



INTERNATIONAL CIVIL AVIATION ORGANIZATION

**REPORT OF THE THIRTEENTH MEETING OF
THE MIDDLE EAST AIR NAVIGATION PLANNING AND
IMPLEMENTATION REGIONAL GROUP**

MIDANPIRG/13
(Abu Dhabi, UAE, 22 - 26 April 2012)

The views expressed in this Report should be taken as those of the Regional Planning and Implementation Group and not of the Organization. This Report will, however, be submitted to the ICAO Council and any formal action taken will be published in due course as a Supplement to the Report

Approved by the Meeting
and published by authority of the Secretary General

The designations employed and the presentation of material in this publication do not imply the expression of any opinion whatsoever on the part of ICAO concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontier or boundaries.

TABLE OF CONTENTS

Page

PART I - HISTORY OF THE MEETING

1.	Place and Duration	1
2.	Opening	1-2
3.	Attendance.....	2
4.	Officers and Secretariat.....	2
5.	Language	2
6.	Agenda	3
7.	Conclusions and Decisions – Definition	3
8.	List of Conclusions and Decisions	4-6
9.	List of Participants.....	6-30

PART II - REPORT ON AGENDA ITEMS

Report on Agenda Item 1	1-1
Report on Agenda Item 2.1	2.1-1
Appendix 2.1A-2.1C	
Report on Agenda Item 2.2	2.2-1
Appendix 2.2A	
Report on Agenda Item 3	3-1/3-3
Appendix 3A	
Report on Agenda Item 4.1	4.1-1/4.1-3
Appendix 4.1A & 4.1B	
Report on Agenda Item 4.2	4.2-1/4.2-12
Appendix 4.2A - 4.2K	
Report on Agenda Item 4.3	4.3-1/4.3.13
Appendix 4.3A – 4.3D	
Report on Agenda Item 4.4	4.4-1/4.4.5
Appendix 4.4A – 4.4D	
Report on Agenda Item 4.5	4.5-1/4.5-16
Appendix 4.5A – 4.5Y	
Report on Agenda Item 4.6	4.6-1/4.6-7
Appendix 4.6A – 4.6E	
Report on Agenda Item 4.7	4.7-1/4.7-3
Appendix 4.7A - 4.7B	
Report on Agenda Item 5.1	5.1-1/5.1-4
Appendix 5.1A – 5.1H	
Report on Agenda Item 5.2	5.2-1/5.2-9
Appendix 5.2A & 5.2B	
Report on Agenda Item 6.	6-1/6-2
Appendix 6A & 6B	
Report on Agenda Item 7	7-1
Appendix 7A	

MIDANPIRG/13
History of the Meeting

PART I - HISTORY OF THE MEETING

1. PLACE AND DURATION

1.1 The Thirteenth Meeting of the Middle East Air Navigation Planning and Implementation Regional Group (MIDANPIRG/13) was hosted by the General Civil Aviation Authority (GCAA) of the United Arab Emirates at the Park Rotana Hotel – Abu Dhabi, from 22 to 26 April 2012.

2. OPENING

2.1 The meeting was opened by H.E. Saif Mohammed Al-Suwaidi, Director General, GCAA, UAE who extended a warm welcome to all participants to the MIDANPIRG/13 meeting and wished them a pleasant stay Abu Dhabi. He thanked ICAO for its efforts in fostering the implementation of Middle East (MID) Regional Air Navigation Plan (ANP) and arranging this meeting in Abu Dhabi and restated UAE's commitment to support the ICAO MID Regional Office and MIDANPIRG activities.

2.2 Mr. Al-Suwaidi mentioned that MIDANPIRG provides a platform for collective cooperation in addressing current developments and future challenges. In this respect, he highlighted that a united approach is essential to ensure the effective implementation of air navigation plans across the region; recognising that deficiencies in any part of the system constitute a threat to the entire global network.

2.3 Mr. Al-Suwaidi stated that despite the global economic downturn, UAE and in general the MID Region has been experiencing continuous and high increase in air traffic during the last decade, which represents a challenge for MIDANPIRG and the MID States to cope with airspace safety, security, capacity, efficiency and environmental issues/challenges.

2.4 Mr. Mohamed Khonji, Regional Director, ICAO Middle East (MID) Regional Office welcomed all the participants to Abu Dhabi. He expressed ICAO's sincere gratitude and appreciation to the Government of UAE, the General Civil Aviation Authority (GCAA) and in particular to H.E. Saif Mohammed Al-Suwaidi, Director General, GCAA, and Mr. Ahmed Al Jallaf, Executive Director Air Navigation Services, GCAA, for hosting this important meeting in Abu Dhabi and for the excellent arrangements for the meeting and generous hospitality extended to the ICAO staff and all participants. He pointed out that UAE has always been supporting the ICAO MID Regional Office and MIDANPIRG activities and played an important and positive role in the MID Region.

2.5 Mr. Khonji highlighted that MIDANPIRG has matured, transforming the MID Region into a more developed active Region over the seventeen years of its existence, considering its location as crossroads between three major continents (Africa, Asia and Europe). In this respect, he highlighted that with the contributions of all Partners, the planning process has been successful and Air Navigation has continued to be safe, economical and more efficient in the MID Region. Nevertheless, he underlined that with the rapid growth of air traffic, and with the changes that are occurring globally, the civil aviation world is continuously facing new challenges, and thus regional cooperation within the framework of MIDANPIRG is the only way towards the improvement of safety and efficiency of air navigation, taking into consideration the environmental protection and aviation security issues.

MIDANPIRG/13
History of the Meeting

2.6 Mr. Khonji stated that, in addition to the improvements of safety of air transport, which is the ICAO first strategic objective, the subject of Environment must be considered as a global context to be embedded within airspace organization, and of air traffic management elements before States proceed with decisions. Therefore, he highlighted that the implementation of operational improvements using the latest technologies should be speeded up. In the same vein, he advised that the Twelfth Air Navigation Conference (AN-Conf/12), which would be held in Montréal, 19 to 30 November 2012, would endorse the new Global Air Navigation Plan (GANP), which encompasses the Aviation System Block Upgrades (ASBUs).

2.7 Finally, Mr. Khonji thanked all Participants for their presence wishing them successful deliberations, productive meeting and a pleasant stay in Abu Dhabi.

3. ATTENDANCE

3.1 The meeting was attended by a total of one hundred and two (102) participants, which included experts from ten (10) States (Bahrain, Egypt, Iran, Jordan, Kuwait, Oman, Qatar, Saudi Arabia, UAE and Yemen) and six (6) International Organizations/Agencies (ACAC, CANSO, IATA, IFALPA, Jeppesen and MIDRMA). The list of participants is at pages 6-30.

4. OFFICERS AND SECRETARIAT

4.1 Mr. Mohamed R. M. Khonji, ICAO Middle East Regional Director acted as the Secretary of the Meeting, assisted by the following ICAO MID Regional Officers:

Mr. Mohamed Smaoui	-	Regional Officer, Air Navigation Services/Aeronautical Information Management (ANS/AIM)
Mr. Raza A. Gulam	-	Regional Officer, Communications, Navigation and Surveillance (CNS)
Mr. Saud Al Adhoobi	-	Regional Officer, Air Traffic Management and Search and Rescue (ATM/SAR)
Mr. Adel Ramlawi	-	Regional Officer, Aerodrome and Ground Aids (AGA)

4.2 The meeting was also supported by, Mr. Gustavo De León, Regional Programme Officer from the Air Navigation Bureau of ICAO Headquarters in Montreal and Mr. Christopher Keohan, Regional Officer Meteorology (MET) from the ICAO EUR/NAT Office, Paris.

5. LANGUAGE

5.1 The discussions were conducted in English. Documentation was issued in English.

MIDANPIRG/13
History of the Meeting

6. AGENDA

6.1 The following Agenda was adopted:

- Agenda Item 1: Adoption of the Provisional Agenda and Election of First Vice Chairperson
- Agenda Item 2: Follow-up on the outcome of MIDANPIRG/12 Meeting
 - 2.1 Review of action taken by the ANC on MIDANPIRG/12 Report
 - 2.2 Review status of MIDANPIRG/12 Conclusions and Decisions
- Agenda Item 3: Global, Inter and Intra-Regional Activities
- Agenda Item 4: Performance Framework for Regional Air Navigation Planning and Implementation
 - 4.1 AOP
 - 4.2 ATM/SAR
 - 4.3 AIM
 - 4.4 CNS
 - 4.5 CNS/ATM
 - 4.6 MET
 - 4.7 Traffic Forecasting
- Agenda Item 5: Air Navigation Deficiencies and Safety Matters
 - 5.1 Air Navigation Deficiencies
 - 5.2 Air Navigation Safety
- Agenda Item 6: Future Work Programme
- Agenda Item 7: Any other Business

7. CONCLUSIONS AND DECISIONS – DEFINITION

7.1 The MIDANPIRG records its actions in the form of Conclusions and Decisions with the following significance:

- a) **Conclusions** deal with matters that, according to the Group's terms of reference, merit directly the attention of States, or on which further action will be initiated by the Secretary in accordance with established procedures; and
- b) **Decisions** relate solely to matters dealing with the internal working arrangements of the Group and its Sub-Groups

MIDANPIRG/13
History of the Meeting

8. LIST OF CONCLUSIONS AND DECISIONS

CONCLUSION.13/1:	AERODROMES CERTIFICATION IMPLEMENTATION AND ACTION PLAN
CONCLUSION 13/2:	RUNWAY END SAFETY AREA (RESA)
CONCLUSION 13/3:	IMPROVEMENT OF THE ATS ROUTE STRUCTURE IN THE MID REGION
CONCLUSION 13/4:	MIDRAR PROJECT
CONCLUSION 13/5:	IMPLEMENTATION OF REDUCED RADAR LONGITUDINAL SEPARATION IN THE MID REGION
CONCLUSION 13/6:	MID STRATEGY ON SSR CODE ALLOCATION
CONCLUSION 13/7:	MID SSR CODE MANAGEMENT PLAN (CMP)
DECISION 13/8:	DISSOLUTION OF THE SSRCA STUDY GROUP
CONCLUSION 13/9:	MID REGIONAL CONTINGENCY PLAN
CONCLUSION 13/10:	POST RVSM IMPLEMENTATION IN THE BAGHDAD FIR
DECISION 13/11:	REVISED TOR OF THE ATM/AIM/SAR SUB-GROUP
CONCLUSION 13/12:	MEANS OF DISSEMINATION OF THE LIST OF VALID NOTAM
CONCLUSION 13/13:	AVOIDANCE OF THE AIRAC DATE 15 NOVEMBER 2012
DECISION 13/14:	DISSOLUTION OF THE QMS ACTION GROUP
CONCLUSION 13/15:	QMS IMPLEMENTATION
CONCLUSION 13/16:	CERTIFICATION OF THE AIM SERVICES
DECISION 13/17:	ESTABLISHMENT OF THE MIDAD STUDY GROUP (MIDAD STG)
DECISION 13/18:	DISSOLUTION OF THE AIS AUTOMATION ACTION GROUP
CONCLUSION 13/19:	MIDAD PROJECT SECOND PHASE
CONCLUSION 13/20:	COMMITMENT TO THE MIDAD PROJECT
CONCLUSION 13/21:	MIDAD LEGAL FRAMEWORK
DECISION 13/22	TERMS OF REFERENCE OF THE AIM TASK FORCE
CONCLUSION 13/23:	MID IP NETWORK SURVEY
CONCLUSION 13/24:	DEVELOPMENT OF IP BASED MID NETWORKS
CONCLUSION 13/25:	UPDATE THE AMC SYSTEM
CONCLUSION 13/26:	MID AFTN/CIDIN DIRECTORY
CONCLUSION 13/27:	MID-ATS MESSAGE MANAGEMENT CENTRE (AMC) PROJECT
DECISION 13/28:	REVISED TOR OF THE ATN-IPS WORKING GROUP
DECISION 13/29:	TERMS OF REFERENCE OF THE CNS SUB-GROUP
CONCLUSION 13/30:	NATIONAL PERFORMANCE FRAMEWORK
CONCLUSION 13/31:	ENDORSEMENT OF THE AIM PARTS OF THE MID BASIC ANP AND FASID

MIDANPIRG/13
History of the Meeting

<i>DECISION 13/32:</i>	<i>ESTABLISHMENT OF THE MID AIR NAVIGATION PLAN AD-HOC WORKING GROUP (ANP WG)</i>
<i>CONCLUSION 13/33:</i>	<i>STATE ACTION PLANS FOR CO2 EMISSION</i>
<i>DECISION 13/34:</i>	<i>ESTABLISHMENT OF THE AIR TRAFFIC MANAGEMENT MEASUREMENT TASK FORCE (ATMM TF)</i>
<i>CONCLUSION 13/35:</i>	<i>ESTIMATING ENVIRONMENT BENEFITS</i>
<i>CONCLUSION 13/36:</i>	<i>ICAO NEW FLIGHT PLAN FORMAT AWARENESS CAMPAIGNS</i>
<i>CONCLUSION 13/37:</i>	<i>ICAO NEW FPL FORMAT TESTING SCHEDULE</i>
<i>CONCLUSION 13/38:</i>	<i>INFPL STRATEGIC SUPPORT TEAM (SST)</i>
<i>CONCLUSION 13/39:</i>	<i>REVISED STRATEGY FOR THE IMPLEMENTATION OF INFPL</i>
<i>CONCLUSION 13/40:</i>	<i>MID REGION INFPL IMPLEMENTATION DOCUMENT</i>
<i>CONCLUSION 13/41:</i>	<i>MID REGION PROCESS FOR MODE S IC CODES ALLOCATION</i>
<i>DECISION 13/42:</i>	<i>MID REGION SURVEILLANCE STRATEGY</i>
<i>CONCLUSION 13/43:</i>	<i>ALLOCATION OF 24 BIT AIRCRAFT ADDRESS</i>
<i>CONCLUSION 13/44:</i>	<i>PROTECTION OF GNSS SIGNAL</i>
<i>CONCLUSION 13/45:</i>	<i>STRATEGY FOR THE IMPLEMENTATION OF GNSS in THE MID REGION</i>
<i>CONCLUSION 13/46:</i>	<i>GNSS SURVEY</i>
<i>CONCLUSION 13/47:</i>	<i>MID REGIONAL PBN IMPLEMENTATION STRATEGY AND PLAN</i>
<i>DECISION 13/48:</i>	<i>ESTABLISHMENT OF MID PBN SUPPORT TEAM (MPST)</i>
<i>CONCLUSION 13/49:</i>	<i>MID PBN SUPPORT TEAM (MPST)</i>
<i>CONCLUSION 13/50:</i>	<i>PBN IMPLEMENTATION PROGRESS REPORT</i>
<i>CONCLUSION 13/51:</i>	<i>SUPPORTING IMPLEMENTATION OF SECURE SADIS FTP SERVICE IN THE MID REGION</i>
<i>CONCLUSION 13/52:</i>	<i>SIGMET TEST PARTICIPATION</i>
<i>CONCLUSION 13/53:</i>	<i>UPDATE TO THE MID REGIONAL SIGMET GUIDE</i>
<i>CONCLUSION 13/54:</i>	<i>DEVELOP RECOMMENDATION OF MID REGIONAL OPMET CENTRES FOR INTER-REGIONAL EXCHANGE OF OPMET DATA</i>
<i>CONCLUSION 13/55:</i>	<i>OPMET DATA ERRORS AND DEFICIENCIES</i>
<i>CONCLUSION 13/56:</i>	<i>TIMELINESS OF OPMET DATA</i>
<i>DECISION 13/57:</i>	<i>REVISED ToR OF THE MET SG</i>
<i>CONCLUSION 13/58:</i>	<i>PROVISION OF STATISTICAL DATA</i>
<i>CONCLUSION 13/59:</i>	<i>TRAFFIC FORECAST AND PEAK PERIOD ANALYSIS WORKSHOP</i>
<i>CONCLUSION 13/60:</i>	<i>TRAFFIC FORECASTING AND PEAK PERIOD ANALYSIS REQUIREMENTS IN THE MID REGION</i>
<i>CONCLUSION 13/61:</i>	<i>CENTRALIZED AIR NAVIGATION DEFICIENCY DATABASE</i>
<i>CONCLUSION 13/62:</i>	<i>NGAP NATIONAL PLANS</i>

MIDANPIRG/13
History of the Meeting

<i>CONCLUSION 13/63:</i>	<i>ELIMINATION OF AIR NAVIGATION DEFICIENCIES IN THE MID REGION</i>
<i>CONCLUSION 13/64:</i>	<i>REPORTING OF LARGE HEIGHT DEVIATIONS (LHD)</i>
<i>CONCLUSION 13/65:</i>	<i>PROVISION OF REQUIRED DATA TO THE MIDRMA</i>
<i>CONCLUSION 13/66:</i>	<i>SECOND MID RVSM SAFETY ASSESSMENT SEMINAR</i>
<i>CONCLUSION 13/67:</i>	<i>TRAINING ON RVSM SAFETY ASSESSMENT</i>
<i>CONCLUSION 13/68:</i>	<i>VERTICAL COLLISION RISK SOFTWARE</i>
<i>CONCLUSION 13/69:</i>	<i>RVSM APPROVALS</i>
<i>CONCLUSION 13/70:</i>	<i>MID REGION HEIGHT-KEEPING MONITORING STRATEGY</i>
<i>CONCLUSION 13/71:</i>	<i>MID RVSM SMR 2012-2013</i>

9. LIST OF PARTICIPANTS

NAME	TITLE & ADDRESS
STATES	
BAHRAIN	
Mr. Ali Ahmed Mohammed	Director Air Navigation Civil Aviation Affairs P.O. Box 586 KINGDOM OF BAHRAIN Fax: (973) 1732 1992 Tel: (973) 1732 1116 Mobile: (973) 3996 9399 Email: aliahmed@caa.gov.bh
Mr. Saleem Mohamed Hassan	Chief Air Traffic Management Civil Aviation Affairs P.O. Box 586 KINGDOM OF BAHRAIN Fax: (973) 17 329 966 Tel: (973) 17 321 117 Mobile: (973) 39 608 860 Email: saleemmh@caa.gov.bh

MIDANPIRG/13
History of the Meeting

NAME	TITLE & ADDRESS
Mr. Shukry Jaffar Abdulla Hashem	Supervisor Meteorological Operation Civil Aviation /Met Directorate P.O. BOX 586 KINGDOM OF BAHRAIN Fax: (973) 17320630 Tel: (973) 17321177 Mobile: (973-3) 9632056 Email: Sabdulla@caa.gov.bh Shukri.jaffar@gmail.com
EGYPT	
Mr. Abdel Aziz Mhamoud Abdel Aziz	Pilot Military – Air Force New Misr Street Cairo-EGYPT Tel: (202) 26203067 Mobile: (2) 01229008777 Email: zizomal@yahoo.com
Mr. Abu El Magd Ahmed Khalifa	Head of Department of Navigation Ministry of Civil Aviation Egyptian Civil Aviation Authority Cairo Airport Road Cairo - EGYPT Fax: (202) 2267 8537 Tel: (202) 2267 8537 Mobile: (2012) 228 0347 Email: NAVMAGD@yahoo.ca
Mr. Ahmed Abd El-Hameed M. Ahmed	Director of Luxor Airport Forecasting Center T.V. St., Luxor-EGYPT Fax: (209) 52324435 Tel: (209) 52324435 Mobile: (2) 01117566062 Email: dah21964@yahoo.com
Mr. Alaa El Din Abdel Fattah Mohamed	G.M. of ATC for Airport Egyptian Civil Aviation Authority Cairo Airport Road Cairo - EGYPT Mobile: 01001686789 Email: a.elmonaiey@hotmail.com

MIDANPIRG/13
History of the Meeting

NAME	TITLE & ADDRESS
Mr. Amr Mohamed M.Sobhy	Pilot Egyptian Armed Force 2 Marwa building-Golf Area Cairo-EGYPT Tel: (202) 22661388 Mobile: (2) 0104900007 Email: amrsobhy102@hotmail.com Amrsobhy102@yahoo.com
Mr. Ashraf Hamed Abdel Fatah	Pilot Military Air Defence Force Cairo-EGYPT Tel: (202) 29101120 Mobile: (2) 01001646632 Email: ashrafdaboun@yahoo.com
Mr. Gamal Abdel Wahab Abdel Maguied	General Manager of Electronic Department Cairo Air Navigation Center Cairo Airport-Village Road Cairo-EGYPT Fax: (202) 26970703 Tel: (202) 2667866 Mobile: (2) 01006600952 Email: gamohmmad@gmail.cairo
Mr. Hassan Kamel Abdel Meguid	ATS Safety Manager/R&D General Director National Air Navigation Services Company (NANSC) Cairo International Airport Road Cairo - EGYPT Fax: (202) 2268 0627 Tel: (202) 2265 7842 Mobile:(2) 0100 184 3602 Email: hassankam@hotmail.com Hassan.kamel@nansceg.net
Mr. Mohamed Negm Mahmoud Negm	Pilot Military Air Force Operation Department Cairo-EGYPT Tel: (202) 2671788 Mobile: (2) 01006053454 Email: zizomal@yahoo.com

MIDANPIRG/13
History of the Meeting

NAME	TITLE & ADDRESS
Mr. Mohamed Salah M. Okka	Director of Technical Cooperation Department Cairo-EGYPT Fax: (202) 26849857 Tel: (202) 26849860 Mobile: (2) 01009103354 Email: mohamokkaoo@gmail.com Mohamokka2001@yahoo.com
ISLAMIC REPUBLIC OF IRAN	
Mr. Ahad Vazifeh	Aviation Senior Forecaster I.R. of Iran's Meteorological Organization Meteorological Organization (IRIMO) P.O. Box 13185-461 Tehran - ISLAMIC REPUBLIC OF IRAN Fax: (9821) 660 700 5 Tel: (9821) 660 700 38 Mobile: (9891) 2385 1049 Email: affairs.intl@gmail.com
Mr. Ebrahim Shoushtari	Deputy CEO for Aeronautical Ops Iran Airports Company- Merhrabad Airport P.O. Box 13445 – 1798 Tehran - ISLAMIC REPUBLIC OF IRAN Fax: (982-1) 4454 4168 Tel: (982-1) 445 441 34 Mobile: (9891) 21861900 Email: e_shoushtari@yahoo.com e.shoushtari@airport.ir
Mr. Meisam Shaker Arani	Aerodrome Expert Civil Aviation Organization P.O. Box 13445 – 1798 Tehran - ISLAMIC REPUBLIC OF IRAN Fax: (9821) 44665576 Tel: (9821) 66073534 Mobile: (989) 12 6454753 Email: m-shaker@cao.ir ska.meisam@gmail.com

MIDANPIRG/13
History of the Meeting

NAME	TITLE & ADDRESS
Mr. Mohamed Bagher Hamidi	Director General of COM & NAV Engineering Department Tehran - ISALAMIC REPUBLIC OF IRAN Fax: (9821) 44544001 Tel: (9821) 44544000 Mobile: (9891) 25018595 Email: Hamidi-mb@airport.ir
Mr. Mohammad Khodakarami	Vice president for Aeronautical and International Affairs Civil Aviation Organization Mehrabad International Airport P.O. Box 13445 - 1798 Tehran - ISALAMIC REPUBLIC OF IRAN Fax: (9821) 66036340 Tel: (9821) 66036341 Mobile: (989-12) 390 8196 Email: mokhodakarami@gmail.com
Mr. Saeed Akbari	General Director of Aeronautical Operation Supervisory Department Aeronautical and Intl. Affairs, Tehran Mehrabad International Airport P.O. Box 13445-1798 Tehran - ISALAMIC REPUBLIC OF IRAN Fax: (9821) 44665576 Tel: (9821) 66073534 Mobile: (98912)1 404462 Email: s-akbari@cao.ir s.akbari@airport.ir
JORDAN	
Mr. Azmi Issa Abdullah Al Amaireh	Technical Controller Royal Jordanian Air Force Ammn-JORDAN Fax: (962) 64874121 Mobile: (962-79) 9055997 Email: alhareth1999@yahoo.com

MIDANPIRG/13
History of the Meeting

NAME	TITLE & ADDRESS
Capt. Diab Abu Zaid	ANS Commissioner Civil Aviation Regulatory Commission P.O. Box 7547 Amman - JORDAN Mobile: (962) 795703449 Email: anscom@com.gov.jo
Mr. Fhaid Y. Al Tiameh	Jordan Meteorological Department National Forecast Center, Director P.O. Box 341011 Amman-JORDAN Mobile: (962) 777426008 Email: nfc@jometeo.gov.jo
Ms. Hanan A. Qabartai	Chief AIS HQ Civil Aviation Regulatory Commission P.O. Box 7547 Amman - JORDAN Fax: (962-6) 489 1266 Tel: (962-6) 489 72681 Mobile: (962-79) 6768012 Email: ais.hq@carc.gov.jo qati_hanan@yahoo.com
Mr. Nayef Al-Marshoud	Director of ATM Civil Aviation Regulatory Commission P.O. Box 7547 Amman - JORDAN Fax: (962) 6 489 1266 Tel: (962) 6 489 2282 ext: 3420 Mobile: (962-79) 7498892 Email: datm@carc.gov.jo
Mr. Suleiman Deeb Zayed	Director of Communications Civil Aviation Regulatory Commission Civil Aviation Authority P.O. Box 7547 Amman - JORDAN Fax: (962-6) 4898 0331 Tel: (962-6) 489 2282 Mobile: (962-79) 611 7566 Email: suleiman2111@yahoo.com dcom@carc.gov.jo

MIDANPIRG/13
History of the Meeting

NAME	TITLE & ADDRESS
Mr. Suleiman Jumah Salem Khalafat	Chief of Navigation Branch Navigation Branch Royal Jordanian Air Force Amman-JORDAN Fax: (962) 6 4874121 Tel: (962) 64896351 Ext 22664 Mobile: (962) 799827364 Email: opsnavig@rjaf.mil.jo
KUWAIT	
Mr. Abdulamir M. Altaho	Superintendent of Telecommunication and Information in MET P.O. Box 17 Safat 13001 State of KUWAIT Fax: (965) 24727326 Tel: (965) 24722410 Mobile: (965) 99786154 Email: aaltaho@met.gov.kw
Mr. Ahmad Gh. Al-Shammari	Aviation Safety Inspector Directorate General of Civil Aviation Kuwait International Airport P.O. Box 17 Safat 13001 State of KUWAIT Fax: (965) 24765 796 Tel: (965) 24336699 ext. 2343 Mobile: (965) 9944 6648 Email: ag.alshammari@dgca.gov.kw a.al-shammari@hotmail.com
Mr. Daud Al-Jarrah	Head of AFTN Section Directorate General of Civil Aviation Kuwait International Airport P.O. Box 17 Safat State of KUWAIT Fax: (965-2) 473 2530 Tel: (965-2) 4721 279 Mobile: (965) 990 88511 Email: da.aljarrah@dgca.gov.kw kudata3@hotmail.com

MIDANPIRG/13
History of the Meeting

NAME	TITLE & ADDRESS
Mr. Jamal Al –Mejaibel	Major Kuwait Air Force State of KUWAIT Fax: (965-2) 24742869 Tel: (965-2) 4311588 Ext. 82088 Mobile: (965) 94420242 Email: woxof_j@yahoo.com kaf_j@hotmail.com
Mr. Khaled Al Ghanim	Chief of AIS Section Directorate General of Civil Aviation Kuwait International Airport P.O. Box 17 Safat 13001 State of KUWAIT Fax: (965-2) 476 5512 Tel: (965-2) 473 7792 Mobile: (965) 9717 2717 Email: kg.alghanim@dgca.gov.kw kalghanim@hotmail.com
Mr. Khalid Fahad Al Shayji	Deputy Director General for Air Navigation Services Affairs Directorate General of Civil Aviation P.O. Box 17 Safat 13001 Kuwait State of KUWAIT Fax: (9765) 24343419 Tel: (965) 97261616 Mobile: (965-2) 4767 637 Email: ddg.ans@dgca.gov.kw
Mr. Mansour F. Al Harbi	Radar Duty Supervisor Directorate General of Civil Aviation Kuwait International Airport P.O. Box 17 Safat 13001 State of KUWAIT Fax: (965-2) 431 9231 Tel: (965-2) 4762 994 Mobile: (965) 9973 9088 Email: mf.alharbi@dgca.gov.kw atc_controler@hotmail.com

MIDANPIRG/13
History of the Meeting

NAME	TITLE & ADDRESS
Mr. Mohammad A. Al-Awadhi	Superintendent of Air Navigation Directorate General of Civil Aviation Kuwait International Airport P.O. Box 17 Safat 13001 State of KUWAIT Fax: (965-2) 431 5359/24319231 Tel: (965-2) 4760 463/2434 2476 Mobile: (965) 9717 7703 Email: m.alwadhi@dgca.gov.kw Awadhi7177@gmail.com
OMAN	
Mr. Abdullah Nasser Rashid Al-Harthy	Senior Air Traffic Controller Directorate General of Meteorology & Air Navigation (DGMAN) P.O. Box 1 – Code 111 Muscat International Airport Muscat, SULTANATE OF OMAN Fax: (968) 24518990 Tel: (968) 2451 9201 Mobile: (968) 99476806 Email: abdullah_nasser@caa.gov.om abbyalharthy@gmail.com
Mr. Ahmed Hamood M. Al-Harthy	Director Operations & Technical Services Directorate General of Meteorology & Air Navigation (DGMAN) Muscat International Airport P.O. Box 1 Code 111 Muscat - SULTANATE OF OMAN Fax: (968) 2518 360 Tel: (968) 2519 360 Email: a.alharthy@met.gov.om
Eng. Ahmed Salim AL Ojaili	Asst. Director of Technical Affairs P.O. Box 274 Salalah- SULTANATE OF OMAN Fax: (968) 23204112 Tel: (968) 23204111 Mobile: (968) 99494957 Email: ahmed_alojaili@sllap.gov.om ahmedsalimeng@hotmail.com

MIDANPIRG/13
History of the Meeting

NAME	TITLE & ADDRESS
Mr. Ali Humaid Al-Adawi	Standards Officer Directorate General of Meteorology & Air Navigation (DGMAN) Muscat International Airport P.O. Box 1 Code 111 Muscat - SULTANATE OF OMAN Fax: (968) 2451 9930 Tel: (968) 2451 9699 Mobile: (968) 9443 3003 Email: ali@caa.gov.om
Mr. Ali Salim Al-Rai	Chief of ATM Section P.O. Box Code 868 Salalah- SULTANATE OF OMAN Fax: (968) 23290184 Tel: (968) 23204100 Mobile: (968) 99491360 Email: alrai@sllap.gov.om Alrai60@gmail.com .
Mr. Mubarak Saleh Al Ghelani	Director Air Traffic Control Services P.O. Box 1, Code 111 Muscat - SULTANATE OF OMAN Fax: (968) 24518991 Mobile: (968) 24518646 Email: m.alghelani@caa.gov.om
Mr. Said Salim Abdullah Al-Oufy	Royal Air Force of Oman Staff Officer ATC HQ Royal Air Force Oman P.O. Box 1204 Muscat - SULTANATE OF OMAN Tel: (968) 24334016 Mobile: (968) 99333356 Email: 5599844d@hotmail.com

MIDANPIRG/13
History of the Meeting

NAME	TITLE & ADDRESS
Mr. Saleh Abdullah Nasser Al-Harthy	Director Air Navigation Services Directorate General of Meteorology & Air Navigation (DGMAN) P.O. Box 1 P.C. 111 Muscat - SULTANATE OF OMAN Fax: (968) 24519930 Tel: (968) 24519789 Mobile: (968) 95205073 Email: saleh@caa.gov.om
Mr. Waleed Khalfan Al Riyami	Acting Director ANS Safety Department Civil Aviation Affairs (CAA) Directorate General of Safety & Air Service(DGSAS) P.O. Box 1 - Code 111 Muscat - SULTANATE OF OMAN Fax: (968) 2451 9707 Tel: (968) 245 18 985 Mobile: (968) 9932 3733 Email: waleedalriyami@caa.gov.om
QATAR	
Mr. Ahmed Mohamed Al Eshaq	Air Navigation Department Civil Aviation Authority P.O. Box 73 Doha – QATAR Fax: (974) 4465 6554 Tel: (974) 4462 2300 Mobile: (974) 5555 0440 Email: ahmed@caa.gov.qa
Mr. Faisal Mutlaq Al-Qahtani	Head of AIS Civil Aviation Authority P.O. Box 73 Doha – QATAR Fax: (974) 4465 6554 Tel: (974) 44656 230 Mobile: (974) 5553 7060 Email: faisal.alqahtani@cca.gov.qa

MIDANPIRG/13
History of the Meeting

NAME	TITLE & ADDRESS
Mr. Ibrahim Abdul Qader	Vice-Chairman Civil Aviation Authority P.O. Box 3000 Doha – QATAR Fax: (974) 465 6554 Tel: (974) 462 2300 - 44557201 Mobile: (974) 5551 3619 Email: ibrahim@caa.gov.qa
SAUDI ARABIA	
Mr. Abdullah A. Al-Khrami	Manager, ANS Systems Safety General Authority of Civil Aviation ANS/Safety and Quality Assurance Dept P.O. Box 15441 Jeddah 21444, KINGDOM OF SAUDI ARABIA Fax: (966-2) 6717717 ext. 1903 Tel: (966-2) 6717717 ext. 1920 Mobile: (966) 553355288 Email: khrami@hotmail.com akhrami@gaca.gov.sa
Mr. Abubkr Ahmed Said Bagazi	Senior Weather Forecaster P.O. Box 1358 Jeddah 21431 KINGDOM OF SAUDI ARABIA Fax: (966-2) 6530197 Tel: (966-2) 6532197 Mobile: (966) 555652182 Email: Abubkr_al@yahoo.com
Mr. Adel Al Mansour	Royal Saudi Air Force KINGDOM OF SAUDI ARABIA Mobile: (966-5)554246668 Email: adell.almansour@gmail.com

MIDANPIRG/13
History of the Meeting

NAME	TITLE & ADDRESS
Eng. Ahmad Jameel Mannan	Manager, Communications Engineering Branch General Authority of Civil Aviation P.O. Box 15441 Jeddah 21444 KINGDOM OF SAUDI ARABIA Fax: (966-2) 671 9041 Tel: (966-2) 6717717 ext. 1254 Mobile: (966-55) 301 1757 Email: amannan@gaca.gov.sa
Mr. Aon Abdullah Al-Garni	General Manager ATM/ANS/GACA Air Navigation Services General Authority of Civil Aviation P.O. Box 40217 Jeddah 21499 KINGDOM OF SAUDI ARABIA Fax: (966-2) 640 2855 Tel: (966-2) 640 1005 Mobile: (966-55) 772 984 Email: aonabdul@yahoo.com
Mr. Fahad Awad Al-Malki	Manager of Planning and Analysis CNS/ATM Department Air Navigation Services General Authority of Civil Aviation P.O. Box 15344 Jeddah 21444 KINGDOM OF SAUDI ARABIA Fax: (966-2) 671 9041 Tel: (966-2) 671 7717 Mobile: (966-55) 554 4014 Email: fahadmalki@hotmail.com
Mr. Fahad Bin Mohammed Al Ghamdi	Manager of ATS Unit in KAIA KAIA ATCU General Authority of Civil Aviation P.O. Box 6326 Jeddah 21442 KINGDOM OF SAUDI ARABIA Fax: (966-2) 685 4021 Tel: (966-2) 685 0505 Mobile: (966-50) 362 4810 Email: atcudfahad@hotmail.com

MIDANPIRG/13
History of the Meeting

NAME	TITLE & ADDRESS
Mr. Hamad M. Alaufi	Director of AIS General Authority of Civil Aviation P.O. Box 929 Jeddah 21421 KINGDOM OF SAUDI ARABIA Fax: (966-2) 640 5333 Tel: (966-2) 6290564 or 640 5333 Mobile:(966-55) 561 1136 Email: hmalaufi@gaca.gov.sa
Mr. Hameed Hamad Al-Jeddani	ANS/AIS/Publication Manager General Authority of Civil Aviation P.O. Box 929 Jeddah 21421 KINGDOM OF SAUDI ARABIA Fax: (966-2) 640 5622 Tel: (966-2) 6717717 Ext 1755 Mobile:(966-5) 04 671134 Email: hjudanee1@yahoo.com haljidani@gaca.gov.sa
Mr. Mohammad Omar Al-Alawi	Manager ANS Safety General Authority of Civil Aviation S&ER P.O. Box 887 Jeddah 21421 KINGDOM OF SAUDI ARABIA Fax: (966-2) 6855770 Tel: (966-2) 6855255 Mobile:(966-505) 621 582 Email: malalawi@gaca.gov.sa
Mr. Mohammed Zayed Ayish Almutiri	Director of Training/Squadron air traffic control P.O. Box 221 Dhahran KINGDOM OF SAUDI ARABIA Fax: (966) 3302818 Tel: (966)3311171 Mobile: (966)555777934 Email: Captin_zz@hotmail.com

MIDANPIRG/13
History of the Meeting

NAME	TITLE & ADDRESS
Mr. Nabil Bin Yehia AlKutbi	Manager, Aerodrome Standards and Safety, Safety Dept, General Authority of Civil Aviation P.O. Box 887 Jeddah 21165 KINGDOM OF SAUDI ARABIA Fax: (966-2) 685 5492 Mobile: (966-5)12216061 Email: nkutbi@gaca.gov.sa
Mr. Saad Abdullah Al Zahrani	Surveillance & Automation Systems Planner General Authority of Civil Aviation CNS/ATM Department P.O. Box 15441 KINGDOM OF SAUDI ARABIA Fax: (966-2) 6717 717 -1594 Tel: (966-2) 6717 717 - 1595 Mobile: (966-5) 5564 5291 Email: sdbd9@yahoo.com
Mr. Saeed Shanan Al Zahrani	RSAF-ATC SQ Comm KINGDOM OF SAUDI ARABIA Fax: (966-2) 7260829 Tel: (966-2) 7262900/45777 Mobile:(966-5)54700190 (966-5) 08841928 Email: mm4455@hotmail.com
Mr. Tariq Yousef Ahmed Ashmawi	D.G. of Operation Presidency of Meteorology & Environment P.O. Box 1358 Jeddah 21431 KINGDOM OF SAUDI ARABIA Fax: (966) 26530197 Tel: (966) 26536313 Mobile: (966) 505656688 Email: Tariq@pme.gov.sa

MIDANPIRG/13
History of the Meeting

NAME	TITLE & ADDRESS
Mr. Turki AL Shareef	General Authority of Civil Aviation Superintendent MET COM Centre KINGDOM OF SAUDI ARABIA Fax: (966-2) 6530688 Tel: (966-2) 6530624 Mobile: (966-5) 541928 Email: Turki12333@hotmail.com
Mr. Turki Abdul Mohsen Al-Hazaim	Air Traffic Controller General Authority of Civil Aviation P.O. Box 4967 Riyadh KINGDOM OF SAUDI ARABIA Tel: (966) 550133336 Email: t.tz@9.cn
UNITED ARAB EMIRATES	
Mr. Ahmed Al Jallaf	Executive Director Air Navigation Services General Civil Aviation Authority Air Navigation & Aerodromes P.O. Box 666 Abu Dhabi - UNITED ARAB EMIRATES Fax: (971-2) 599 6883 Tel: (971-2) 599 6888 Mobile: (971-50) 614 9065 Email: aljallaf@szc.gcaa.ae
Mr. Abdalla Al Rashidi	Director AIM General Civil Aviation Authority Sheikh Zayed Air Navigation Centre P.O. Box 666 Abu Dhabi- UNITED ARAB EMIRATES Fax: (971) 2599 6889 Tel: (971) 2599 6891 Mobile: (971) 506119865 Email: akaabi@szc.gcaa.ae

MIDANPIRG/13
History of the Meeting

NAME	TITLE & ADDRESS
Mr. Abdulla Al Hashmi	Director Air Traffic Management P.O. Box 666 Abu Dhabi- UNITED ARAB EMIRATES Fax: (9712) 599 6838 Tel: (9712) 599 6830 Mobile: (971-50) 4420 486 Email: ahashimi@szc.gcaa
Mr. Abdul Rahman Mohamed Al Obaidi	Senior AIS Officer Abu Dhabi Airports Company PJSC P.O. Box 94449 Abu Dhabi, UNITED ARAB EMIRATES Fax: (971-2) 599 863 / 575 7820 Tel: (9712) 599 8627 Mobile:(971-50) 755 5512 Email: aalobaidi@adac.ae
Mr. Ahmed Omar Al Amoudi	Air Traffic Services-Supervisor P.O. Box 94449 Abu Dhabi- UNITED ARAB EMIRATES Fax: (971-2) 5757414 Tel: (9712) 5998 739 Mobile: (971-50) 4411019 Email: aoalamoudi@ans.adac.ae
Mr. Alan Robert	ATS Inspector General Civil Aviation Authority P.O. Box 6558 Abu Dhabi - UNITED ARAB EMIRATES Fax: (971-2) 4054406 Tel: (971-2) 4054214 Mobile: (971-50) 6117596 Email: aroberts@gcaa.gov.ae
Mr. Bahkeet Yehia	Army Air Force Abu Dhabi- UNITED ARAB EMIRATES Mobile: (972-50) 5111889

MIDANPIRG/13
History of the Meeting

NAME	TITLE & ADDRESS
Mr. Hamad Rashid Al Belushi	Head ANSP Research and Dataset P.O. Box 666 Abu Dhabi- UNITED ARAB EMIRATES Fax: (9712) 599 6836 Tel: (9712) 599 6957 Mobile: (971-50) 6164350 Email: hbelushi@szc.gcaa.ae
Ms. Helen Woodrow	VP Forecasting & Research P.O. Box 2525 Dubai International Airport, Dubai - UNITED ARAB EMIRATES Fax: (971-2) 2245155 Tel: (971-4) 2162379 Mobile: 971 50 5530161 Email: Helen.woodrow@dubaiairports.ae
Mr. Ibrahim Ahli	Director DANS Dubai Air Navigation Services Dubai - UNITED ARAB EMIRATES Tel: (971) 4 216 2209 Fax: (971) 4 2245359 Mobile: (971) 50 644 5553
Mr. Jasem Al Mansoori	Sheikh Zayed Air Navigation Centre P.O. Box 666 Abu Dhabi- UNITED ARAB EMIRATES Tel: (9712) 599 6999 Mobile: (971-50) 5999319 Email: jmansoori@szc.gcaa.ae
Mr. Juma Harib	Deputy Director Air Navigation Services DCAA General Civil Aviation Authority Dubai- UNITED ARAB EMIRATES Fax: (971-2) 599 6883 Tel: (971-2) 5999 6887 Mobile: (971-50) 6682 725 Email: jharib@szc.gcaa.ae

MIDANPIRG/13
History of the Meeting

NAME	TITLE & ADDRESS
Mr. Khaled M. Al Zaabi	Aviation Consultant P.O. Box 20 Abu Dhabi- UNITED ARAB EMIRATES Fax: (971-2) 6566610 Tel: (971-2) 6174402 Mobile: (972-50) 5715700 Email: khaled.alzaabi@dob.abudhabi.ae
Mr. Khalid Mohamed Al Reyaisy	Aeronautical Information Services Officer Abu Dhabi Airports Company PJSC P.O. Box 94449 Abu Dhabi, UNITED ARAB EMIRATES Fax: (971-2) 575 6820 Tel: (971-2) 505 3915 Mobile:(971-50) 8117272
Mr. Mohamed Abdulla Al Abri	Aviation Planning Specialist Head of Aviation Meteorology National Centre of Meteorology & Seismology Ministry of Presidential Affairs P.O. Box:11121 Abu Dhabi, UNITED ARAB EMIRATES Tel: +97122227300 Fax: +97122227132 Mob: +971504418871 Email: malabri@nems.ae
Mr. Mohammed Al Ameri	ATC Officer General Civil Aviation Authority P.O. Box 666 Abu Dhabi - UNITED ARAB EMIRATES Fax: (971-2) 599 6863 Tel: (9712) 599 6999 Mobile: (971-50) 6699486 Email: msameri@szc.gcaa.ae

MIDANPIRG/13
History of the Meeting

NAME	TITLE & ADDRESS
Mr. Mohamed Al Dossari	Acting Director Air Navigation & Aerodromes Dept Air Navigation & Aerodrome Department of Security and Infrastructure P.O. Box 6558 Abu Dhabi, UNITED ARAB EMIRATES Fax: (971) 2405 4406 Tel: (971) 2405 4395 Mobile: (971) 50442 6979 Email: addossari@gcaa.gov.ae
Mr. Muayyed Aitenaiji	Senior Research and Data Set Officer Sheikh Zayed Air Navigation Centre P.O. Box 666 Abu Dhabi- UNITED ARAB EMIRATES Fax: (9712) 599 6883 Tel: (9712) 599 6858 Mobile: (971-50)3131370 Email: metenaiji@szc.gcaa.ae
Mr. Nasser Juma	Vice President- Air Navigation Services Abu Dhabi Airport Company ADAC Abu Dhabi-UNITED ARAB EMIRATES Fax: (971-2) 575 7414 Tel: (971-2) 5998800 Mobile: (971) 50 62 95229 Email: njuma@adac.ae
Mr. Omran Ghanim Ahli	Tower Team Leader Air Traffic Control Air Navigation Services P.O. Box 2525 Dubai Airports Dubai- UNITED ARAB EMIRATES Mobile: 050-6464140 Email: pmran.ahli@dubaairports.ae

MIDANPIRG/13
History of the Meeting

NAME	TITLE & ADDRESS
Mr. Ronald Rigney	Aviation Consultant Abu Dhabi Department of Transport P.O. Box 20 Abu Dhabi- UNITED ARAB EMIRATES Fax: (971-2) 6566610 Tel: (971-2) 6174 405 Mobile: (971) 566 420 280 Email: ronald.rigney@dot.abudhabi.ae
Mr. Saqr Obaid Saleh H. Al Marashda	ATC Officer P.O. Box 666 Abu Dhabi- UNITED ARAB EMIRATES Fax: (9712) 599 6836 Tel: (9712) 599 6999 Mobile: (971-50) 7611717 Email: smarashda@szc.gcaa.ae
Mr. Waleed Al Hameeri	Director CNS General Civil Aviation Authority P.O. Box 6558 Abu Dhabi - UNITED ARAB EMIRATES Fax: (971-2) 599 6862 Tel: (971-2) 599 6872 Mobile: (971-50) 811 9151 Email: waleeds@szc.gcaa.ae
Mr. Max Rahman	Director Aviation Safety & Support SERCO P.O. Box 9197 Dubai- UNITED ARAB EMIRATES Mobile: (973) 50-2206075 Email: max.rahman@serco.ae
Mr. Manthinus Olivier	Manager Aviation Safety SERCO P.O. Box 9197 Dubai - UNITED ARAB EMIRATES Mobile: (971) 561775806 Email: marthinus.olivier@serco.ae

MIDANPIRG/13
History of the Meeting

NAME	TITLE & ADDRESS
Mr. Rick Sharpe	Advisor Aviation Business SERCO P.O. Box 9197 Dubai - UNITED ARAB EMIRATES Mobile: (971) 506682830 Email: rick.sharpe@serco.ae
Mr. Mathew Riley	General Manager Air Traffic Services SERCO Dubai International Airport P.O. Box 1897 Dubai - UNITED ARAB EMIRATES Fax: (967-1) 42245359 Tel: (967-4) 2162888 Mobile: (971) 56 1479134 Email: rick.sharpe@serco.ae
YEMEN	
Mr. Abdullah Ahmed Alawlaqi	GD of air Navigation Civil Aviation Authority P.O. Box 1042 Sana's - YEMEN Fax: (967-1) 344047 Tel: (967-1) 345 402 Mobile: (967-77)777 6830 Email: atccns@gmail.com
ORGANIZATIONS/AGENCIES	
ACAC	
Mr. Khalid Ali Jaber	ACAC Representative General Civil Aviation Authority Abu Dhabi- UNITED ARAB EMIRATES Tel: (971) 2599 6692 Mobile: (971) 6281765 Email: kjaber@szc.gcaa.ae

MIDANPIRG/13
History of the Meeting

NAME**TITLE & ADDRESS****CANSO**

Mr. Salem A. Jahdli

Director ME Affairs
CANSO
Jeddah 21444
P.O. Box 15441-Jeddah 21444
KINGDOM OF SAUDI ARABIA
Fax:
Tel: (966) 267 177 17 ext. 1850
Mobile: (966-5)03356993
Email: salem.jahdli@canso.org

IATA

Mr. Achim Baumann

Director SO&I, MENA
P.O. Box 940587
Amman 11194 - JORDAN
Fax: 962 6 593 9912
Tel: (962-6) 5804256
Mobile: (972-79) 704 5556
Email: baumanna@iata.org

Mr. Bob Everest

V. P. Flt Ops Support
Emirates Group Headquarters
P.O. BOX 686
Dubai - UNITED ARAB EMIRATES
Fax: +971 4 2864085
Tel: +971 4 7084300
Mobile: +971 50 6244978
Email: bob.everest@emirates.com

Mr. Ekkehard Gutt

Aeronautical Services Manager
Emirates Group Headquarters
Flight Operations
P.O. Box 686
Dubai - UNITED ARAB EMIRATES
Fax: 971 4 286 4085
Tel: 971 4 708 4304
Mobile: +971 56 177 9743
Email: ekkehard.gutt@emirates.com

MIDANPIRG/13
History of the Meeting

NAME	TITLE & ADDRESS
Capt. Faysal M. Shaaban	IATA and Technical Affairs MID RCG-Member Beirut International Airport P.O. Box 206/62 Beirut - LEBANON Fax: (961-1) 623 045 Tel: (961-1) 622 132 Mobile: (961-3) 762 631 (971-5)56654547 Email: shaabanf@mea.com.lb fshaaban@airarabia.com
Mr. Mohammed Howsawi	Chief Flight Dispatch International Air Transport Association (IATA) P.O. Box 620 - cc921 Jeddah 21231 KINGDOM OF SAUDI ARABIA Tel: (966) 2 684 2551 Mobile: (966) 0504630884 Email: mhowsawi@saudiairlines.com
Mr. Peter J. Raw	Senior Manager ATM & Flight Planning Solutions Etihad Airways New Airport Road P.O. Box 35566 Abu Dhabi- UNITED ARAB EMIRATES Fax: 971 2575 8225 Tel: 971 2505 8132 Mobile: 971 50811 8348 Email: praw@etihad.ae
IFALPA	
Capt. Souhaïel Dallel	Executive Vice President - AFI/MID Region 1053 Tunis TUNIS Tel: (216) 71191101 Mobile: (216) 98320771 Email: Souhaïel.dallel@topnet.tn

MIDANPIRG/13
History of the Meeting

NAME**TITLE & ADDRESS****JEPPESEN**

Mr. Werner Kurz

Director International Relations
Jeppesen GmbH
Frankfurter Strasse 233, 63263
Neu-Isenburg - Germany
Fax: (49) 6102 50 7239
Tel: (49) 6102 50 8170
Mobile: (0173) 880 5515
Email: werner.kurz@jeppesen.com

MIDRMA

Mr. Fareed Abdullah Al Alawi

MIDRMA Manager
MIDRMA Office
P.O. Box 50468
KINGDOM OF BAHRAIN
Fax: (973) 1732 9956
Tel: (973) 1732 9054
Mobile: (973) 3965 1596
Email: falalawi@caa.gov.bh
midrma@midrma.com

MIDANPIRG/13
Report on Agenda Item 1

PART II: REPORT ON AGENDA ITEMS

REPORT ON AGENDA ITEM 1: ADOPTION OF THE PROVISIONAL AGENDA AND ELECTION OF FIRST VICE CHAIRPERSON

1.1 The meeting reviewed and adopted the Provisional Agenda as at Para 6 of the History of the Meeting.

1.2 The meeting recalled that Mr. Khaled Chamieh who retired lately from the Directorate General of Civil Aviation Lebanon, has been acting as First Vice-Chairperson of MIDANPIRG. Accordingly, the meeting unanimously elected Mr. Ahmed Al-Jallaf, Executive Director Air Navigation Services, General Civil Aviation Authority-UAE, as the new First Vice-Chairperson of MIDANPIRG to replace Mr. Chamieh.

MIDANPIRG/13
Report on Agenda Item 2.1

REPORT ON AGENDA ITEM 2: FOLLOW-UP ON THE OUTCOME OF MIDANPIRG/12 MEETING

**2.1 REVIEW OF ACTION TAKEN BY THE ANC ON THE
REPORT OF MIDANPIRG/12**

2.1.1 The Meeting was presented with actions taken by the Air Navigation Commission (ANC) during their review and approval of the Report of the Twelfth Meeting of MIDANPIRG held in Amman, Jordan, from 17 to 21 October 2010. The Meeting noted the specific actions taken by the ANC, and the follow-up by the States and Secretariat on Conclusions and Decisions of the Meeting as at **Appendices 2.1A, 2.1B, and 2.1C** to the Report on Agenda Item 2.1.

2.1.2 The meeting noted that the ANC appreciated the good work done by MIDANPIRG for the planning and implementation of air navigation which contributed to the improvement of safety and efficiency of air navigation within the MID Region.

2.1.3 The Meeting thanked the ANC for their valuable guidance on various activities of the MIDANPIRG and ensured that it would be taken into account in the development of its future work programme.

MIDANPIRG/13
Appendix 2.1A to the Report on Agenda Item 2.1

**OUTCOME OF THE TWELFTH MEETING OF THE MIDDLE EAST AIR NAVIGATION
PLANNING AND IMPLEMENTATION REGIONAL GROUP (MIDANPIRG/12)**

Jordan, from 17 to 21 October 2010

EXECUTIVE SUMMARY

1. Attended by seventy six participants from twelve States and four international organizations.
2. As a result of the establishment of RASG–MID, the meeting adopted the revised terms of reference of MIDANPIRG.
3. States and the MIDRMA were invited to take necessary measures to ban any aircraft without confirmed RVSM approval status from entering the RVSM airspace.
4. The MID Region height-keeping monitoring strategy was adopted.
5. RVSM in Baghdad FIR is scheduled to be implemented effective 10 March 2011, with Go/No-Go Decision on 15 December 2010.
6. MID States were urged to develop national plans to implement the transition from AIS to AIM.
7. States were invited to support the ICAO position at WRC–2012. ICAO to improve visibility to its position on WRC–2012.
8. Eight MID Region Metrics were adopted for performance monitoring of the AN systems.
9. States are to collect process and submit relevant data to support the MID Regional metrics.
10. The PBN implementation strategy and plan were updated which includes CDO.
11. MIDANPIRG adopted the Global Operational Data Link Document (GOLD).
12. States to expedite the implementation of QMS for MET in accordance with Annex 3 provisions.
13. MIDANPIRG to develop a Volcanic Ash Contingency Plan for the MID Region.
14. MIDANPIRG is considering the possibility of establishing a MID database to support regional traffic forecasting activities.
15. States to review their respective lists of identified deficiencies define their root causes and forward an action plan for their rectification to the MID Regional Office by 31 March 2011.

16. States were urged to adopt/incorporate the ICAO language proficiency requirements in their national regulations.

17. Continue to consider environmental issues in the planning and implementation of regional air navigation systems.

MIDANPIRG/13
Appendix 2.1B to the Report on Agenda Item 2.1

**TWELFTH MEETING OF THE MIDDLE EAST AIR NAVIGATION PLANNING AND
IMPLEMENTATION REGIONAL GROUP (MIDANPIRG/12)**

MIDANPIRG CONCLUSIONS/DECISIONS

AN ANALYSIS

1. The MIDANPIRG/12 Meeting developed a total of eighty outputs, comprising sixty one Conclusions and nineteen Decisions. These eighty outputs can be categorized into two levels of actions. The first level (seventy eight outputs), known as “implementations plans”, calls for action by Headquarters, the Regional Office, States and MIDANPIRG itself and results in activities that support the implementation of air navigation systems. The second level (two outputs; Conclusions 12/4 and 12/8), known as “implementation gaps”, calls for action specifically by Headquarters and results in activities that would involve further development of requisite provisions and/or guidance material.
2. Out of eighty outputs, twenty nine have been suggested for specific review by the ANC and are detailed in the Action Plan in **Appendix 2.1C** hereto. For ease of reference associated outputs (Conclusions/Decisions), if any, are also shown in the Action Plan. The selection criteria for twenty nine outputs for review by the ANC reflects inter alia key regional implementation issues, calls for interregional harmonization, refers to ICAO global programmes or requests for specific action by ICAO Headquarters.
3. With regard to the conclusions and decisions of the meeting which are not reflected in the Action Plan, follow-up action will be taken by the Secretary General in accordance with established practice. Each entry in the Action Plan is linked to the Strategic Objectives of the Organization for 2008-2010.

MIDANPIRG/13
Appendix 2.1C to the Report on Agenda Item 2.1

Implementation of select conclusions/decisions of MIDANPIRG/12 Meeting
— Action Plan —

Concl/Dec No. --- Strategic Objective *	Title of Conclusion	Text of Conclusion	Responsibility	Deliverable	Action Agreed by ANC on 10 March 2011 (ANC 186-7)	Reporting/ Completion date
C 12/1 A	ESTABLISHMENT OF RASGS – CONSEQUENT REVISION TO TOR OF MIDANPIRG	That, the revised terms of reference of MIDANPIRG at Appendix 3A to the Report on Agenda Item 3 be adopted and reflected also in the MIDANPIRG Procedural Handbook.	ICAO MID Regional Office	Revised TOR of MIDANPIRG	Noted and requests the ANC to consider how the reports and actions resulting from RASG meetings will be handled.	Completed
C 12/4 D	REQUIREMENT FOR ICAO GUIDANCE ON AERODROME OPERATIONAL MANAGEMENT PROCEDURES	That, an ICAO Guidance material on aerodrome operational management procedures is urgently requested as complementary to the implementation of the SARPs contained in Annex 14, Volume I.	ICAO HQ/ ANB/AGA	PANS- Aerodromes	Noted that the Secretariat is addressing this issue as a part of development of PANS-Aerodromes.	2013
C 12/8 D	QUALITY OF AERODROME AERONAUTICAL DATA AND COORDINATION BETWEEN AERODROME OPERATORS AND AIS	That, a) ICAO to consider development of additional guidance on the implementation of quality requirements for protection and reporting aerodrome-related aeronautical data in accordance with the SARPs contained in Annex 14, Volume I; and	ICAO HQ/ CNS/AIM	AIM Quality Manual	Noted that the Secretariat is addressing this issue as a part of development of AIM Quality Manual.	2011

Concl/Dec No. --- Strategic Objective *	Title of Conclusion	Text of Conclusion	Responsibility	Deliverable	Action Agreed by ANC on 10 March 2011 (ANC 186-7)	Reporting/ Completion date
		b) MID States to ensure proper coordination with the Aeronautical Information Services and aerodrome authorities/operators for the timely transfer of aerodrome operational data through Service Level Agreements (SLA), worldwide best practices, etc.	ICAO MID Regional office	State letter	Noted.	Completed
C 12/15 D	AIRCRAFT WITHOUT CONFIRMED RVSM APPROVAL STATUS	That, a) States and the MIDRMA be invited to take necessary measures to ban any aircraft without confirmed RVSM approval status from entering the RVSM airspace;	ICAO MID Regional office, MID RMA and States	Safe operation of RVSM	Noted.	Ongoing
		b) States be urged to report any case of handover at an RVSM Flight Level of an aircraft without confirmed RVSM approval status from adjacent ACCs to the ICAO MID Regional Office and the MIDRMA; and c) the MID RVSM Programme Managers monitor and follow up this subject at the national level, in order to ensure the efficient implementation of a) and b) above.	ICAO HQ / ANB/ATM	Monitoring of RVSM safety performance worldwide	Recognizing that non-approved RVSM aircraft entering RVSM airspace has become a global issue, requested the Secretariat to continue to monitor RVSM safety performance worldwide on an ongoing basis and address the relevant issues.	Ongoing

2.1C-3

Concl/Dec No. --- Strategic Objective *	Title of Conclusion	Text of Conclusion	Responsibility	Deliverable	Action Agreed by ANC on 10 March 2011 (ANC 186-7)	Reporting/ Completion date
C 12/16 A	MID RVSM SAFETY OBJECTIVES	That, the safety assessment of RVSM operations in the MID Region be based on the following safety objectives: a) Safety Objective 1: The risk of collision in the MID RVSM airspace due solely to technical height-keeping performance meets the ICAO Target Level of Safety (TLS) of 2.5×10^{-9} fatal accidents per flight hour; b) Safety Objective 2: The overall risk of collision due to all causes which includes the technical risk and all risk due to operational errors and in-flight contingencies in MID RVSM airspace meets the ICAO overall TLS of 5×10^{-9} fatal accidents per flight hour; and c) Safety Objective 3: address any safety-related issues raised in the SMR by recommending improved procedures and practices; and propose safety level improvements to ensure that any identified serious or risk-bearing situations do not increase and, where possible, that they decrease. This should set the	ICAO MID Regional office and States	Safety Objectives	Noted and complimented MIDANPIRG for meeting the overall TLS requirements.	Completed

Concl/Dec No. --- Strategic Objective *	Title of Conclusion	Text of Conclusion	Responsibility	Deliverable	Action Agreed by ANC on 10 March 2011 (ANC 186-7)	Reporting/ Completion date
		basis for a continuous assurance that the operation of RVSM will not adversely affect the risk of en-route mid-air collision over the years.				
D 12/19 + associated para 5.2.56 D	RVSM IMPLEMENTATION WITHIN BAGHDAD FIR	That, the Baghdad FIR RVSM Implementation Working Group (BFRI WG) is delegated the authority to take the Go/No-Go Decision for RVSM implementation within Baghdad FIR.	ICAO MID Regional office	RVSM implementation within Baghdad FIR.	Noted that RVSM has been implemented successfully in the Baghdad FIR at 00:01 UTC on 10 March 2011. Recognizing that, with this implementation, all of the MID Region FIRs are in RVSM airspace, the ANC appreciated the initiative of MIDANPIRG and congratulated on this accomplishment.	Completed
C 12/22 + associated C 12/23 D	SURVEY ON THE PROVISION OF SAR IN THE MID REGION	That, a) the ICAO MID Regional Office send a State Letter with a questionnaire to all MID States, prior to 15 Jan 2011, to collect information on the status of implementation of SAR provisions in the MID Region and update the list of Air Navigation Deficiencies accordingly;	ICAO MID Regional office ICAO HQ/ ANB/ATM	State Letter with a questionnaire Advice to other ICAORDs to conduct a survey on the status of	Noted. Noted and that the Secretariat could consider carrying out a similar survey in other regions.	Completed 2011

2.1C-5

Concl/Dec No. --- Strategic Objective *	Title of Conclusion	Text of Conclusion	Responsibility	Deliverable	Action Agreed by ANC on 10 March 2011 (ANC 186-7)	Reporting/ Completion date
		b) States send their replies to the ICAO MID Regional Office prior to 15 February 2011; and c) in case of non-receipt of reply by the agreed deadline, concerned States will be added to the list of Air Navigation Deficiencies for non-provisions of required SAR services.		implementation of SAR provisions.		
C 12/47 D	MID REGION PERFORMANCE METRICS	That: a) the following MID Region Metrics be adopted for performance monitoring of the air navigation systems: MID Metric 1: Number of accidents per 1,000 000 departures; MID Metric 2: Percentage of certified international aerodromes; MID Metric 3: Number of Runway incursions and excursions per year; MID Metric 4: Number of States reporting necessary data to the MID RMA on regular basis and in a timely manner; MID Metric 5: The overall vertical-collision risk in MID RVSM airspace;	ICAO MID Regional office ICAO HQ/ ANB	MID Region metrics for efficiency A common set of performance metrics applicable to all ICAO regions including guidance material for collection of data.	Noted. The WG/SRP requests the ANC to call upon the Secretariat to complete the task of developing a set of performance metrics applicable to all ICAO Regions along with guidance for the collection of data.	Completed September 2011

Concl/Dec No. --- Strategic Objective *	Title of Conclusion	Text of Conclusion	Responsibility	Deliverable	Action Agreed by ANC on 10 March 2011 (ANC 186-7)	Reporting/ Completion date
		MID Metric 6: Percentage of air navigation deficiencies priority “U” eliminated; MID Metric 7: Percentage of instrument Runway ends with RNP/RNAV approach procedure; and MID Metric 8: Percentage of en-route PBN routes implemented in accordance with the regional PBN plan. b) the MIDANPIRG subsidiary bodies monitor the Metrics related to their work programmes; develop associated performance targets and provide feed-back to MIDANPIRG				

2.1C-7

Concl/Dec No. --- Strategic Objective *	Title of Conclusion	Text of Conclusion	Responsibility	Deliverable	Action Agreed by ANC on 10 March 2011 (ANC 186-7)	Reporting/ Completion date
D 12/49 D	REVIEW OF THE MID AIR NAVIGATION PLAN (ANP)	That, in support to ICAO efforts to improve regional ANPs, the MIDANPIRG subsidiary bodies: a) carry out a complete review of the MID Basic ANP and FASID parts related to their Terms of Reference (TOR) and Work Programme; b) develop revised draft structure and content of the Basic ANP in order to reconcile it with the ATM Operational Concept, the Global Plan provisions and the performance based approach; c) identify the need for and development of those FASID Tables necessary to support the implementation of a performance-based global air navigation systems; and d) report progress to MIDANPIRG/13.	ICAO HQ/ ANB/SAST	Revised MID ANP in e-format	Noted and that the Secretariat will take into account the MIDANPIRG input in transitioning from P-(Paper based)-ANPs to e-(electronic based)-ANPs for all regional air navigation plans.	2012
C 12/52 + associated C 12/51, C 12/53, C 12/54, C 12/55	ICAO NEW FLIGHT PLAN FORMAT IMPLEMENTATION	That, MID States be urged to: a) secure necessary budget for the implementation of the ICAO New FPL Format; b) initiate necessary negotiation with their ATC systems manufacturers/ vendors for the	ICAO HQ/ ANB/ATM	Global harmonization through monitoring of implementation status on ICAO FITS portal.	Noted and requested the Secretariat to continue monitoring the implementation status of every State on ICAO FITS Portal and ensure global harmonization for a transition to NEW Flight Plan.	November 2012

Concl/Dec No. --- Strategic Objective *	Title of Conclusion	Text of Conclusion	Responsibility	Deliverable	Action Agreed by ANC on 10 March 2011 (ANC 186-7)	Reporting/ Completion date
D		implementation of necessary hardware/software changes, as soon as possible; c) develop National PFF related to the ICAO new FPL format project with clearly established milestones with timelines; and d) take all necessary measures to comply with the applicability date of 15 November 2012.	ICAO HQ/ ANB/ATM	Global report to ANC.	Requested the Secretariat to present a global report on implementation of FPL status worldwide.	Completed (Global report presented to ANC on 21 January 2011)
D 12/72 D	VOLCANIC ASH CONTINGENCY PLAN FOR THE MID REGION	That, the ATM/SAR/AIS Sub-Group and MET Sub-Group of the MIDANPIRG be invited to develop a draft Volcanic Ash Contingency Plan for the MID Region for consideration at MIDANPIRG/13.	ICAO MID Regional office and ATM/SAR/ AIS Sub-Group and MET Subgroup of MIDANPIRG	Volcanic Ash Contingency Plan	Noted and requested the Secretariat to expedite the development of a volcanic ash regional contingency plan in coordination with all parties concerned.	March 2012
C 12/75 D	ELIMINATION OF AIR NAVIGATION DEFICIENCIES IN THE MID REGION	That, MID States be urged to: a) review their respective lists of identified deficiencies, define their root causes and forward an action plan for rectification of outstanding deficiencies to the ICAO MID Regional Office prior to 31 March 2011; b) use the online facility offered by the ICAO MID Air Navigation Deficiency Database (MANDD) for submitting online requests for	ICAO MID Regional office and States	Action plan for rectification of outstanding deficiencies.	Noted and requested the Secretariat to accord highest priority in its work programme to the urgent elimination of the safety-related deficiencies. States reflected in the MIDANPIRG list of deficiencies are urged to establish action plans with fixed target dates. Also, commitment to the elimination of deficiencies should be	March 2011

2.1C-9

Concl/Dec No. --- Strategic Objective *	Title of Conclusion	Text of Conclusion	Responsibility	Deliverable	Action Agreed by ANC on 10 March 2011 (ANC 186-7)	Reporting/ Completion date
		addition, update, and elimination of air navigation deficiencies; c) accord high priority to eliminate all air navigation deficiencies with emphasis on those with priority “U”; in particular by allocating the necessary budget to ensure that their Civil Aviation Authorities have and retain a sufficient number of qualified technical personnel, who are provided with appropriate initial, on-the-job and recurrent training; and d) seek support from regional and international organizations (i.e. ACAC, GCC, etc.) for the elimination of identified air navigation deficiencies.			pursued through all available mechanisms.	
C 12/78 + associated C 12/79 D	USE OF THE ENGLISH LANGUAGE AND STANDARD ICAO PHRASEOLOGY	That, in order to expedite the process of implementation of the ICAO Language Proficiency requirements, MID States that have not already done so, be urged to: a) adopt/incorporate the ICAO language proficiency requirements (Amendment 164 to Annex 1) in their national regulations;	ICAO MID Regional office and States	Implementation of the ICAO language proficiency requirements.	Noted and that to date eight out of fourteen MID States have submitted implementation plans.	Ongoing

Concl/Dec No. --- Strategic Objective *	Title of Conclusion	Text of Conclusion	Responsibility	Deliverable	Action Agreed by ANC on 10 March 2011 (ANC 186-7)	Reporting/ Completion date
		b) assess current language proficiency level of air traffic controllers and pilots according to the ICAO rating scale; c) ensure that all stakeholders (pilots, air traffic controllers, language teachers, regulators, etc.) are familiar with the ICAO language proficiency requirements; d) ensure that their air traffic controllers and pilots use the standard ICAO phraseology in aeronautical communication; and e) take necessary measures to ensure that those individuals demonstrating language proficiency at the Operational Level 4 are re-evaluated every three years.				

* **Note:** ICAO established the following Strategic Objectives for the period 2005-2010:

- A:** **Safety** - Enhance global civil aviation safety;
- B:** **Security** - Enhance global civil aviation security;
- C:** **Environmental Protection** - Minimize the adverse effect of global civil aviation on the environment;
- D:** **Efficiency** - Enhance the efficiency of aviation operations;
- E:** **Continuity** - Maintain the continuity of aviation operations;
- F:** **Rule of Law** - Strengthen law governing international civil aviation.

MIDANPIRG/13
Report on Agenda Item 2.2

REPORT ON AGENDA ITEM 2: FOLLOW-UP ON THE OUTCOME OF MIDANPIRG/12 MEETING

2.2 REVIEW STATUS OF MIDANPIRG/12 CONCLUSIONS AND DECISIONS

2.2.1 The meeting reviewed the progress made on the implementation of MIDANPIRG/12 Conclusions and Decisions. The actions taken by States and the Secretariat on the above mentioned Conclusions and Decisions were reviewed and the updated list is provided at **Appendix 2.2A** to the Report on Agenda Item 2.2.

MIDANPIRG/13
Appendix 2.2A to the Report on Agenda Item 2.2

FOLLOW-UP ACTION PLAN ON MIDANPIRG/12 CONCLUSIONS AND DECISIONS

CONCLUSIONS AND DECISIONS	FOLLOW-UP	TO BE INITIATED BY	DELIVERABLE	TARGET DATE	REMARKS
CONC.12/1: ESTABLISHMENT OF RASGs – CONSEQUENT REVISION TO TOR OF MIDANPIRG That, the revised terms of reference of MIDANPIRG as at the Appendix 3A to the Report on Agenda Item 3 be adopted and reflected also in the MIDANPIRG Procedural Handbook	Implementation of the Conclusion	ICAO	Revised TOR	October 2010	Closed
CONC. 12/2: INCREASING THE EFFICIENCY OF THE MIDANPIRG SUBSIDIARY BODIES That, with a view to maintain the continuity in the activity of the MIDANPIRG subsidiary bodies and increase their efficiency: a) States be invited to nominate for each MIDANPIRG subsidiary body Experts/Specialists as Members of the body concerned to fully contribute to the work of this body; and b) the specialists nominated for membership in a MIDANPIRG subsidiary body, act as focal points within their Civil Aviation Administration for all issues and follow-up activities related to the Work Programme of that body.	Implementation of the Conclusion	ICAO States	State Letter Nomination of Experts/Specialist	January 2011	Actioned/Ongoing SL Ref.: ME 3/56 - 11/041 dated 7 March 2011 6 States replied
CONC. 12/3: UPDATE OF THE MIDANPIRG PROCEDURAL HANDBOOK That, the ICAO MID Regional Office: a) proceed with the amendment of concerned pages of the MIDANPIRG Procedural Handbook to reflect the changes approved by MIDANPIRG/12; and b) publish the updated version of the Handbook on the ICAO MID website before 31 December 2010.	Update the MIDANPIRG Procedural Handbook and post it on the web	ICAO	Fifth edition of the Procedural Handbook	January 2011	Closed

MIDANPIRG/13-REPORT
APPENDIX 2.2A

2.2A-2

CONCLUSIONS AND DECISIONS	FOLLOW-UP	TO BE INITIATED BY	DELIVERABLE	TARGET DATE	REMARKS
CONC. 12/4: REQUIREMENT FOR ICAO GUIDANCE ON AERODROME OPERATIONAL MANAGEMENT PROCEDURES That, an ICAO Guidance material on aerodrome operational management procedures is urgently requested as complementary to the implementation of the SARPs contained in Annex 14, Vol. I	Implementation of the Conclusion	ICAO	PANS-Aerodromes	2013	Closed
DEC. 12/5: ESTABLISHMENT OF AERODROME CERTIFICATION IMPLEMENTATION TASK FORCE That, an Aerodromes Certification Implementation Task Force (ADCI TF) be established in accordance with the agreed Terms of Reference (TOR):	Implementation of the Conclusion	MIDANPIRG/12	TF established	October 2010	Closed First meeting planned for Oct. 2012
DEC. 12/6: SURVEY ON AERODROME EMERGENCY PLAN AND EMERGENCY OPERATION CENTRE That, a) a survey on Aerodrome Emergency Plan and Emergency Operation Centre be conducted in the MID Region; and b) the result of the survey be analyzed by ICAO MID Regional Office and presented to AOP SG/8 for further course of actions as appropriate.	Implementation of the Conclusion	ICAO States AOP SG/8	State Letter AOP SG/8 Report	May 2011 December 2011	Actioned/Ongoing SL Ref.: ME 3/56. 4- 11/275 dated 2 November 2011 4 States replied
CONC. 12/7: RUNWAY SAFETY That, a) ICAO to consider organizing a Seminar/Workshop on Runway Safety during the year 2011, with focus on runway excursion prevention measures; and b) MID States be encouraged to host the Seminar/Workshop.	Implementation of the Conclusion	ICAO	Conduct a Seminar	December 2011	Closed Regional Runway Safety Seminar scheduled 14-16 May 2012 in Amman, Jordan

CONCLUSIONS AND DECISIONS	FOLLOW-UP	TO BE INITIATED BY	DELIVERABLE	TARGET DATE	REMARKS
CONC. 12/8: QUALITY OF AERODROME AERONAUTICAL DATA AND COORDINATION BETWEEN AERODROME OPERATORS AND AIS That, a) ICAO to consider development of additional guidance on the implementation of quality requirements for protection and reporting aerodrome-related aeronautical data in accordance with the SARPs contained in Annex 14, Volume I; and b) MID States to ensure proper coordination with the Aeronautical Information Services and aerodrome authorities/operators for the timely transfer of aerodrome operational data through Service Level Agreements (SLA), worldwide best practices, etc	Implementation of the Conclusion	ICAO States	Guidance Material Service Letter Agreements (SLA) AOP SG/8 Report	December 2013 December 2011	Closed
CONC. 12/9: RNAV 5 IMPLEMENTATION IN THE MID REGION That, States that have not yet done so, be urged to: a) update their AIP to change RNP 5 to RNAV 5; and b) take necessary measures to implement RNAV 5 area in the level band FL 160 - FL460 (inclusive).	Implementation of the Conclusion	ICAO States	State Letter update AIP Implement RNAV 5 (FL 160-FL460)	January 2011	Closed SL Ref.: AN 6/29 – 10/432 dated 16 December 2010 & AN 6/29 – 11/141 dated 7 June 2011

MIDANPIRG/13-REPORT

APPENDIX 2.2A

2.2A-4

CONCLUSIONS AND DECISIONS	FOLLOW-UP	TO BE INITIATED BY	DELIVERABLE	TARGET DATE	REMARKS
CONC. 12/10: ALLOCATION OF FIVE-LETTER-NAME CODES IN THE MID REGION That, prior to 31 March 2011, States that have not yet done so: a) assign ICARD ATS Route Planners, in order to make use of the ICARD system and improve the process of allocation of 5LNCs; b) take necessary action in order for their designated ICARD Route Planner(s) to register to the ICAO ICARD 5LNC web-based System; c) review their list of allocated 5LNCs and identify the non-used, duplicate and non-ICAO 5LNCs, and inform the ICAO MID Regional Office accordingly for necessary action; d) release those allocated 5LNCs which were replaced and/or are no longer used; and e) update the ICARD database by adding the missing information (missing latitude and longitude coordinates, etc).	Implement the Conclusion	ICAO States	State Letter Assign ATS Route Planner. Register to ICAO ICARD Update ICARD	January 2011 March 2011	Closed SL Ref.: AN 8/15.2 – 10/444 dated 22 December 2010
CONC. 12/11: MEMBERSHIP OF THE MIDRMA That, Bahrain, Egypt, Iran, Iraq, Jordan, Kuwait, Lebanon, Oman, Saudi Arabia, Syria, UAE and Yemen committed themselves to participate in the MIDRMA project, through the signature of the Memorandum of Agreement (MOA).	Implement the Conclusion	MIDANPIRG/12	Signature of MOA MIDRMA Board/10 Report	October 2010	Closed
CONC. 12/12: MIDRMA FUNDING MECHANISM That, a) the activities of the MIDRMA be ensured through contributions from all MIDRMA Member States, which could be recovered in accordance with ICAO Policies on charges for Airports and Air Navigation Services (Doc 9082), in coordination with IATA; b) the MIDRMA Member States pay their contributions on a yearly basis not later than 1 November of each year based on the invoices issued by ICAO;	MIDRMA Board and ICAO to Follow-up implementation with concerned States	MIDANPIRG	Updated funding mechanism approved by MIDANPIRG/12	October 2010	Closed

CONCLUSIONS AND DECISIONS	FOLLOW-UP	TO BE INITIATED BY	DELIVERABLE	TARGET DATE	REMARKS
c) ICAO ensure that the year of contribution is clearly indicated in the invoices related to the MIDRMA Project; d) The annual amounts to be paid by the MIDRMA Member States are, as follows: i) Bahrain, Egypt, Iran, Oman and Saudi Arabia annual contribution is US\$ 30,000 each; and ii) Iraq, Jordan, Kuwait, Lebanon, Syria and Yemen annual contribution is US\$ 10,000 each; e) UAE is exempted from the payment of contributions to the MIDRMA for the first ten (10) years of operation (up-to end of 2015); f) the MIDRMA Member States comply with the payment instructions contained in the invoices sent by ICAO HQ (Project code, fund number, invoice number, Bank information, etc); g) the budget estimate for the MIDRMA operation for each year be prepared/approved by the MIDRMA Board before 31 May of previous year; h) in case a MIDRMA Member State does not pay the contribution to the MIDRMA Project in a timely manner, the MIDRMA Board might consider to take penalty measures against this State (exclusion from the MID RVSM Safety Monitoring Report, review of the Membership, etc); i) the MIDRMA Board Chairman, in compliance with the Custodian Agreement and based on the agreed funding mechanism and the estimation of the yearly operating budget of the MIDRMA, be delegated the authority to certify on behalf of the MIDRMA Member States the requests for advance payment from the MIDRMA account managed by ICAO HQ to the MIDRMA Bank account in Bahrain, as decided by the MIDRMA Board;					

MIDANPIRG/13-REPORT

APPENDIX 2.2A

2.2A-6

CONCLUSIONS AND DECISIONS	FOLLOW-UP	TO BE INITIATED BY	DELIVERABLE	TARGET DATE	REMARKS
j) the bills related to the MIDRMA expenses be certified by the MIDRMA Board Chairman and reviewed by the MIDRMA Board at each of its meetings; and k) the MIDRMA funding mechanism be revised by the MIDRMA Board when necessary.					
CONC. 12/13: MIDRMA STAFFING That, in accordance with the MIDRMA Memorandum of Agreement (MOA): a) the MIDRMA staff is composed of local personnel provided by Bahrain, as follows: i) MIDRMA Manager/Team Leader (Part Time) ii) MIDRMA Officer (Full Time) b) the salaries of the MIDRMA staff are paid as monthly lump sums as follows: i) MIDRMA Manager/Team Leader (Part Time) (500 BD) ii) MIDRMA Officer (Full Time) (1,500 BD) c) the MIDRMA staff salaries be revised by the MIDRMA Board when necessary and as appropriate; and d) Bahrain is responsible of all administrative issues related to the MIDRMA staff, in coordination with the MIDRMA Board Chairman.	Bahrain and the MIDRMA Board to follow up implementation of the Conclusion	MIDANPIRG	MIDRMA staffing approved by MIDANPIRG/12	October 2010	Closed
DEC. 12/14: MID RVSM SCRUTINY GROUP That, the MID RVSM Scrutiny Group is established with Terms of Reference (TOR) as at Appendix 5.2C to the Report on Agenda Item 5.2	MIDRMA to organize Scrutiny Group meetings	MIDANPIRG	Establishment of the Scrutiny Group approved by MIDANPIRG/12	October 2010	Closed

CONCLUSIONS AND DECISIONS	FOLLOW-UP	TO BE INITIATED BY	DELIVERABLE	TARGET DATE	REMARKS
CONC. 12/15: AIRCRAFT WITHOUT CONFIRMED RVSM APPROVAL STATUS That, a) States and the MIDRMA be invited to take necessary measures to ban any aircraft without confirmed RVSM approval status from entering the RVSM airspace; b) States be urged to report any case of handover at an RVSM Flight Level of an aircraft without confirmed RVSM approval status from adjacent ACCs to the ICAO MID Regional Office and the MIDRMA; and c) the MID RVSM Programme Managers monitor and follow up this subject at the national level, in order to ensure the efficient implementation of a) and b) above.	Implement the Conclusion	ICAO MIDRMA States	State Letter Report aircraft with non confirmed RVSM approval status	January 2011 Ongoing	Actioned/Ongoing SL Ref.: AN 6/5.10.15A – 11/086 dated 12 April 2011 (Replaced and superseded by Conc. 13/69)
CONC. 12/16: MID RVSM SAFETY OBJECTIVES That, the safety assessment of RVSM operations in the MID Region be based on the following safety objectives: a) Safety Objective 1: The risk of collision in the MID RVSM airspace due solely to technical height-keeping performance meets the ICAO Target Level of Safety (TLS) of 2.5×10^{-9} fatal accidents per flight hour; b) Safety Objective 2: The overall risk of collision due to all causes which includes the technical risk and all risk due to operational errors and in-flight contingencies in MID RVSM airspace meets the ICAO overall TLS of 5×10^{-9} fatal accidents per flight hour; and c) Safety Objective 3: address any safety-related issues raised in the SMR by recommending improved procedures and practices; and propose safety level improvements to ensure that any identified serious or risk-bearing situations do not increase and, where possible, that they decrease. This should set the basis for a continuous assurance that the operation of RVSM will not	Follow up the implementation of the safety objectives	MIDRMA MIDANPIRG	SMR 2012	November 2011	Closed

MIDANPIRG/13-REPORT

APPENDIX 2.2A

2.2A-8

CONCLUSIONS AND DECISIONS	FOLLOW-UP	TO BE INITIATED BY	DELIVERABLE	TARGET DATE	REMARKS
adversely affect the risk of en-route mid-air collision over the years.					
CONC. 12/17: MID REGION HEIGHT-KEEPING MONITORING STRATEGY That, the MID Region height-keeping monitoring Strategy is adopted as at Appendix 5.2D to the Report on Agenda Item 5.2.	The MIDRMA Board and the ATM/SAR/AIS SG to follow up Implementation of the Strategy	MIDANPIRG	Strategy approved by MIDANPIRG/12	October 2010	Actioned/Ongoing (Replaced and superseded by Conc. 13/70)
CONC. 12/18: MID RVSM SMR 2012 That, a) the FPL/traffic data for the period 1-31 January 2011 be used for the development of the MID RVSM Safety Monitoring Report (SMR 2012); b) only the appropriate Flight Data form available on the MIDRMA website (www.midrma.com) should be used for the provision of FPL/traffic data to the MIDRMA; and c) the draft version of the MID RVSM SMR 2012 be ready before 30 September 2011 for review by the ATM/SAR/AIS SG/12 meeting.	Implement the Conclusion	ICAO MIDRMA	State Letter Draft SMR	December 2010 September 2011	Closed SL Ref.: AN 6/5.10.15A – 10/437 dated 19 December 2010
DEC. 12/19: RVSM IMPLEMENTATION WITHIN BAGHDAD FIR That, the Baghdad FIR RVSM Implementation Working Group (BFRI WG) is delegated the authority to take the Go/No-Go Decision for RVSM implementation within Baghdad FIR.	Implement the Decision	BFRI WG	BFRI WG/2 Report Go/No-Go decision	January 2011	Closed
CONC. 12/20: FDPS SSRCA REQUIRED FUNCTIONALITY That, MID States be encouraged to consider the upgrade of their FDPSs to include the directional assignment capability in conjunction with ICAO New Flight Plan (INFPL) upgrade.	Implement the Conclusion	States	Upgrade of FDPS	November 2012	Closed

CONCLUSIONS AND DECISIONS	FOLLOW-UP	TO BE INITIATED BY	DELIVERABLE	TARGET DATE	REMARKS
CONC. 12/21: MID STRATEGY ON SSR CODE ALLOCATION ISSUES That, MID States adopt the MID strategy in order to improve the MID SSR Code Allocation System as at Appendix 5.2H to the Report on Agenda Item 5.2.	Implement the Conclusion	SSRCA SG	SSRCA SG/4 Report	September 2011	Actioned/Ongoing SLs dated 14 Dec. 2010 and 8 Jun 2011 (Replaced and superseded by Conc. 13/6)
CONC 12/22: SURVEY ON THE PROVISION OF SAR IN THE MID REGION That, a) the ICAO MID Regional Office send a State Letter with a questionnaire to all MID States, prior to 15 Jan 2011, to collect information on the status of implementation of SAR provisions in the MID Region and update the list of Air Navigation Deficiencies accordingly; b) States send their replies to the ICAO MID Regional Office prior to 15 February 2011; and c) in case of non-receipt of reply by the agreed deadline, concerned States will be added to the list of Air Navigation Deficiencies for non-provisions of required SAR services.	Implement the Conclusion	ICAO and States	State Letter Reply to survey	15 January 2011 15 February 2011	Closed SLs dated 16 Dec 2010 and 7 Jun 2011
CONC. 12/23: SAR POINT OF CONTACT (SPOC) AND 406MHZ BEACON That, MID States: a) designate a national SAR Point of Contact; b) take appropriate action to establish a register for 406 MHz ELT and share the data with International 406 MHz Beacon Registration Database; c) designate to the Cospas-Sarsat Secretariat a SAR Point of Contact; and	Follow-up Implementation of Conclusion	ICAO States	State Letter Data base Beacon upgrades and registration Focal points	2011 2011	Closed SLs dated 16 Dec 2010 and 7 June 2011

MIDANPIRG/13-REPORT

APPENDIX 2.2A

2.2A-10

CONCLUSIONS AND DECISIONS	FOLLOW-UP	TO BE INITIATED BY	DELIVERABLE	TARGET DATE	REMARKS
d) update the ICAO MID Regional Office on their implementation status.					
DEC. 12/24: DISSOLVE THE SAR AD-HOC WORKING GROUP (AWG) That, the SAR AWG be dissolved and the ATM/SAR/AIS SG is to follow the SAR requirements and issues.	Implement the Decision	MIDANPIRG/12	Dissolve WG	October 2010	Closed
CONC. 12/25: CIVIL/MILITARY COOPERATION That, in order to facilitate effective civil/military cooperation and joint use of airspace in accordance with ICAO provisions, and in support of the ICAO's vision for an integrated, harmonized and globally interoperable air traffic management system as laid out in the ATM Operational Concept and in the Global Air Navigation Plan, MID States that have not yet done so, be urged to: a) manage the airspace in a flexible manner with an equitable balance between civil and military users through strategic coordination and dynamic interaction, in order to open up segregated airspace when it is not being used for its originally-intended purpose and allow for better airspace management and access for all users according to their needs; b) develop necessary institutional arrangements to foster civil/military cooperation; and c) take steps and arrange as necessary for the Military authorities to be: i) fully involved in the airspace planning and management process; ii) aware of the new developments in civil aviation; and iii) involved in national, regional and international aviation meetings, workshops, seminars and training sessions, as appropriate.	Follow-up Conclusion Implementation	States	Input from States Involvement of military in civil airspace management processes Civil/military coordination and cooperation	November 2011 Ongoing Ongoing	Actioned/Ongoing SL AN6/13-11/137 dated 2 June 2011 (Re-iterated)

CONCLUSIONS AND DECISIONS	FOLLOW-UP	TO BE INITIATED BY	DELIVERABLE	TARGET DATE	REMARKS
CONC. 12/26: UNCOORDINATED FLIGHTS OVER THE RED SEA AREA That, the ICAO MID Regional Office process a Proposal for Amendment to the Supplementary Procedures (Doc 7030) in order to include the procedures to be followed by all civil uncoordinated flights and, to the extent practicable, by military aircraft operating over the Red Sea Area, as shown at Appendix 5.2L to the Report on Agenda Item 5.2.	Implement the Conclusion	ICAO	Amendment of Doc 7030	January 2011	Closed
CONC. 12/27: IMPROVEMENT OF THE ADHERENCE TO THE AIRAC SYSTEM That, in order to improve the adherence to the AIRAC System, States, that have not yet done so, be urged to: a) fully comply with the AIRAC procedures, in accordance with the provisions of Annex 15 and the MID Basic ANP Chapter VIII; c) organize awareness campaigns involving AIS and all technical Departments providing the raw data to the AIS for promulgation; and c) arrange for the signature of Service Level Agreements (SLA) between AIS and the data originators.	Implement the Conclusion	ICAO States	State Letter Feedback from States	February 2011 June 2011	Closed SL dated 12 April 2011
CONC. 12/28: eTOD CHECKLIST That, MID States be encouraged to use the eTOD checklist at Appendix 5.3B to the Report on Agenda Item 5.3 in order to assist them in the process of planning and implementation of the eTOD provisions.	Implement the Conclusion	ICAO States	State Letter Feedback from States	February 2011 June 2011	Closed SL Ref.: AN 8/2.4 – 11/094 dated 19 April 2011

MIDANPIRG/13-REPORT

APPENDIX 2.2A

2.2A-12

CONCLUSIONS AND DECISIONS	FOLLOW-UP	TO BE INITIATED BY	DELIVERABLE	TARGET DATE	REMARKS
CONC. 12/29: eTOD AWARENESS CAMPAIGNS That, for the sake of an efficient and harmonized implementation of eTOD, MID States be invited to organize, at the National Level and, to the extent possible co-operatively, awareness campaigns and training programmes (seminars, workshops, etc) to promote and expedite the process of eTOD implementation.	Implement the Conclusion	ICAO States	State Letter Feedback from States	February 2011 June 2011	Closed SL dated 19 April 2011
DEC. 12/30: DISSOLUTION OF THE eTOD WORKING GROUP That, noting that the majority of the tasks assigned to the eTOD Working Group have been completed: a) the eTOD Working Group is dissolved; and b) the eTOD tasks which have not yet been completed be included into the Work Programme of the AIS/MAP Task Force.	Implement the Decision	MIDANPIRG/12	Dissolve eTOD WG	October 2010	Closed
CONC. 12/31: AWARENESS CAMPAIGNS AND TRAINING PROGRAMMES ON QMS That, MID States be invited to organize, at the National level, awareness campaigns and training programmes with the support of ICAO and the QMS Implementation Action Group (QMS AG), to promote and expedite the process of implementation of QMS for AIS.	Implement the Conclusion	ICAO States	State Letter Feedback from States	February 2011 June 2011	Actioned/Ongoing SL dated 12 April 2011 (Replaced and superseded by Conc. 13/15)
DEC 12/32: TERMS OF REFERENCE OF THE QMS IMPLEMENTATION ACTION GROUP That, the Terms of Reference of the QMS Implementation Action Group (QMS AG) be updated as at Appendix 5.3G to the Report on Agenda Item 5.3.	Implement the Decision	MIDANPIRG	Updated TOR	October 2010	Closed

CONCLUSIONS AND DECISIONS	FOLLOW-UP	TO BE INITIATED BY	DELIVERABLE	TARGET DATE	REMARKS
DEC.12/33: TERMS OF REFERENCE OF THE AIS AUTOMATION ACTION GROUP That, the Terms of Reference of the AIS Automation Action Group (AISA AG) be updated as at Appendix 5.3H to the Report on Agenda Item 5.3.	Implement the Decision	MIDANPIRG	Updated TOR	October 2010	Closed
CONC.12/34: TRANSITION FROM AIS TO AIM That, recognizing the limitations of the current AIS, which does not meet the new global ATM system requirements envisioned by the ATM Operational Concept, and taking into consideration the ICAO Roadmap for the transition from AIS to AIM: a) MID States, that have not yet done so, be urged to develop national plans to implement the transition from AIS to AIM and send them to the ICAO MID Regional Office before 31 March 2011; and b) the AIS/MAP Task Force monitor the progress of transition from AIS to AIM in the MID Region and supports regional and national planning.	Implement the Conclusion	ICAO States AIS/MAP TF	State Letter National Plans AIS/MAP TF/6 Report	February 2011 April 2011	Closed SL Ref.: AN 8/4 – 11/091dated 14 April 2011
DEC. 12/35: PLANNING FOR THE TRANSITION FROM AIS TO AIM That, based on the ICAO Global ATM Operational Concept and the ICAO Roadmap for the transition from AIS to AIM, the AIS/MAP Task Force: a) develop performance goals for the transition from AIS to AIM in the MID Region and identify achievable Milestones; and b) carry out a review of the AIS parts of the MID Basic ANP and FASID in order to introduce/develop planning material related to the transition from AIS to AIM.	Implement the Decision	AIS/MAP TF	AIM Performance goals Draft Proposal for Amendment to the MID ANP (Part AIM)	October 2011	Closed

MIDANPIRG/13-REPORT
APPENDIX 2.2A

2.2A-14

CONCLUSIONS AND DECISIONS	FOLLOW-UP	TO BE INITIATED BY	DELIVERABLE	TARGET DATE	REMARKS
CONC. 12/36: MID AIM SEMINAR That, with a view to provide States with a better understanding of the planning and implementation issues related to the transition from AIS to AIM: a) a MID AIM Seminar be organized in 2012; b) ICAO coordinate with Egypt for the hosting of the Seminar; and c) MID States be encouraged to participate actively in this event.	ICAO to follow up with Egypt for the organization of the Seminar	ICAO Egypt	Seminar	2012	Closed Seminar planned to be held in Cairo, 11-13 June 2012
DEC. 12/37: TERMS OF REFERENCE OF THE AIS/MAP TASK FORCE That, the Terms of Reference and Work Programme of the AIS/MAP Task Force be updated as at Appendix 5.3I to the Report on Agenda Item 5.3.	Implement the Decision	MIDANPIRG	Updated TOR	October 2010	Closed (Replaced and superseded by Dec 13/22)
CONC. 12/38: POSTING OF AMHS PLANS IN AMC That, MID States be encouraged to post their AMHS implementation plans on the European ATS Messaging Management Centre (AMC).	Follow-up the posting of Plan on AMC	ICAO States	State Letter AMHS plans Posted	February 2011	Actioned/Ongoing SL AN 7/5.1 – 11/016 dated 20 Jan. 2011 (Replaced and superseded by Conc. 13/25 and 13/26)
CONC. 12/39: MID IP NETWORK SURVEY That, MID States be urged to complete the MID IP Network survey as at Appendix 5.4A to the Report on Agenda Item 5.4 and send to ICAO MID Regional Office by February 2011.	Follow-up in IP Network in MID Region	ICAO States	State Letter Completed survey	February 2011	Actioned/Ongoing SL AN 7/5.1 – 11/016 dated 20 Jan. 2011 (Replaced and superseded by Conc. 13/23)

CONCLUSIONS AND DECISIONS	FOLLOW-UP	TO BE INITIATED BY	DELIVERABLE	TARGET DATE	REMARKS
CONC.12/40: USE OF PUBLIC INTERNET IN THE MID REGION That MID States be encouraged to: a) follow the guidance Appendix 5.4B to the Report on Agenda Item 5.4, when using the public internet for critical aeronautical communication; and b) provide to the ICAO MID Regional Office, the inventory on the public internet usage ; as at Appendix 5.4C to the Report on Agenda Item 5.4 by 20 February 2011.	Implement the Conclusion	States	State Letter Inventory of public internet ATN/IPS WG report	February 2011 March 2011	Closed AN 7/5.1 – 11/016 dated 20 Jan. 2011
DEC. 12/41: REVISED NAME AND TOR OF THE IPS WG That, the IPS WG is renamed as ATN/IPS WG with same members; and its terms of reference and work programme of the ATN/IPS Working Group be updated as at Appendix 5.4D to the Report on Agenda Item 5.4.	Implement the Decision	MIDANPIRG/12	Revised TOR	October 2010	Closed (Replaced and superseded by Dec. 13/28)
DEC.12/42: DISSOLVE THE AD-HOC ACTION GROUP FOR THE SUPPORT OF AERONAUTICAL FREQUENCY BANDS That, the Ad-Hoc action group for the support of Aeronautical frequency bands is dissolved and its task to be carried by the CNS SG.	Implement the Decision	MIDANPIRG/12	Dissolve AD-HOC Group	October 2010	Closed
CONC. 12/43: SUPPORT ICAO POSITION FOR WRC-12 That, MID States be urged to: a) include ICAO Position on WRC-12 in their State Position to the extent possible; b) support Civil Aviation Authorities, aviation spectrum experts to participate actively in the national and regional level activities related to WRC-12 including ITU study groups to support ICAO Position; and	Follow up with States to support ICAO positions	ICAO States	State Letter CNS SG/4 Report Support ICAO positions	February 2012	Closed

MIDANPIRG/13-REPORT

APPENDIX 2.2A

2.2A-16

CONCLUSIONS AND DECISIONS	FOLLOW-UP	TO BE INITIATED BY	DELIVERABLE	TARGET DATE	REMARKS
c) support Civil Aviation Authorities, aviation spectrum experts to participate in WRC-12 and coordinate with the ICAO delegation to the conference.					
CONC. 12/44: UPDATING THE AFTN/CIDIN DIRECTORY That, ICAO MID Regional Office request Authorization from EUROCONTROL to provide the routing function and any additional functions available in AMC to the MID Region.	Follow-up with EUROCONTROL for additional fun	ICAO	State Letter	February 2011	Ongoing AN 7/5.1 – 11/011 dated 19 Jan. 2011 (Replaced and superseded by Dec. 13/26)
CONC. 12/45: MID SURVEILLANCE WORKSHOP That, a) the ICAO MID Regional Office organizes a workshop with an objective to raise awareness, develop MID Regional Surveillance strategy and road map; and b) MID States participate in the workshop and provide their future surveillance plans	Implement the Conclusion	ICAO State	Organize Workshop State to attend workshop and provide their plan	2011	Closed Workshop conducted in Saudi Arabia, 8-10 May 2011
CONC. 12/46: EXCHANGE OF SURVEILLANCE DATA That, MID States be encouraged, to share ATS surveillance data in order to improve surveillance coverage in the MID Region, which will enhance safety, efficiency, capacity and could be used as back-up where feasible.	Implement the Conclusion	ICAO States	State Letter Exchange Surveillance data	February 2011	Closed SL AN 7/5.9 – 11/025 dated 16 Feb. 2011
CONC. 12/47: MID REGION PERFORMANCE METRICS That: a) the following MID Region Metrics be adopted for performance monitoring of the air navigation systems: MID Metric 1: Number of accidents per 1,000 000 departures; MID Metric 2: Percentage of certified international aerodromes;	Monitor performance of ANS using the endorsed metrics	MIDANPIRG & subsidiary bodies	Develop performance targets	2011	Actioned/Ongoing SL Ref.: AN 7/26.1-11/121 dated 24 May 2011 3 States replied

CONCLUSIONS AND DECISIONS	FOLLOW-UP	TO BE INITIATED BY	DELIVERABLE	TARGET DATE	REMARKS
MID Metric 3: Number of Runway incursions and excursions per year; MID Metric 4: Number of States reporting necessary data to the MIDRMA on regular basis and in a timely manner; MID Metric 5: The overall collision risk in MID RVSM airspace; MID Metric 6: Percentage of air navigation deficiencies priority “U” eliminated; MID Metric 7: Percentage of instrument Runway ends with RNP/RNAV approach procedure; and MID Metric 8: Percentage of en-route PBN routes implemented in accordance with the regional PBN plan. b) the MIDANPIRG subsidiary bodies monitor the Metrics related to their work programmes; develop associated performance targets and provide feed-back to MIDANPIRG.					
CONC. 12/48: DATA COLLECTION FOR MID REGION PERFORMANCE METRICS That, States be invited to: a) incorporate the agreed MID Region Performance Metrics into their National performance monitoring process; b) collect and process relevant data necessary for performance monitoring of the air navigation systems to support the regional Metrics adopted by MIDANPIRG; and c) submit this data to the ICAO MID Regional Office on a regular basis.	Implement the Conclusion	ICAO States	State Letter Include metrics into national performance monitoring Submit data to ICAO	January 2011	Actioned/Ongoing SL Ref.: AN 7/26.1-11/121 dated 24 May 2011 (Replaced and superseded by Conc. 13/30)

MIDANPIRG/13-REPORT
APPENDIX 2.2A

2.2A-18

CONCLUSIONS AND DECISIONS	FOLLOW-UP	TO BE INITIATED BY	DELIVERABLE	TARGET DATE	REMARKS
DEC. 12/49: REVIEW OF THE MID AIR NAVIGATION PLAN (ANP) That, in support to ICAO efforts to improve regional ANPs, the MIDANPIRG subsidiary bodies: a) carry out a complete review of the MID Basic ANP and FASID parts related to their Terms of Reference (TOR) and Work Programme; b) develop revised draft structure and content of the Basic ANP in order to reconcile it with the ATM Operational Concept, the Global Plan provisions and the performance based approach; c) identify the need for and development of those FASID Tables necessary to support the implementation of a performance-based global air navigation systems; and d) report progress to MIDANPIRG/13.	Implement the Decision	ICAO States Users	New structure, format & content of ANP/FASID	2012	Actioned/Ongoing (Supported by Dec. 13/32)
DEC. 12/50: TERMS OF REFERENCE OF THE INFPL STUDY GROUP That, the Terms of Reference and Work Programme of the INFPL Study Group be updated as at Appendix 5.5G to the Report on Agenda Item 5.5	Implement the Decision	MIDANPIRG	Updated TOR	October 2010	Closed
CONC. 12/51: INFPL IMPLEMENTATION DIFFICULTIES That, MID States be urged to complete the impact studies and file any difficulties arising in the implementation of INFPL to the ICAO MID Regional Office for posting on FITS.	Implement the Conclusion	ICAO States	State Letter Completed impact study File difficulties	April 2011 October 2012	Closed SL dated 16 Feb 2011

CONCLUSIONS AND DECISIONS	FOLLOW-UP	TO BE INITIATED BY	DELIVERABLE	TARGET DATE	REMARKS
CONC. 12/52: ICAO NEW FLIGHT PLAN FORMAT IMPLEMENTATION That, MID States be urged to: a) secure necessary budget for the implementation of the ICAO New FPL Format; b) initiate necessary negotiation with their ATC systems manufacturers/ vendors for the implementation of necessary hardware/software changes, as soon as possible; c) develop National PFF related to the ICAO new FPL format project with clearly established milestones with timelines; and d) take all necessary measures to comply with the applicability date of 15 November 2012.	Implement the Conclusion	States	Secure resources	June 2011 INFPL SG/3 meeting report	Closed SL dated 16 Feb 2011
CONC. 12/53: QUESTIONNAIRE ON THE STATUS OF INFPL IMPLEMENTATION That, MID States be urged to reply to the Questionnaire on the Status of Implementation of Amendment 1 to the Procedures for Air Navigation Services-Air Traffic Management, Fifteenth Edition (PANS-ATM, Doc 4444) as at Appendix 5.5J to the Report on Agenda Item 5.5, by 20 February 2011.	Implement the Conclusion	States	Completed questionnaire	February 2011	Closed SL AN 6/2B – 11/027 dated 16 February 2011
CONC. 12/54: STRATEGY FOR THE IMPLEMENTATION OF INFPL That, MID Region Strategy for the implementation of INFPL be adopted as at Appendix 5.5K to the Report on Agenda Item 5.5	Implement the Conclusion	MIDANPIRG/12	Adopted Strategy	October 2010	Actioned/Ongoing (Replaced and superseded by Conc. 13/39)

MIDANPIRG/13-REPORT
APPENDIX 2.2A

2.2A-20

CONCLUSIONS AND DECISIONS	FOLLOW-UP	TO BE INITIATED BY	DELIVERABLE	TARGET DATE	REMARKS
CONC. 12/55: INFPL IMPLEMENTATION PLANS AND PROGRESS REPORT That, MID States be urged to send INFPL Implementation plans and progress report on the preparation for the implementation of INFPL to the ICAO MID Regional Office every (3) three months and whenever major progress is achieved.	Implement the Conclusion	States	Progress Report	Every 3 months	Closed
CONC. 12/56: STRATEGY FOR THE IMPLEMENTATION OF GNSS IN THE MID REGION That, the Strategy for implementation of GNSS in the MID Region be updated as at Appendix 5.5N to the Report on Agenda Item 5.5.	Implement the Conclusion	MIDANPIRG/12	Adopted new Strategy	October 2010	Actioned/Ongoing (Replaced and superseded by Conc. 13/45)
CONC. 12/57: MID REGION PBN IMPLEMENTATION STRATEGY AND PLAN That, the MID Region PBN Implementation Strategy and Plan be updated as at Appendix 5.5P to the Report on Agenda Item 5.5.	Implement the Conclusion	MIDANPIRG/12	Approved Strategy	October 2010	Actioned/Ongoing (Replaced and superseded by Conc. 13/47)
CONC. 12/58: PBN IMPLEMENTATION PROGRESS REPORT That, for future reporting on the status of PBN implementation, MID States be urged to: a) use the excel sheet as at Appendix 5.5Q to the Report on Agenda Item 5.5 and PBN Implementation Progress Report Template as at Appendix 5.5R to the Report on Agenda Item 5.5; and b) submit progress reports to ICAO MID Regional Office every six months or whenever major progress is achieved.	Implement the Conclusion	States	Progress Report	Every 6 months	Actioned/Ongoing SL dated 16 February 2011 (Replaced and superseded by Conc. 13/50)

CONCLUSIONS AND DECISIONS	FOLLOW-UP	TO BE INITIATED BY	DELIVERABLE	TARGET DATE	REMARKS
DEC. 12/59: TERMS OF REFERENCE OF THE PBN/GNSS TASK FORCE That, the Terms of Reference and Work Programme of the PBN/GNSS Task Force be updated as at Appendix 5.5T to the Report on Agenda Item 5.5.	Implement the Decision	MIDANPIRG	Updated TOR	October 2010	Closed
DEC. 12/60: LIST OF TASK FOR PBN/GNSS TASK FORCE That, the list of tasks for the PBN/GNSS Task Force be updated with new task assignments as at Appendix 5.5U to the Report on Agenda Item 5.5.	Implement the Decision	MIDANPIRG	PBN/GNSS TF/3 Report	October 2010	Closed
CONC. 12/61: IMPLEMENTATION OF CONTINUOUS DESCENT OPERATIONS That, recognizing the efficiency and environmental benefits of Continuous Descent Operations (CDO), and the need to harmonize these operations in the interest of safety, MID States be encouraged to include implementation of CDO as part of their PBN implementation plans and to implement CDO in accordance with the ICAO CDO Manual Doc 9931.	Follow up development in MID Region/States	States	Progressive introduction of CDO operations in TMAs	2012	Closed SL dated 16 February 2011
DEC. 12/62: DISSOLVE MID-FIT That, MID-FIT is dissolved and the matters related to data link activities are considered and followed by the CNS/ATM/IC SG.	Implement the Decision	MIDANPIRG	Dissolved MID-FIT	October 2010	Closed
CONC. 12/63: ADOPTION OF GOLD That, MID States be urged to: a) adopt Global Operational Data Link Document (GOLD) for data link operations; and b) contribute in future amendments to the GOLD as required.	Implement the Conclusion	MIDANPIRG States	Adopted GOLD	October 2010	Closed

MIDANPIRG/13-REPORT

APPENDIX 2.2A

2.2A-22

CONCLUSIONS AND DECISIONS	FOLLOW-UP	TO BE INITIATED BY	DELIVERABLE	TARGET DATE	REMARKS
CONC. 12/64: TRAINING FOR THE NEW WAFS FORECASTS That, in order to facilitate the implementation of the new WAFS forecasts by the WAFS users in the MID States, WAFC Provider States in coordination with the World Meteorological Organization (WMO) be invited to organize in 2011 or 2012 a training seminar for the MID Region on the use of the new gridded WAFS forecasts for convective clouds, icing and turbulence	Implement the Conclusion	WAFC Provider States WMO	Training Seminar	2012	Closed Training method to be considered at WAFSOPSG/7 in Sep 2012 (reference WAFSOPSG/6 C6/12 and C6/13) Training to be available to regions in 2013
CONC. 12/65: FINALIZED SIGMET TEST PROCEDURES AND CONDUCTING OF REGULAR SIGMET TESTS IN THE MID REGION That, a) the MID SIGMET Test Procedures, at Appendix 5.6A to the Report on Agenda Item 5.6, be adopted and forwarded to States for implementation; b) MID States be urged to participate in the conducting of regular WS- and WV-SIGMET tests in 2011 onwards and nominate SIGMET Focal Points if they have not already done so; and c) the results of the SIGMET tests be reported to each MET Sub-Group meeting, with feedback provided on any identified deficiencies provided to States concerned with proposed corrective actions.	Implement the Conclusion	ICAO States	State Letter Nominate SIGMET Focal point MET SG/3 Report	January 2011 February 2011 May 2011	Actioned/Ongoing SL AN 10/12 – 10/422 dated 14 Dec. 2010 (Replaced and superseded by Conc. 13/52)

CONCLUSIONS AND DECISIONS	FOLLOW-UP	TO BE INITIATED BY	DELIVERABLE	TARGET DATE	REMARKS
CONC. 12/66: SIGMET GUIDE FOR THE MID REGION That, the ICAO MID Regional Office, circulate the working draft of the MID SIGMET Guide, as presented at Appendix 5.6B to the Report on Agenda Item 5.6, to MID States in order to: a) obtain the necessary WS-, WV- and WC-SIGMET headers for Appendix B of the document; and b) finalize the document in time for the MET SG/3 meeting.	Implement the Conclusion	ICAO	State Letter Draft SIGMET Guide	January 2011 May 2011	Actioned/Ongoing SL AN 12/3 – 10/424 dated 14 Dec. 2010 (Replaced and superseded by Conc. 13/53)
CONC. 12/67: IMPROVING OPMET DATA IN THE MID REGION That, in order to improve the quality and availability of OPMET data in the MID Region, MID States be urged, if they have not already done so, to: a) fully implement ICAO Annex 3 provisions relating to OPMET data, including TAF; b) investigate the reasons for the absence of SIGMET messages and reconsider their procedures for SIGMET generation and transmission; c) consider the need for establishing local quality control and format verification procedures for OPMET data; and d) undertake all efforts to reduce the errors in OPMET data significantly, the aim of which should be that less than 5% of all issued OPMET data being incorrect.	Implement the Conclusion	States	Implement annex 3 provisions Establish QC for OPMET data	May 2011	Closed SL AN 10/11 – 10/425 dated 14 Dec. 2010

MIDANPIRG/13-REPORT

APPENDIX 2.2A

2.2A-24

CONCLUSIONS AND DECISIONS	FOLLOW-UP	TO BE INITIATED BY	DELIVERABLE	TARGET DATE	REMARKS
CONC. 12/68: HARMONIZATION OF PROCEDURES FOR OPMET DATA ISSUANCE That, in order to improve the timeliness and regularity of OPMET data (METAR and TAF) for AOP aerodromes in the MID Region: a) the ICAO MID Regional Office develop guidance material related to the issuance of OPMET data by 31 December 2010; and b) MID States be urged to implement common procedures in accordance with this guidance by MET SG/3.	Implement the Conclusion	ICAO	State Letter Guidance material	January 2011	Closed SL AN 10/11 – 10/426 dated 14 Dec. 2010
CONC. 12/69: ACTIVATION AND PROPOSED MEETING OF THE MID OPMET BULLETIN MANAGEMENT GROUP That, a) the MID OPMET Bulletin Management Group (BMG) be activated with the Terms of Reference at Appendix 5.6C to the Report on Agenda Item 5.6; b) the MID States participating in the OPMET BMG are urged to nominate appropriate experts on the group and inform the ICAO MID Regional Office accordingly; and c) the Rapporteur of the OPMET BMG, in coordination with the ICAO MID Regional Office, organize a meeting of the group immediately prior to MET SG/3.	Implement the Conclusion	ICAO BMG	State Letter Organize BMG meeting	January 2011 May 2011	Closed SL AN 10/11 – 10/427 dated 14 Dec. 2010 BMG/1 meeting held 18 Dec. 2011 in Cairo and BMG/2 meeting held concurrently with MIDANPIRG/13 on 23 Apr. 2012

CONCLUSIONS AND DECISIONS	FOLLOW-UP	TO BE INITIATED BY	DELIVERABLE	TARGET DATE	REMARKS
CONC. 12/70: REGIONAL SURVEY ON THE IMPLEMENTATION OF MET SERVICES AND FACILITIES That, the ICAO MID Regional Office utilise the questionnaire presented at Appendix 5.6D to the Report on Agenda Item 5.6 as the basis of a regional survey on the implementation of MET services and facilities in the MID Region in 2010, and at least every 18 months thereafter	Implement the Conclusion	ICAO	State Letter	January 2011	Closed SL AN 10/22 – 10/428 dated 14 Dec. 2010 Reminder letter AN11/22-12/012 dated 12 Jan. 2012
CONC. 12/71: FACILITATING THE IMPLEMENTATION OF QMS FOR MET IN THE MID REGION That, MID States that have not yet implemented a Quality Management System (QMS) for meteorological (MET) service to international air navigation, be invited to take necessary action to expedite the implementation of QMS in accordance with Annex 3 provisions, taking into consideration the key recommendations at Appendix 5.6E to the Report on Agenda Item 5.6	Implement the Conclusion	ICAO	State Letter	January 2011	Closed SL AN 3/2.8 – 10/429 dated 14 Dec. 2010
DEC.12/72: VOLCANIC ASH CONTINGENCY PLAN FOR THE MID REGION That, the ATM/SAR/AIS Sub-Group and MET Sub-Group be invited to develop a draft Volcanic Ash Contingency Plan for the MID Region for consideration at MIDANPIRG/13.	Implement the Decision	ICAO MID	Draft Volcanic Ash contingency plan	May 2011	Ongoing (Re-iterated)

MIDANPIRG/13-REPORT
APPENDIX 2.2A

2.2A-26

CONCLUSIONS AND DECISIONS	FOLLOW-UP	TO BE INITIATED BY	DELIVERABLE	TARGET DATE	REMARKS
CONC. 12/73: REVIEW OF PART VI (MET) OF THE MID AIR NAVIGATION PLAN VOLUME II (FASID) That, in time for MET Sub-Group 3, the ICAO MID Regional Office, in coordination with the MID OPMET Bulletin Management Group (BMG), is invited to review and propose amendments, as necessary, to FASID Tables MET 2A, 2C, 4A and 4B related to OPMET exchange.	Implement the Conclusion	ICAO BMG	FASID Amendment	May 2011	Closed
CONC. 12/74: UPDATED TRAFFIC FORECASTING REQUIREMENTS IN THE MID REGION That, a) the ICAO MID Regional Office coordinate with other international and regional organizations; including IATA, the possibility of establishing a MID database to support regional traffic forecasting activities; b) MID States continue their support to the Traffic Forecasting Sub-Group by ensuring that their respective nominees to the membership of the Sub-Group include, as much as possible, forecasting experts, air traffic management experts and, when required, financial analysts to carry out business case and cost/benefit analysis; and c) MID States continue to avail required FIR and other data to the Traffic Forecasting Sub-Group in the format agreed by the Sub-Group to facilitate the development of forecasts and other air navigation planning and implementation parameters.	Update information to be provided by States	TF SG ICAO States	State Letter Meeting of the SG Traffic data	May 2011	Closed

CONCLUSIONS AND DECISIONS	FOLLOW-UP	TO BE INITIATED BY	DELIVERABLE	TARGET DATE	REMARKS
CONC.12/75: ELIMINATION OF AIR NAVIGATION DEFICIENCIES IN THE MID REGION That, MID States be urged to: a) review their respective lists of identified deficiencies, define their root causes and forward an action plan for rectification of outstanding deficiencies to the ICAO MID Regional Office prior to 31 March 2011; b) use the online facility offered by the ICAO MID Air Navigation Deficiency Database (MANDD) for submitting online requests for addition, update, and elimination of air navigation deficiencies; c) accord high priority to eliminate all air navigation deficiencies with emphasis on those with priority “U”; in particular by allocating the necessary budget to ensure that their Civil Aviation Authorities have and retain a sufficient number of qualified technical personnel, who are provided with appropriate initial, on-the-job and recurrent training; and d) seek support from regional and international organizations (i.e. ACAC, GCC, etc.) for the elimination of identified air navigation deficiencies.	Implement the Conclusion	ICAO States	State Letter Feedback from States	January 2011	Actioned/Ongoing SL Ref.: AN2/2 – 11/123 dated 25 May 2011 (Replaced and superseded by Conc. 13/63)
DEC. 12/76: DISSOLUTION OF THE AIR NAVIGATION SAFETY SUB-GROUP That, recognizing that the Air Navigation Safety Sub-Group (ANS SG) work programme could be achieved more efficiently using alternative mechanisms and groupings, the ANS SG is dissolved.	Implement the Decision	MIDANPIRG	ANS SG dissolved	October 2010	Closed

MIDANPIRG/13-REPORT

APPENDIX 2.2A

2.2A-28

CONCLUSIONS AND DECISIONS	FOLLOW-UP	TO BE INITIATED BY	DELIVERABLE	TARGET DATE	REMARKS
CONC. 12/77: ATS SAFETY MANAGEMENT That, MID States that have not yet done so, be urged to: a) establish a State Safety Programme (SSP) and ensure the implementation of Safety Management Systems (SMS) by their ATS service providers, in accordance with Annex 11 provisions; b) promulgate a national safety legislative framework and specific regulations in compliance with international and national standards that define how the State will conduct the management of safety, including the collection and protection of safety information and improvement of accident prevention, in compliance with relevant provisions contained at Chapter 2 of Annex 11 and Chapter 8 of Annex 13; c) share safety information including information on ATS incidents and accidents; and d) take advantage of the ICAO guidance material related to safety management as well as the training events offered by ICAO (SMS, SSP and ECCAIRS training courses seminars and workshops).	The ATM/SAR/AIS SG to follow up the implementation of the Conclusion	ICAO States	State Letter Feedback from States	February 2011	Closed SL AN6/21-11/138 dated 2 June 2011
CONC. 12/78: USE OF THE ENGLISH LANGUAGE AND STANDARD ICAO PHRASEOLOGY That, in order to expedite the process of implementation of the ICAO Language Proficiency requirements, MID States that have not already done so, be urged to: a) adopt/incorporate the ICAO language proficiency requirements (Amendment 164 to Annex 1) in their national regulations; b) assess current language proficiency level of air traffic controllers and pilots according to the ICAO rating scale; c) ensure that all stakeholders (pilots, air traffic controllers, language teachers, regulators, etc.) are familiar with the ICAO language proficiency requirements;	Implement the Conclusion	ICAO States	State Letter Complete assessment of pilots & controllers	January 2011 March 2011	Closed SL AN12/12-11/139 dated 2 Jun. 2011

CONCLUSIONS AND DECISIONS	FOLLOW-UP	TO BE INITIATED BY	DELIVERABLE	TARGET DATE	REMARKS
d) ensure that their air traffic controllers and pilots use the standard ICAO phraseology in aeronautical communication; and e) take necessary measures to ensure that those individuals demonstrating language proficiency at the Operational Level 4 are re-evaluated every three years.					
CONC. 12/79: SURVEY ON THE STATUS OF IMPLEMENTATION OF ENGLISH LANGUAGE PROFICIENCY (ELP) IN THE MID REGION That, the ICAO MID Regional Office carries out a survey to collect information on the status of implementation of English Language Proficiency (ELP) in the MID Region, prior to 31 December 2010	Implement the Conclusion	ICAO	State Letter	January 2011	Closed SL AN12/12-11/139 dated 2 Jun. 2011
CONC. 12/80: ESTABLISHMENT OF MID REGIONAL SAFETY OVERSIGHT ORGANIZATION (RSOO) That, States be requested to inform the ICAO MID Regional Office about their views/intentions for the establishment of MID RSOO, prior to 31 March 2011.	Implement the Conclusion	ICAO	State Letter Feedback from States	January 2011 April 2011	Closed (Subject addressed by the DGCA-MID/1 meeting also. Further follow-up by RASG-MID)

MIDANPIRG/13
Report on Agenda Item 3

REPORT ON AGENDA ITEM 3: GLOBAL, INTER AND INTRA-REGIONAL ACTIVITIES

Global Air Navigation Plan (GANP)

3.1 The meeting received a presentation which highlighted the outline and objectives of the revised Global Air Navigation Plan that will be presented to the 12th Air Navigation Conference (AN-Conf/12) that will be held in Montreal from 19 to 30 November 2012. The meeting noted that the revised GANP will provide roadmaps in support to the Global ATM Operational Concept that will bring some certainty to the investment decisions and actions on infrastructure, equipage and regulatory approval by States, Air Navigation Service Providers (ANSPs), aerodromes and operators.

3.2 The meeting noted that a Chapter describing the System of Systems will be included in the new GANP showing the combined synergies between the GANP and the Global Aviation Safety Plan (GASP), including the development of safety and air navigation reports.

12th Air Navigation Conference and Aviation System Block Upgrades (ASBUs)

3.3 The meeting encouraged States and International Organizations to attend the AN-Conf/12 as per ICAO State letter ST 13/1-11/71 dated 22 December 2011.

3.4 The meeting noted that the purpose of the AN-Conf/12 is to gain consensus, obtain commitments and formulate recommendations to achieve a harmonized global air navigation system for international civil aviation. The objective is to optimize the opportunities in technology and maturing work programmes toward common global objectives. The Conference will consider proposed Aviation System Block Upgrades (ASBUs) and the Communications, Navigation, Surveillance (CNS), Aeronautical Information Management (AIM) and avionics roadmaps for inclusion in the Global Air Navigation Plan. The Conference would also provide stakeholders with an opportunity to coalesce around major themes, set priorities and refine the way forward based on lessons learned. Special consideration would be given to utilization of existing capacity of enabling systems and planning for their expansion, taking into consideration user requirements.

3.5 A presentation was made to the meeting introducing the Aviation System Block Upgrades (ASBUs) and highlighting the current challenges, the future needs and the ASBU methodology, in particular, the meeting noted the series of measurable, operational performance improvements, which are organized into flexible and scalable building blocks, that could be implemented, as needed depending on the regional and national planning and identified priorities.

3.6 The meeting had discussions on few issues related to ASBUs. In particular, the relationship between ASBUs and the GPIs; the assessment of risk and the business cases associated with the implementation of ASBUs and the link between ASBUs and the SSP/SMS frameworks.

3.7 The Secretariat provided explanation to the queries raised and encouraged States/International Organizations to attend the ASBU workshop-Special Implementation Project (SIP) that will be conducted at the MID Regional Office (Cairo, 30 September-4 October 2012).

MIDANPIRG/13
Report on Agenda Item 3

Regional Performance Framework – Planning Methodologies and Tools

3.8 The meeting was informed that, the regional planning process, which is guided by the Global Air Navigation Plan, starts by identifying the homogeneous ATM areas, major traffic flows and international aerodromes. The Modules from the ASBU would be evaluated to identify which best provide the identified opportunities for performance improvement. Depending on the complexity of the Modules, additional planning steps may need to be undertaken including regional financing (if appropriate), possible regional training needs and special emphasis work groups. This is an iterative planning process which may require repeating several steps leading to the development and implementation of regional implementation plans. This planning requires interaction between regulators, users of the aviation system, the Air Navigation Service Providers (ANSP's) and aerodrome operators, thus ensuring commitment by all States and Air Navigation Services (ANS) partners for its implementation.

3.9 The meeting noted that modern planning environment in general, and the realization of the alignment between the GANP and the regional plans specifically, requires the implementation of a data-based online format to ensure that all stakeholders are connected to the same up-to-date information. In this respect, the meeting noted that, ICAO has implemented a series of air navigation planning and reporting tools as outlined below.

3.10 The meeting recalled that in July 2011, the amendment process of the regional Air Navigation Plans (ANPs) was automated to reduce the time of the approval process within ICAO. But despite all these improvements, the challenge remained to keep the paper-based regional Air Navigation Plan (ANPs) updated, particularly in view of continuous air navigation technological developments. To address this issue, an online format of the regional ANPs, called electronic Air Navigation Plans (eANPs), has been launched.

3.11 The meeting noted that in order to simplify its introduction, all procedures that apply to the current paper-based ANPs will continue for the eANPs. However, to make full use of the online system, ICAO will continue to simplify the workflows related to the amendment process, and to the data within the eANP, to increase the efficiency, accuracy, and accessibility in maintaining the narrative and data in the ANPs. In this respect, it was highlighted that all the FASID Tables would be standardized, harmonized and aligned with the ASBU methodology.

3.12 The meeting was apprised of additional online tools for regional planning developed by ICAO, which could be accessed through the ICAO GIS Portal: <http://gis.icao.int/gallery>. These ICAO tools will be demonstrated in the exhibition area during the AN-Conf/12. It was also noted that each Regional Office will have these tools in place, and the Regional Officers will be trained, by December 2012.

3.13 In connection with the above, the meeting was informed that the current Performance Framework Form (PFF) has been redesigned and aligned with the ASBU framework and renamed Air Navigation Report Form (ANRF). The ANRF would be the basis for performance monitoring of the ASBU implementation at both regional and national levels. The ANRF templates for all the 18 Modules of ASBU Blocks would be available in the Volume II – FASID of each Regional eANP.

MIDANPIRG/13
Report on Agenda Item 3

3.14 The meeting noted that, effective 2014, on annual basis a Global Air Navigation Report would be developed. The Regional Air Navigation Reports (ANRF) will be utilized in developing the annual Global Air Navigation Report. It was highlighted that the spirit of such a global review is to assist in understanding which areas require special attention and effectively improve air navigation performance in the future. This review also provides an opportunity for world civil aviation community to compare the progress across different ICAO regions in the establishment of air navigation infrastructure.

Outcome of the DGCA-MID/1 meeting related to the air navigation fields

3.15 The meeting was apprised of the outcome of the First Meeting of Directors General of Civil Aviation – Middle East Region (DGCA MID/1) held in Abu-Dhabi, UAE, 22 – 24 March 2011.

3.16 The meeting noted that the DGCA-MID/1 meeting developed 13 Conclusions covering different subjects: managerial issues, air navigation, aviation safety, aviation security, environmental protection and technical cooperation.

3.17 The meeting noted the actions taken by States and the Secretariat on nine (9) of the Conclusions developed by the DGCA-MID/1 meeting, which are related to air navigation as at **Appendix 3A** to the Report on Agenda Item 3.

MIDANPIRG/13
Appendix 3A to the Report on Agenda Item 3

FOLLOW-UP ACTION PLAN ON THE DGCA-MID/1 CONCLUSIONS

CONCLUSIONS AND DECISIONS	FOLLOW-UP	TO BE INITIATED BY	DELIVERABLE	TARGET DATE	REMARKS
CONC. 1/2: ELIMINATION OF AIR NAVIGATION DEFICIENCIES IN THE MID REGION That, States: a) accord high priority to the elimination of air navigation deficiencies; in particular by allocating the necessary budget to ensure that their Civil Aviation Authorities have and retain a sufficient number of qualified technical personnel, and provide appropriate initial, on-the-job and recurrent training; b) work cooperatively towards the elimination of common deficiencies; and c) consider the use of the Regional Safety Oversight Organizations (RSOOs) as an efficient mechanism for, inter-alia, the provision of appropriate training to technical staff and elimination of common deficiencies.	Implement the Conclusion	ICAO States	State Letter Feedback from States	January 2011	Actioned SL Ref.: AN2/2 – 11/123 dated 25 May 2011
CONC. 1/3: MIDDLE EAST REGIONAL AIRSPACE REVIEW (MIDRAR) That, a) States committed to the UAE declaration are encouraged to: i. support CANSO efforts to carry out a Middle East Regional Airspace Review (MIDRAR), in close coordination with ICAO and all concerned parties/stakeholders; ii. support the creation of the MIDRAR Team; and iii. provide necessary information, data and other resources, including Specialist input, as required.	Implement the Conclusion	States CANSO, ICAO	MIDRAR Study	TBD	Actioned

MIDANPIRG/13-REPORT

APPENDIX 3A

3A-2

CONCLUSIONS AND DECISIONS	FOLLOW-UP	TO BE INITIATED BY	DELIVERABLE	TARGET DATE	REMARKS
b) CANSO or one of its Members present the outcome of the MIDRAR to the appropriate MIDANPIRG subsidiary bodies (ARN TF and ATM/SAR/AIS SG) to initiate necessary amendments to the Air Navigation Plan(s), as appropriate.					
CONC. 1/4: IMPLEMENTATION OF THE ICAO NEW FPL FORMAT That, considering the importance of timely implementation of the ICAO new Flight Plan Format, MID States are urged to provide necessary resources and support to expedite implementation of the ICAO New Flight Plan Format.	Implement the Conclusion	States	Feedback from States		Actioned
CONC. 1/5: MID REGION AIS DATABASE (MIDAD) That, a) Jordan and Bahrain take the lead in carrying out a study/business case pertaining to the establishment of a MID Region AIS Database (MIDAD), in close coordination with ICAO; b) States provide all necessary information and support for the achievement of the study; and c) Jordan and Bahrain present the outcome of the study to the appropriate MIDANPIRG subsidiary bodies (AIS/MAP TF and ATM/SAR/AIS SG).	Implement the Conclusion	Bahrain, Jordan and all States ICAO	MIDAD Initial Study	November 2011	Completed
CONC. 1/6: CONTINGENCY PLANS That, for the interest of ensuring safety and continuity of civil aviation, MID States: a) accord high priority and secure necessary resources to update, complete and promulgate their contingency plans; and b) send copies of their contingency plans (even those which are still in draft format) to the ICAO MID Regional Office as soon as possible.	Implement the Conclusion	States	Contingency Plans		Actioned

CONCLUSIONS AND DECISIONS	FOLLOW-UP	TO BE INITIATED BY	DELIVERABLE	TARGET DATE	REMARKS
CONC. 1/8: REGIONAL STRATEGY FOR COLLECTION OF SAFETY DATA That, recognizing the importance of safety data for SMS and SSP programmes, MID States to implement ECCAIRS for collecting safety data; and attend ECCAIRS training courses organized by the ICAO MID Regional Office..	Implement the Conclusion	States	Use ECCAIRS and attendance to ECCAIRS training courses	TBD	Ongoing
CONC. 1/9: ESTABLISHMENT OF RSOOs AND RAIOS IN THE MID REGION That, in order to strengthen their safety oversight capabilities and solve common safety-related deficiencies, in an effective, cooperative and sustainable manner, MID States: a) cooperate towards the establishment of Regional Safety Oversight Organizations (RSOOs) and Regional Accident and Incident Investigation Organizations (RAIOs); and b) further address the subject within the framework of RASG-MID.	Implement the Conclusion	States	Establishment of RSOO and RAIO	TBD	Ongoing
CONC. 1/10: WORKSHOP ON REGIONAL SAFETY OVERSIGHT PROGRAMMES That, as part of the Regional preparations for the establishment of Regional Safety Oversight Organizations (RSOOs) and Regional Accident and Incident Investigation Organizations (RAIOs), the ICAO MID Regional Office organize a Workshop on Regional Safety Oversight Programmes, in order to address the technical, institutional and financial aspects related to these Regional/Sub-Regional projects.	Implement the Conclusion	ICAO	Seminar/Workshop	December 2012	Actioned Joint ACAC/ICAO Seminar/Workshop on Regional Safety Oversight Programmes scheduled to be held in Rabat, Morocco, 10-12 December 2012

CONCLUSIONS AND DECISIONS	FOLLOW-UP	TO BE INITIATED BY	DELIVERABLE	TARGET DATE	REMARKS
CONC. 1/12: ESTABLISHMENT OF HIGH LEVEL ENVIRONMENTAL REGIONAL GROUP That, in order to address the identified environmental concerns/challenges, States cooperate towards establishment of a High Level Environmental Regional Group.	Implement the Conclusion	States	Establishment of High Level Environmental Regional Group	TBD	Ongoing

MIDANPIRG/13
Report on Agenda Item 4.1

**REPORT ON AGENDA ITEM 4: PERFORMANCE FRAMEWORK FOR REGIONAL AIR NAVIGATION
PLANNING AND IMPLEMENTATION ISSUES**

4.1 AOP

Implementation of Certification of Aerodromes

4.1.1 The meeting reviewed the outcome of the eighth meeting of the AOP Sub-Group that was held in Cairo, 13-15 February 2012. The meeting re-iterated the importance of certification of aerodromes, which will provide safe environment for aircraft operations at aerodromes and contribute to improved capacity, increased efficiency and greater cost-effectiveness to aerodrome users. The improvement of the quality and efficiency of aerodrome facilities and services and the enhancement of safety of aerodrome operations are elements of the regional performance objectives.

4.1.2 The meeting noted that there is a need to provide detailed information on the status of Implementation of Certification of Aerodromes and Safety Management System (SMS) at each International Aerodrome. The need to promulgate the status of certification of aerodromes has been mandated through Amendment 10A to Annex 14, Vol I, effective since 19 November 2009. The requirement was also included in Annex 15, Appendix 1, Part 3, Section AD 1.5, requiring the promulgation of such information in the national AIP.

4.1.3 The meeting reviewed the status of implementation of certification of aerodromes and noted that 23 aerodromes representing 40% of MID International Aerodromes have been certified. In this regard, the meeting noted that the level of introduction and implementation of certification of aerodromes in the MID Region have progressed compared to 32% of international aerodromes reported certified to the MIDAPIRG/12 meeting. However it is still below the required and expected levels.

4.1.4 The meeting recalled that MIDANPIRG/12, through Decision 12/5 agreed to the establishment of the Aerodrome Certification Implementation Task Force (ADCI TF) and urged MID States to participate actively in the Task Force. In this respect, it was noted that the first meeting of the ADCI TF will be held in Cairo, 15-17 October 2012.

4.1.5 Based on the above, the meeting agreed to the following Conclusion:

**CONCLUSION 13/1: AERODROMES CERTIFICATION IMPLEMENTATION
AND ACTION PLAN**

That, States, that have not yet done so, be urged to take necessary measures to start/complete the Implementation of the Aerodromes Certification Programme in an expeditious manner and provide the ICAO MID Regional Office with the associated Action Plan, before 15 September 2012, for review by the ADCI TF.

Implementation of SMS at Aerodromes in the MID Region

4.1.6 The meeting noted that ICAO SARPs require States to establish a State Safety Programme (SSP) in order to achieve an Acceptable Level of Safety (ALoS) in Civil Aviation. In addition, States shall require, as part of their State Safety Programme (SSP), that the Operators of Certified Aerodromes implement a Safety Management System (SMS), which is also part of the minimum requirements for aerodrome certification.

MIDANPIRG/13
Report on Agenda Item 4.1

4.1.7 Further details on SSP and SMS implementation are contained in Agenda item 5.2.

Aerodrome Emergency Planning (AEP)

4.1.8 The meeting recalled that MIDANPIRG/12, through Decision 12/6, agreed that a survey on aerodrome emergency planning and emergency operation centre, be carried out. The meeting noted that as a follow-up action to the above-mentioned Decision, the ICAO MID Regional Office issued on 02 November 2011 a State Letter requesting States to complete the questionnaire on the subject. The meeting noted with concern that only four States (Jordan, Qatar, Saudi Arabia and UAE) provided the required information.

4.1.9 The meeting agreed that States, that have not yet done so, should provide the required data to the ICAO MID Regional Office before **31 August 2012** for review and necessary action by the ADCI TF.

Runway Safety

4.1.10 The meeting recalled that MIDANPIRG/12 noted with concern the results of statistical analysis based on the data contained in the ICAO ADREP system which showed that the runway related accidents and serious incidents continue to be a serious safety concern.

4.1.11 The meeting was informed about the initiatives undertaken by ICAO and other organizations to reduce the risk of a Runway Safety Accident.

4.1.12 The meeting was apprised of the outcome of the AOP SG/8 meeting related to runway safety, in particular, it was noted that runway incursion and excursion prevention programmes as well as runway surface maintenance were included in the MID Regional aerodrome performance framework.

4.1.13 The meeting recalled that runway safety is a collective responsibility that extends to organizations (aerodrome operators, air navigation service providers and aircraft operators) as well as to individuals (controllers, pilots and vehicle drivers).

4.1.14 The meeting noted that ICAO's dedicated focus on runway safety efforts began in 2002 with an education and awareness campaign that consisted of a series of seminars in ICAO Regions on the prevention of Runway Incursion (RI). This was followed with the ICAO Runway Safety Toolkit CD-ROM and in 2007 with the Manual on the Prevention of Runway Incursions. It was considered appropriate to address all runway safety issues in a comprehensive manner to include the prevention and mitigation of Runway Incursion (RI), Runway Excursion (RE) and other occurrences related to Runway Safety.

4.1.15 The meeting was apprised of the outcome of the Global Runway Safety Symposium (GRSS) convened in May 2011, in Montreal, as at **Appendix 4.1A** to the Report on Agenda Item 4.1.

4.1.16 The meeting was informed that within the framework of the Regional Aviation Safety Group-Middle East Region (RASG-MID), it was identified that Runway Excursions (RE) represents one of the key Focus Areas (FAs).

MIDANPIRG/13
Report on Agenda Item 4.1

4.1.17 The meeting noted that the data from the USOAP audits related to runway safety have been utilized to determine the priorities on the development and implementation of safety enhancements. **Appendix 4.1B** to the Report on Agenda Item 4.1 outlines the Lack of Effective Implementation of ICAO SARPs related to Runway Safety and presents a diagram showing the MID Region results compared to the global results.

4.1.18 The meeting was informed as a follow up action to MIDANPIRG/12 Conclusion 12/7 and based on the recommendations of the GRSS, ICAO in partnership with IATA, is organizing a Regional Runway Safety Seminar for the Middle East Region (MID-RRSS). The Seminar is scheduled to be held in Amman, Jordan, 14-16 May 2012 with an aim to promote and enhance runway safety and establish an associated regional action plan, including the establishment of local Runway Safety Teams (RST). Accordingly, the meeting urged States to support the MID-RRSS.

4.1.19 The meeting recognized that airport operators need to maintain their efforts to reduce runway operations incidence and that range of factors contribute to runway incursions, including aerodrome design, technology, procedures, training, regulations and human error.

4.1.20 The meeting noted that Annex 14 Recommendation related to Runway End Safety Area (RESA) has been enforced in some MID States through their national regulations. Accordingly, for the sake of harmonization, the meeting invited States, that have not yet done so, to take similar action, and agreed to the following Conclusion:

CONCLUSION 13/2: RUNWAY END SAFETY AREA (RESA)

That, States, that have not yet done so, be invited to take necessary measures to include in their national regulations the requirements related to Runway End Safety Area (RESA) as reflected in ICAO Annex 14 Recommended Practice in order to reduce the safety risk of Runway Excursion.

4.1.21 The meeting noted that the AOP SG/8 meeting raised concern about the English Language Proficiency (ELP) of the ground support services personnel which was considered as a contributing factor to the runway safety occurrences.

4.1.22 Taking into consideration the agreed mechanism for coordination between MIDANPIRG and the RASG-MID, the meeting agreed that the issue of ELP for ground support services personnel be addressed by the RASG-MID.

MIDANPIRG/13
Appendix 4.1A to the Report on Agenda Item 4.1

**OUTCOMES OF THE ICAO GLOBAL RUNWAY SAFETY SYMPOSIUM
24-26 MAY 2011**

- ➔ One size does not fit all
 - Solutions need to account for local conditions yet be standardized and harmonized to ensure interoperability.
 - Runway incursions and excursions are the main issues but other aspects such as Bird Strike, FOD should not be overlooked.
- ➔ Collaborating at multiple levels
 - International organizations have committed to work together to compile and promote proven solutions and endorse best practices.
 - Runway Safety Teams – should be established locally and hosted by the airports.
- ➔ Improve Standardization / Harmonization
 - Develop guidance to define and launch Runway Safety Teams.
 - Harmonize “Runway Safety” definitions, taxonomies and reporting of runway conditions and other safety indicators.
 - Standardize and improve communication procedures.
 - ICAO to ensure that Standards and Guidance material are fit for purpose.
 - Implementation of ICAO Standards monitored through the Continuous Monitoring Approach.
- ➔ Promote and encourage implementation of solutions, such as:
 - Training & collaboration.
 - Runway & taxiway markings & signage.
 - Runway End Safety Areas.
 - PBN approach implementation.
 - Arresting Systems.
 - EFBs, on-board awareness and alerting systems.
 - All partners have committed to increasing the exchange of runway safety information.
- ➔ ICAO Dedicated Runway Safety page
 - Library of downloadable toolkits and documents.
 - Contributions from partner organizations.
 - Links to Skybrary and other runway safety partner sites.
 - Runway safety was established at: <http://www2.icao.int/en/RunwaySafety/default.aspx>
- ➔ Regional Runway Safety Seminars
 - All Runway Safety Programme Partners have committed to deliver Regional Runway Safety Seminars.
 - RRSS events will result in action plans to create runway safety teams and provide support to those already in place.
 - Progress will be monitored with updates provided to all partners through RASGs and other appropriate means.
 - Reduction of risks will be monitored on a regular basis, with follow-up actions taken as required.
 - Communication and outreach plans are being established.

MIDANPIRG/13
Appendix 4.1B to the Report on Agenda Item 4.1

USOAP RESULTS RELATED TO RUNWAY SAFETY

Note: The following USOAP protocol questions have linkages to Runway Safety. Included at the end of the question is the Lack of Effective Implementation (LEI) in %. The number represents the average LEI based on the audit results of 170 States.

Air Traffic Management

7.033 Has the State established and implemented a safety oversight system for ensuring the effective implementation of safety-related policy and procedures in the air navigation fields? ANS Doc 9734, Part A, C2- LEI 66.

7.169 Does the State ensure that the ATS provider implemented a safety management system acceptable to the State? ANS STD A11, 2.26 - LEI 74

7.189 Has the State promulgated a regulation to require the establishment and implementation of a runway safety programme? ANS PANS Doc 4444, 2.5.2 - LEI 68

Aerodromes

8.083 Has the State established a process for the certification of aerodromes? AGA CC Art.15; STD A14, Vol. I, 1.4.1 & 1.4.3; RP A14, Vol. I, 1.4.2; Doc 9774, 3B.3.2 - LEI 56

8.099 Does the State's aerodrome certification process include procedures for accepting a non-compliance with the established requirements, including a risk assessment mechanism and notification procedure? AGA Doc 9734, Part A, 3.3.7; Doc 9774, App. 3 – LEI 65

8.147 Does the State ensure that aerodrome operators have a process for determining and providing relevant information that a runway, or part of, may be slippery when wet, including the minimum friction level for reporting of slippery runway conditions and the type of friction measuring device used? AGA STD A14, Vol. I, 2.9.5, 2.9.6, 2.9.7 & 10.2.3, RP, 2.9.8 - LEI 68

8.163 Has the State promulgated a regulation for the provision of runway end safety areas (RESA) at aerodromes? AGA STD A14, Vol. I, 3.5.1, 3.5.2 & 3.5.4, RP A14, Vol. I, 3.5.3 & 3.5.5 - LEI 50

8.165 If the requirements for RESAs have not been implemented at all aerodromes open to public use, how does the State satisfy itself that the runway surroundings are safe for use by aircraft in the event of an aircraft overrunning or undershooting the runway? AGA STD A14, Vol. I, 3.5.1, 3.5.2 & 3.5.4; RP A14, Vol. I, 3.5.3 & 3.5.5 - LEI 68

8.205 Has the State established a process to ensure that an aerodrome operator's plan for lighting, signs and markings is integrated as a whole into the aerodrome's runway incursion and collision avoidance strategy, taking account of different traffic intensities and visibility conditions? AGA Doc 9734, Part A, 2.4.7 & 3.9.4; Doc 9476, C2 - LEI 63

8.221 Does the State ensure that an aerodrome's SMGCS is designed to prevent inadvertent incursions of aircraft and vehicles onto an active runway or taxiway, taking into account the elements listed in Annex 14, Vol. I? AGA STD & RP A14, Vol. I, 7.1.7 & 9.8; Doc 9734, Part A, 2.4.7 b) iv); Doc 9476; Doc 9380; Doc 9157, Part 4 – LEI 54

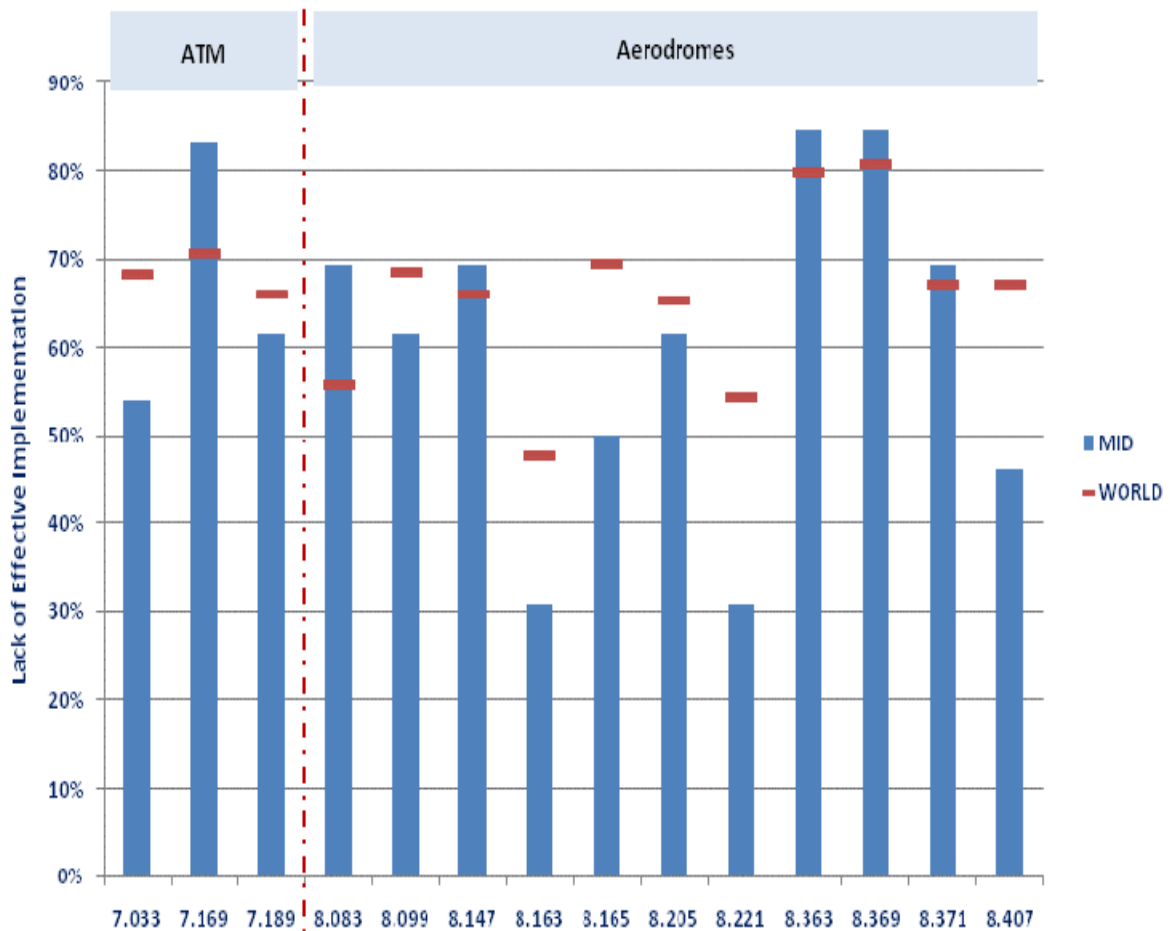
8.363 Has the requirement for certified aerodromes to have a SMS in operation been implemented for all aerodromes receiving international flights? AGA SARPs A14, Vol. I, 1.4.4, 1.4.5 & 1.4.6; Doc 9774, 1.2.3, C3, 3B.3.2 e) & 3D.4 - LEI 80

8.369 Has the State developed and issued guidance for aerodrome operators and regulatory staff on the use of aeronautical studies/risk assessments and their evaluation? AGA Doc 9774, C3, Sect. E, App. 3; Doc 9734, Part A, 3.3.7 & 3.6 - LEI 79

8.371 Is the regulatory technical staff trained in the development, use and evaluation of SMS, including aeronautical studies and risk assessments? AGA Doc 9774, C 3, Sect. E, 4.4.3 & App. 3; Doc 9734 Part A, 3.5 -LEI 65

8.407 How does the State ensure that, as part of their SMS, aerodrome operators monitor and analyse accident and incident occurrences and trends and take appropriate action? AGA Doc 9734, 3.9.8; Doc 9774, Part 5 f) -LEI 66

The following graph shows the MID region results compared to the global results:



MIDANPIRG/13
Report on Agenda Item 4.2

**REPORT ON AGENDA ITEM 4: PERFORMANCE FRAMEWORK FOR REGIONAL AIR NAVIGATION
 PLANNING AND IMPLEMENTATION**

4.2 ATM/SAR

Improvement of the MID ATS Route Network

4.2.1 The meeting noted that there are a number of States that are not complying with the established procedures for the amendment of the ATS route Network, including the compliance with the AIRAC procedures. The meeting urged those States to adhere to the established ICAO procedures for amendments and establishment of ATS routes that form part of the Regional ATS route network.

4.2.2 The meeting noted that as a follow-up to the MIDANPIRG/12 Conclusion 12/9, only Bahrain, Egypt, Iran, Kuwait, Jordan, Oman and UAE have updated their AIPs to change RNP 5 to RNAV 5. It was also highlighted that the RNAV 5 area in the MID Region is still being implemented with different base Flight Levels (FL150, FL195, FL245, FL280, etc). Accordingly, the meeting agreed that the ICAO MID Regional Office continue the follow-up with concerned States.

4.2.3 With regard to ATS Route L/UL315 recently established from **CAIRO – HURGADA – GIBAL**, it was noted that Egypt and Saudi Arabia are having bilateral discussions to reverse the direction of the route segment **HURGADA GIBAL JDW** to allow Eastbound flights. An agreement on the subject is expected to be reached by June 2012.

4.2.4 The meeting noted that ATS Route **P/UP 559** has been established from **TRF** (Jeddah FIR) extending to **VUXOR** (Bahrain/Emirates FIR boundary). The remaining segment of the route that passes through Jordan, Syria and Lebanon is not implemented and will take a long time to implement. The concerned States were included in the list of deficiencies for the above route. The meeting noted that the segments (LCA, KUKLA, KAD, DAM and TRF) will be deleted from the MID ANP, through the proposal for amendment of the MID Basic ANP (Serial No. MID Basic ANP 12/02 - ATM) and accordingly, the associated deficiencies recorded against Jordan, Lebanon and Syria would be deleted.

4.2.5 The meeting recalled that the DGCA-MID/1 meeting recognized the need for rationalization of the ATS routes in the MID Region and that a radical review of the ATS route network had to be carried out based on the definition of City Pairs, Flexible Use of Airspace (FUA) and Performance Based Navigation (PBN) concepts to address Airspace capacity limitation.

4.2.6 The meeting urged MID States to identify ATS routes within their airspace that are not economically feasible and to coordinate with their appropriate authorities to agree to align and shorten the ATS routes in order to enhance safety, efficiency and increase environmental sustainability. Accordingly, the meeting agreed to the following Conclusion:

**CONCLUSION 13/3: IMPROVEMENT OF THE ATS ROUTE STRUCTURE IN THE
 MID REGION**

*That, as a first step towards the rationalization of the ATS route network in the
MID Region:*

MIDANPIRG/13
Report on Agenda Item 4.2

- a) *States be urged to;*
 - i) *identify those ATS Routes that are not economically structured within their airspaces;*
 - ii) *coordinate and agree with appropriate authorities on the priority of action to replace the identified routes with more economical routes based on the definition of City Pairs, the PBN and FUA concepts;*
- b) *Users to;*
 - i) *identify those ATS Routes that are not economically structured in the MID Region;*
 - ii) *provide priority of action; and*
- c) *States and Users; provide feedback to the ARN TF/6 meeting.*

4.2.7 The meeting recalled that the DGCA-MID/1 meeting, through Conclusion 1/3, encouraged States to support CANSO efforts to carry out the Middle East Regional Airspace Review (MIDRAR), in close coordination with ICAO and all concerned parties/stakeholders.

4.2.8 The meeting noted that the main objectives of MIDRAR would be to:

- solve capacity challenges and improve efficiency in the Middle East airspace region's ATM through a regional approach;
- create a credible baseline for the region;
- conduct gap analysis;
- create a credible programme for remedial action;
- manage implementation of programme;
- drive improvement of ATM through moving towards optimally designed airspace; and
- build consensus and buy-in.

4.2.9 The meeting was apprised of the three MIDRAR project phases, i.e.: review, development, implementation and continuous improvement.

4.2.10 The meeting noted that the MIDRAR Study identified and prioritized challenges by considering the potential benefits, how quickly they could be implemented and their inter-relationship. The identified challenges were:

- Bahrain FIR capacity;
- inefficient routings and airspace capacity issues arising from 'Empty Quarter' utilization;
- delays resulting from transition from the Muscat FIR to Mumbai FIR;

MIDANPIRG/13
Report on Agenda Item 4.2

- the need to increase airspace capacity by accessing additional restricted areas or ‘military airspace’;
- bottlenecks formed as a result of inconsistent FIR Boundary interfaces; and
- access to and capacity of Damascus, Baghdad and Tehran FIRs.

4.2.11 The associated MIDRAR initiatives are as follows:

- Initiative 1: Capacity initiative ‘Provide capacity south of the Qatar Peninsular’
- Initiative 2: Increased utilization of the ‘Western Gulf’
- Initiative 3: Increase access to North-Eastern FIRs
- Initiative 4: FIR Harmonization
- Initiative 5: Management oversight

4.2.12 Based on the above, the meeting encouraged States to support the MIDRAR Project and agreed accordingly to the following Conclusion:

CONCLUSION 13/4: MIDRAR PROJECT

That States, be invited to support the MIDRAR Project and assign Focal Points to provide necessary information to the MIDRAR Team.

Allocation of Five-Letter-Name Codes (5LNCs) in the MID Region

4.2.13 The meeting reiterated that the use of the ICAO Five-Letter Name Codes and Route Designator (ICARD) System for the allocation of five-letter-name codes (5LNC) in the MID Region has been very efficient. The meeting confirmed that ICARD was an excellent tool for the elimination of duplicate codes. However, it was agreed that work has to be pursued to eliminate all the pending duplicate and non-ICAO codes.

4.2.14 The meeting recalled that further to the transfer of the ICARD hosting from EUROCONTROL to ICAO HQ in August 2010, and as a follow-up action to the MIDANPIRG/12, through Conclusion 12/10, the ICAO MID Regional Office issued on 22 December 2010 a State Letter requesting States to ensure that their designated ICARD Route Planner(s) register to the ICAO ICARD 5LNC web-based System, update the ICARD database and replace the identified duplicate and non-ICAO 5LNCs.

4.2.15 The meeting reviewed and updated the list of MID Region ICARD ATS Route Planners as follows:

MIDANPIRG/13
Report on Agenda Item 4.2

State	ICARD Route Planner	
	Name	Contact
Bahrain	Mr. Salah Mohamed Al-Humood	Fax: (973) 17 99 66 Tel: (973) 17 321 180 Mobile: (973) 3640 0424 Email: shumood@caa.gov.bh
Egypt	Mr. Nasr El Din Ali Mohamed	Fax: (202) 2268 0627 Tel: (202) 2265 0743 Mobile: (2010) 114 8968 Email: neam2002@hotmail.com nasreldin-ali@nansceg.net
Iran	Mr. Abbas Niknejad	Fax: +98 21 446 49269 Tel: +98 21 66025108 Mobile: +98 912810 9862 Email: abbas.niknejad@gmail.com a.niknejad@airport.ir
Iraq	Mr. Laith Jabbar Hassan	Fax: Tel: (964) 8132419 Mobile: (964) 7905116098 Email: ais_HQ@iraqcaa.com icaa_ais@yahoo.com
Jordan	Mr. Nayef Al Marshoud	Fax: (962-6) 4891266 Tel: (962-6) 4897729 Mobile: (962-7) 77789 470 Email: datm@carc.gov.jo
Kuwait	Mr. Abdullah Aladwani	Fax: (965-2) 476 5512 Tel: (965-2) 476 2531 Mob: (965) 6605 1116 Email: abm.aladwani@dgca.gov.kw
Lebanon	Mr. Elie Elkhoury	Fax: (961-1) 629 023 Tel: (961-1) 628 178 Mobile: (961-3) 897943 Email: kelie@beirutairport.gov.lb
Libya		

MIDANPIRG/13
Report on Agenda Item 4.2

State	ICARD Route Planner	
	Name	Contact
Oman	Mr. Nasser Salim Al-Tuwaiya	Fax: (968) 24519523 Tel: (968) 24519 305 Mobile: (968) 95180 233 Email: nass2008@caa.gov.om naltuwaiya@yahoo.com
Qatar	Mr. Faisal Al-Qahtani	Fax: (974) 4465 6554 Tel: (974) 44656 230 Mobile: (974) 5553 7060 Email: faisal.alqahtani@caa.gov.qa
Saudi Arabia	Mr. Hamad Al Aufi	Fax: (966-2) 640 5333 Tel: (966-2) 629 0564 or 640 5333 Mob: (966-55) 561 1136 Email: hmalaufi@gaca.gov.sa
Sudan	Mr. Yasir Abdalla	Fax: Tel: Mobile: Email:
Syria		Fax: Tel: Mobile: Email:
UAE	Mr. Abdalla Al Rashidi	Fax: (971-2) 599 6889 Tel: (971-2) 599 6891 Mobile: (971) 50 611 9865 Email: : akaabi@szc.gcaa.ae
	Mr. Talal Hussain Al Hammadi	Fax: (971-2) 599 6883 Tel: (971- 2) 599 6890 Mobile: (971) 50 818 0783 Email: thammadi@szc.gcaa.ae
Yemen	Mr. Hashed Abdul Wassa A. Kamel	Fax: (967-1) 344 047 Tel: (967-1)345527 Mobile: (967-7) 7170 7019 Email: hashed_kamel@yahoo.com hashedkamel@gmail.com

4.2.16 The meeting noted with appreciation that, in order to improve the process of assignment and management of 5LNCs in the MID Region, and identification/elimination of duplicate and non-ICAO codes, a Workshop on the use of the ICARD System and associated issues was successfully held in Cairo from 27 to 29 June 2011. The meeting reviewed the Summary of Discussion of the Workshop at **Appendix 4.2A** to the Report on Agenda Item 4.2.

MIDANPIRG/13
Report on Agenda Item 4.2

4.2.17 The meeting urged those States that have not yet done so, to provide the ICAO MID Regional Office with the contact details of their designated ICARD Route Planner(s) and ensure that they register to the ICAO ICARD 5LNC web-based System, update the ICARD database and replace the identified duplicate and non-ICAO 5LNCs, in accordance with the MIDANPIRG/12 Conclusion 12/10.

Implementation of Reduced Radar Longitudinal Separation in the MID Region

4.2.18 The meeting noted that 20 NM longitudinal separation has been implemented by Bahrain, Jordan, Kuwait, Saudi Arabia and Syria.

4.2.19 The meeting recalled that due to the difficulties faced by Iraq, 40 NM longitudinal separation is currently implemented in the Baghdad FIR.

4.2.20 The meeting agreed that uniform 10 NM separation minima could be implemented in the MID Region. The radar surveillance systems, currently in operation within the Region, allow for consistent separation standards.

4.2.21 Based on the above, the meeting encouraged MID States to implement 20 NM longitudinal separation and develop plans for further reduction of longitudinal separation from 20 NM to 10 NM. Accordingly the meeting agreed to the following Conclusion:

**CONCLUSION 13/5: IMPLEMENTATION OF REDUCED RADAR
LONGITUDINAL SEPARATION IN THE MID REGION**

That,

- a) States, that have not yet done so;*
 - i) be urged to implement the 20 NM radar longitudinal separation;*
 - ii) be encouraged to further reduce the radar longitudinal separation within the MID Region to 10 NM, where appropriate; and*
 - iii) be invited to agree with their neighbouring FIRs/States on the date of implementation and updating of the LoAs;*
- b) the ATM Regional PFFs be updated to include the reduced radar longitudinal separation as an ATM objective for the MID Region.*

4.2.22 The meeting noted that Oman had been pushing for the reduction of horizontal separation through the Bay of Bengal Reduced Horizontal Separation Task Force (BOBRHS TF), where it was agreed to implement the Reduced Horizontal Separation (RHS) over the Arabian Sea and Indian Ocean and introduce 50/50 NM separation using mix mode operations. Furthermore, the meeting noted that Oman is facing problem due to the non-compliance of airlines to fill the letter (J) in field 10 of the flight plan.

4.2.23 The meeting noted that there have been a number of reported events relating to the A380 wake turbulence either on Departure or the En-route phase of flight where the following aircraft at 1000 or 2000 ft below and within 20 NM has encountered turbulence.

MIDANPIRG/13
Report on Agenda Item 4.2

4.2.24 Based on the above, it was recognized that further reduction in the longitudinal separation to 10 NM would require MID States to develop procedures for their Air Traffic Controllers to exercise caution when clearing Medium Category aircraft to climb behind an A380 taking into consideration the ICAO guidance material on A380 wake turbulence.

SSR Code Allocation Plan (CAP) for the MID Region

4.2.25 The meeting recalled that when considering the Originating Region Code Assignment Method (ORCAM), the SSRCA Study Group (SG) agreed that data related to MID Region traffic patterns and volume, Flight Data Processing Systems' (FDPS) capabilities and requirements in adjacent ICAO Regions, was necessary in order to reach a decision on the number of the PAs and codes allocated to each PA.

4.2.26 The meeting noted that MIDANPIRG/12 urged MID States to identify and address inefficiencies in the current ORCAM structure before adopting an alternate structure in order to overcome the SSR code shortage.

4.2.27 The meeting noted that the SSRCA SG/4 meeting reviewed the study carried out by EUROCONTROL on the MID Regional traffic patterns for the month of June 2009. The following recommendations were reached:

- the results of the study does not require an immediate split of the MID Participating Areas (PA) into multiple ones for the short and medium term; and
- should there be a need to split the MID PA for the medium and long term, then two PAs should be implemented in accordance with option 1 presented to the SSRCA SG/3 meeting.

4.2.28 The meeting reviewed and endorsed the Strategy on SSR Code allocation at **Appendix 4.2B** to the Report on Agenda Item 4.2. Accordingly, the meeting agreed to the following Conclusion:

CONCLUSION 13/6: MID STRATEGY ON SSR CODE ALLOCATION

*That, the MID Region Strategy on SSR Code Allocation be updated as at **Appendix 4.2B** to the Report on Agenda Item 4.2.*

4.2.29 The meeting noted that the following SSR Codes in the transit series were conflicting between the EUR and MID Regions: 06, 11, 21, 23, 25, 27, 30, 35, 37, 41, 60, 61, 66, 71. It was noted with appreciation that this issue has been resolved through the development of the updated SSR Code allocation list for the MID Region.

4.2.30 Based on the above the meeting endorsed the SSR Code Management Plan (CMP) which includes the revised SSR Code allocation List as at **Appendix 4.2C** to the Report on Agenda Item 4.2. Accordingly, the meeting agreed to the following Conclusion:

MIDANPIRG/13
Report on Agenda Item 4.2

CONCLUSION 13/7: MID SSR CODE MANAGEMENT PLAN (CMP)

*That, the MID Region SSR Code Management Plan is endorsed as at **Appendix 4.2C** to the Report on Agenda Item 4.2.*

4.2.31 The meeting endorsed also the Request Form for a temporary assignment of SSR Codes required for seasonal high traffic activities and intensive Military exercise requirements at **Appendix 4.2D** the Report on Agenda Item 4.2.

4.2.32 The meeting was of the view that the SSRCA Study Group has completed its work programme and agreed to its dissolution, providing that the remaining SSRCA issues be addressed by the ATM/AIM/SAR SG. Accordingly the meeting agreed to the following Decision:

DECISION 13/8: DISSOLUTION OF THE SSRCA STUDY GROUP

That, recognizing that its work programme has been completed, the SSRCA Study Group is dissolved.

Contingency Plans in the MID Region

4.2.33 The meeting recalled that one of the challenges contributing to the low pace in implementation of contingency plans was the process of consultation and agreements with adjacent FIRs/States. However, it was noted that progress has been achieved, since a number of States have signed contingency planning agreements with adjacent FIRs/States.

4.2.34 The meeting recalled that the DGCA-MID/1 meeting noted with concern that the development and promulgation of contingency plans remains one of the long standing deficiencies in the MID Region. Taking into consideration the current events in the MID Region and for ensuring safety and continuity of civil aviation, the DGCA-MID/1 meeting recognized that it's becoming more imperative and pressing that all MID States take necessary measures to sign the pending contingency agreements with adjacent FIRs/States and expedite the promulgation of their contingency plans.

4.2.35 The meeting reviewed the draft MID Regional Contingency Plan and the revised version of the CRAME – 03 Document, which was consolidated by the Secretariat as at **Appendices 4.2E and 4.2F** to the Report on Agenda Item 4.2, respectively; and agreed that the plan should be further updated by States and users. Accordingly the meeting agreed to the following Conclusion:

CONCLUSION 13/9: MID REGIONAL CONTINGENCY PLAN

*That, States and users be urged to review the MID Regional Contingency Plan and the revised version of the CRAME-03 at **Appendices 4.2E and 4.2F** to the Report on Agenda Item 4.2, respectively; and provide updates and comments to the ICAO MID Regional Office before **1 September 2012**.*

4.2.36 The meeting reviewed and updated the status of implementation of the contingency plans agreements in the MID Region as at **Appendix 4.2G** to the Report on Agenda Item 4.2.

MIDANPIRG/13
Report on Agenda Item 4.2

Search and Rescue (SAR)

4.2.37 The meeting recalled the difficulties facing States to comply with Annex 12 and MID Basic ANP provisions related to SAR agreements and recognized that the process of signing such agreements should be facilitated through the promulgation of enabling legislation/regulations. Accordingly, the meeting encouraged States to use the Sample Legislation for establishing a SAR Organization, contained in Document 9731 (IAMSAR).

4.2.38 The meeting noted that as a follow-up action to MIDANPIRG/12 Conclusions 12/22 and 12/23, the ICAO MID Regional Office carried out a survey to collect information on the status of implementation of SAR provisions in the MID Region. The meeting reviewed and updated the status of implementation of SAR provisions and SAR Point Of Contact (SPOC) as at **Appendices 4.2H** and **4.2I** to the Report on Agenda Item 4.2 and agreed to update the list of deficiencies in the SAR field accordingly.

Civil/Military Cooperation

4.2.39 The meeting recalled that MIDANPIRG/12 emphasized on the need of sharing airspace between civil and military. Accordingly, the meeting urged MID States to manage the airspace flexibly with an equitable balance between civil and military users through strategic coordination and dynamic interaction, which should lead to the implementation of the Flexible Use of Airspace (FUA).

4.2.40 The meeting noted that as a follow-up to MIDANPIRG/12 Conclusion 12/25, the ICAO MID Regional Office issued on 2 June 2011 a State Letter urging States to support ICAO's vision for an integrated, harmonized and globally interoperable ATM system, and to facilitate effective civil/military cooperation and joint use of airspace.

4.2.41 The meeting was informed that ICAO has issued new Circular on Civil/Military Cooperation in Air Traffic Management (Cir 330). The meeting encouraged States to use the guidance contained in this Circular to improve the Civil/Military Cooperation.

4.2.42 Based on the above, the meeting re-iterated the MIDANPIRG/12 Conclusion 12/25, which was considered to be still valid:

CONCLUSION 12/25: CIVIL/MILITARY COOPERATION

That, in order to facilitate effective civil/military cooperation and joint use of airspace in accordance with ICAO provisions, and in support of the ICAO's vision for an integrated, harmonized and globally interoperable air traffic management system as laid out in the ATM Operational Concept and in the Global Air Navigation Plan, MID States that have not yet done so, be urged to:

- a) manage the airspace in a flexible manner with an equitable balance between civil and military users through strategic coordination and dynamic interaction, in order to open up segregated airspace when it is not being used for its originally-intended purpose and allow for better airspace management and access for all users according to their needs;*
- b) develop necessary institutional arrangements to foster civil/military cooperation; and*

MIDANPIRG/13
Report on Agenda Item 4.2

c) take steps and arrange as necessary for the Military authorities to be:

- i) fully involved in the airspace planning and management process;*
- ii) aware of the new developments in civil aviation; and*
- iii) involved in national, regional and international aviation meetings, workshops, seminars and training sessions, as appropriate.*

4.2.43 The meeting noted that a Civil/Military Cooperation Seminar/Workshop will be organised in, Cairo in September 2012. Accordingly, the meeting urged States to coordinate with their Military Authorities for an active participation in this Seminar/Workshop.

4.2.44 The meeting noted with appreciation that, as a follow-up to MIDANPIRG/12 Conclusion 12/26, a Proposal for Amendment to the Supplementary Procedures (Doc 7030) related to the “Uncoordinated flights over the Red Sea Area”, was processed and approved by the President of the Council on 11 May 2011.

Post RVSM Implementation in the Baghdad FIR

4.2.45 The meeting noted with concern that, although Iraq has submitted to the MIDANPIRG/13 meeting, three (3) Working Papers and one (1) Information Paper, they were not able to attend the meeting.

4.2.46 The meeting noted that due to the non-attendance of Iraq to the MIDRMA Board/11 meeting in September 2011 and then to the ATM/SAR/AIS SG/12 meeting in November 2011, the ATM/SAR/AIS SG/12 meeting, through Draft Conclusion 12/4, agreed that a Special Coordination Meeting related to the Post RVSM Implementation within Baghdad FIR be organized by ICAO, in order to address the ATC coordination, communication and surveillance issues between Baghdad ACC and the neighbouring ACCs and finalize the RVSM post-implementation safety case.

4.2.47 The meeting was apprised of the Baghdad FIR Post RVSM Implementation-Special Coordination Meeting (BFPRI-SCM) held in Amman, Jordan, 8-9 February 2012.

4.2.48 The meeting noted the concerns raised by Bahrain, Iran, Jordan, Kuwait and Turkey, related to the communication problems with Baghdad ACC as well as the repetitive radar failures in Iraq, especially the Basra radar, which had a negative impact on the safety and efficiency of air navigation.

4.2.49 It was highlighted that in many cases, the situation forced the Iraqi Civil Aviation Authority (ICAA) to revert back to 40NM longitudinal separation instead of the agreed 20 NM longitudinal separation and accordingly, it was agreed to continue using the 40NM longitudinal separation, until the elimination of all the communication and surveillance issues.

4.2.50 The meeting noted that the BFPRI-SCM meeting reviewed the Draft Report on Safety of application of RVSM in the Baghdad FIR after 90 days of use, developed by the ICAA and the comments made by the MIDRMA and agreed that these comments should be taken into consideration in the development of the final version of the Post-RVSM Implementation Safety Report. However, it was noted with concern that the final version of the Post-RVSM Implementation Safety Report was not submitted by the ICAA. The meeting noted the serious concerns raised by MIDRMA, in this respect. In addition, it was highlighted that the Baghdad ACC Letters of Agreements (LOAs) with the Amman ACC,

MIDANPIRG/13
Report on Agenda Item 4.2

Jeddah ACC and Tehran ACC have not yet been signed by the ICAA. Furthermore, Iraq has been included in the list of air navigation deficiencies for the non-provision of required data to the MIDRMA (ADRs, CFRs, RVSM approvals) on a regular basis and in a timely manner.

4.2.51 The meeting noted that the ICAA recognized the incredible amount of work to carry out for the normalization of the Baghdad FIR and the efforts and time necessary to address the difficulties/challenges related to the CNS infrastructure. The meeting recognized that the difficulties faced by Iraq and the consequential restrictions on the longitudinal separation minima have a domino effect not only on the neighbouring States, but also on other States i.e.: Bahrain, UAE, etc.

4.2.52 The meeting reviewed the Action Plan for the normalization of the Baghdad FIR developed by the BFPRI-SCM at **Appendix 4.2J** to the Report on Agenda Item 4.2, and noted with concern that very low progress has been achieved.

4.2.53 Based, on the above, the meeting recognized that the continuous unresolved ATC coordination, communication and surveillance issues between Baghdad ACC and the neighbouring ACCs represent a safety risk and urged Iraq to take necessary measures to expedite the implementation of the Action Plan developed by the BFPRI-SCM. In this respect, the meeting agreed to give a last chance to Iraq to fulfil all the requirements related to RVSM implementation before **15 October 2012**. The meeting highlighted the need for and importance of the RVSM operations in the Baghdad FIR and invited all stakeholders to support Iraq in the process of normalization of the Baghdad FIR, in order to avoid the situation where the suspension of RVSM operations in the Baghdad FIR should be envisaged or imposed. Nevertheless, the meeting agreed that, in case of low progress, and taking into consideration the safety implications, Iraq will be faced with the obligation to suspend the RVSM operations in the Baghdad FIR. Accordingly, the meeting agreed to the following Conclusion:

**CONCLUSION 13/10: POST RVSM IMPLEMENTATION IN THE
BAGHDAD FIR**

That,

- a) Iraq be urged to implement the actions agreed by the BFPRI-SCM in an expeditious manner to solve the ATC coordination, communication and surveillance issues between Baghdad ACC and the neighbouring ACCs;*
- b) States and all stakeholders be invited to support Iraq in the process of normalization of the Baghdad FIR; and*
- c) in case of low progress of implementation of the necessary actions by Iraq before **15 October 2012**, the RVSM operations be suspended in the Baghdad FIR.*

MID Programme Management Unit (MID PMU)

4.2.54 The meeting was apprised of the IATA's proposal for the establishment of a MID Programme Management Unit (MID PMU) to support the implementation of regional plans and projects. In this respect, it was highlighted that there is a need for a mechanism to support and coordinate the implementation of regional airspace-related projects.

MIDANPIRG/13
Report on Agenda Item 4.2

4.2.55 The meeting noted that the objective of the MID-PMU, which would work on a voluntary commitment basis, is to:

- support States in the implementation of plans and projects across the region;
- track the progress of projects on a regional level and provide feedback to the appropriate MIDANPIRG subsidiary body and/or ICAO MID Office, whenever required;
- promote the related ICAO activity; and
- provide information on best practices.

4.2.56 The meeting agreed that the MID-PMU initiative should be further addressed by the appropriate MIDANPIRG subsidiary bodies i.e.: ATM/AIM/SAR SG, CNS/ATM/IC SG and MSG, before any commitment is to be made.

Revised Terms of Reference (TOR) of the ATM/AIM/SAR Sub Group

4.2.57 Taking into consideration the latest developments in the ATM and AIM fields, the meeting agreed that the ATM/SAR/AIS Sub-Group be renamed ATM/AIM/SAR Sub-Group with Terms of Reference (TOR) as at **Appendix 4.2K** to the Report on Agenda Item 4.2. Accordingly, the meeting agreed to the following Decision:

DECISION 13/11: REVISED TOR OF THE ATM/AIM/SAR SUB-GROUP

*That, the ATM/SAR/AIS Sub-Group be renamed ATM/AIM/SAR Sub-Group with Terms of Reference as at **Appendix 4.2K** to the Report on Agenda Item 4.2.*

MIDANPIRG/13
Appendix 4.2A to the Report on Agenda Item 4.2



International Civil Aviation Organization

Workshop on the use of the ICARD System and associated issues
(Cairo, Egypt, 27-29 June 2011)

SUMMARY

1. INTRODUCTION:

1.1 The Workshop on the use of the ICARD System and associated issues, approved by ICAO HQ as a Special Implementation Project (SIP) for the MID Region, was successfully held in Cairo from 27 to 29 June 2011. Nineteen (19) participants from 7 States (Bahrain, Egypt, Kuwait, Oman, Saudi Arabia, UAE and Yemen) have attended the Workshop. The list of participants is at **Attachment A**. The Workshop was moderated by Mr. Mohamed Smaoui, RO/ANS/AIM, ICAO MID Regional Office, supported by Mr. Jérôme Guévin, Aeronautical Information Manager, ANB, ICAO HQ and Mrs. Nikki Goldschmid, ATM Technical Assistant from the ICAO EUR/NAT Regional Office.

1.2 The main objective of the Workshop was to train nominees from States on the use of ICARD and improve the process of assignment and management of Five-Letter Name Codes (5LNCs) in the MID Region. The identification of duplicate and non-ICAO codes in order to initiate necessary actions, in coordination with concerned parties, was also an important subject addressed by the Workshop.

2. OUTCOME OF THE WORKSHOP

2.1 The Workshop included a series of audiovisual presentations and practical hands-on exercises through on-line access to the ICARD System, covering, mainly, the following:

- ICAO provisions related to 5LNCs (Annex 11), including the use of alphanumeric name codes (Doc 8168);
- ICAO Portal;
- registration procedure;
- different Modules of ICARD;
- use of ICARD in the MID Region;
- update of the ICARD database; and
- identification of duplicate and non-ICAO 5LNCs.

2.2 Specific actions have been taken by the participating States as follows:

Bahrain:

- registration procedure of the ICARD Route Planner completed;
- the ICARD database has been updated. In particular, the following non-used 5LNCs were released: ALVON (also for KSA), BONIS, BOPIX, KIRIR, KIRUM and SELEG;
- the following 5LNCs have been confirmed as Duplicates: AKRAM, ELOSA, KISAB, LOTOS, MUSKO, MUTAR and SALWA; and

- KITAP has also been identified as a duplicate. It was also found that this code was registered to UAE instead of Bahrain.

Egypt:

- the current ICARD Route Planner provided a presentation to share the experience of Egypt in the use of ICARD and associated coordination issues;
- the designation of a new ICARD Route Planner has been initiated (to take over from the current one who is changing his job position);
- registration of 3 participants as members of the ICARD group (one of them will be the new designated ICARD Route Planner);
- the ICARD database has been updated; and
- the 5LNC DELMA has been confirmed as Duplicate and action was initiated to carry out necessary coordination for its replacement by DELNA.

Note: it was noted with appreciation that Egypt has taken all necessary measures, in close coordination with the ICAO MID Regional Office, for the update of the ICARD database and elimination of the identified Duplicate and non-ICAO 5LNCs, as requested by the ATM/SAR/AIS Sub-Group and MIDANPIRG. In this respect, it was highlighted that during the last year, the following Duplicate and non-ICAO 5LNCs have been replaced by Egypt: ASTAR, KODAR, LADAL, TOKBO, SIXUM, AVIVA, EMARI, KAMIS, MILAD, MENDI, TABLA and DITAR.

Kuwait:

- registration procedure of the ICARD Route Planner completed;
- the ICARD database has been updated. In particular, the following non-used 5LNCs were released: ALRAS, ALRIM, ALRUT, BOSAK, BOTUB, ELULU, GOMKA, ITNAP, IVIRO, IVOVO, KAPOs, KUBAR, LABDI, MURED, MUSOD, MUXON, NADUS, ORBEB, PASES, PUSMA, RIKSA, RUKAK, SELEG, SEPLI, SIVAL, SODUP, SOGEK, SOLAL, SOMAM, TASRO;
- The 5LNC GESAK has been reserved to replace the 5LNC AWADI which is a non-ICAO code (not registered in ICARD); and
- the 5LNC DARVA has been confirmed as Duplicate and TANAP was identified also as Duplicate.

Oman:

- ICARD Route Planner already registered;
- the ICARD database has been updated. In particular, the following non-used 5LNCs were released: ALPEX, CROSS, DASTO and KANAS. In addition, the 5LNC APELO which is a FIR boundary point between Muscat and Karachi has been registered also for Oman; and
- the 5LNC MIBSI has been confirmed as Duplicate (to be replaced by MIBVI) and DORAB was identified also as Duplicate (to be replaced by DERTO).

Saudi Arabia:

- registration procedure of the ICARD Route Planner completed;
- registration of 3 participants as members of the ICARD group; and
- the following 5LNCs have been confirmed as Duplicates: RAGAN, SALWA, AKRAM, GAMDI, KOBAS, LOTOS and PARAM.

Note: it was noted with appreciation that Saudi Arabia used to be active for the update of the ICARD database and elimination of the identified Duplicate and non-ICAO 5LNCs before the change of the hosting of the ICARD System from EUROCONTROL to ICAO HQ. In this respect, it was highlighted that the following Duplicate and non-ICAO 5LNCs have been replaced by Saudi Arabia: METKI, DARAG, MITSO, ROTAM, BOSOS, KARIN, LABAG, NANGO, RAMSO, GAMLA, GIDOD, HARIS, KAPAD.

UAE:

- registration procedure of the ICARD Route Planners (main and alternate) completed;
- registration of 2 participants as members of the ICARD group;
- the ICARD database has been updated. In particular, the 5LNC SAMAK has been released;
- The Duplicate 5LNC GIDOX has been replaced by UAE;
- the 5LNCs AVAMI and SOBER have been confirmed as Duplicate. UAE will consider the replacement of SOBER; however, it would be difficult to replace AVAMI since it's used in many ATS Routes.

Note: it was noted with appreciation that UAE used to be active for the update of the ICARD database and elimination of the identified Duplicate and non-ICAO 5LNCs before the change of the hosting of the ICARD System from EUROCONTROL to ICAO HQ. In this respect, it was highlighted that the following Duplicate and non-ICAO 5LNCs have been replaced by UAE: LILLY, CARLO, EGMAL, DUMPI, NIGEL, PINGO and MURAK. An example of good coordination between the ICAO Cairo and Paris Offices for the replacement of the 5LNC DESDI by the Russian Federation was highlighted (DESDI used to be a Duplicate used by both UAE and The Russian Federation).

Yemen:

- registration procedure of the ICARD Route Planner completed;
- the ICARD database has been updated. In particular, the following non-used 5LNCs were released: DOMAN, ITMAM, FARES, RIHAB and ALKOS.
- the following 5LNCs have been confirmed as Duplicates: KORAB and MISAN.
- the 5LNCs KITAB, AMBOD, BAROM, KORAB and BANAR have been identified also as Duplicates.

2.3 A brainstorming session related to the future developments/improvements of the ICARD System and its use in the MID Region took place at the end of the Workshop. The following proposals/suggestions have been made:

- Non-ICAO codes that are released shall not go back to the reserve list.
- Differentiate between the “blocking” warnings and other warnings.
- Generate a warning message in case the Lat and Long coordinates for the requests of allocation of 5LNC are not provided;
- The following warning message should be clarified *“The code is close to another existing points”*:
 - ✓ What is the distance used to trigger the message?
 - ✓ Should the distance be shown on the warning message?
 - ✓ Should the name(s) of the existing 5LNC provided?
- When renaming an existing code, the selection of sound-like code with almost identical spelling should be avoided; eg. renaming MITSU with MITVI or DELMA with DELNA.
- Improve the software/algorithm used for the generation of “Reports” (especially the Reports of Duplicates) in the “Downloads” menu. In particular, the cover page of all reports referring to the FASID, shall be deleted and the header page amended accordingly.
- The use of codes for the designation of States “Code Indicators” (ITU and ISO) is to be reviewed, especially in the generation of Reports. The use of the State name is more convenient.
- Initiate action for the use of ICARD for the management of Route Designators in the MID Region and identify associated users’ requirements.
- States are encouraged to use the alphanumeric name codes in accordance with Doc 8168 provisions.
- ICAO to consider developing the necessary mechanism for the regular update of the ICARD database, based on the electronic AIPs (eAIP) and/or Regional AIS Databases (EAD, MIDAD, etc) and using the Aeronautical Information Exchange Model (AIXM) as the standard for the exchange of aeronautical data.
- ICAO to consider developing additional Training material on the use of ICARD, including on-line Training (Computer Based Training “CBT”).
- When requesting the assignment/amendment of 5LNC, the ICARD Route Planners should endeavour to provide complementary information in the “Comments” Box, related to the effective date, concerned ATS Route(s), replacement of duplicate or Non-ICAO code, etc.
- The following changes to the ICARD System (software issues) should be considered:
 - ✓ “Find Allocated and Available 5LNC” change the default from “Allocated List” to “Both”.
 - ✓ The Proximity Check box should be disabled until the Lat/Long coordinates are provided.
 - ✓ When using Microsoft Internet Explorer 9 (IE9), the users should run the ICARD application in 'Compatibility View' mode, otherwise the web page shows up as a blank without any indications of the problem.
 - ✓ Review the definition and use of the Codes shown in orange (pending for approval, or release, belongs to a block, etc) and provide relevant information to the Data Manager.

- ✓ “Transfer to Region” currently offers the possibility for the ICARD Data Manager to transfer codes from his Region Reserve List to another Region. It is proposed that this functionality should allow also the ICARD Data Manger to post Requests for transfer of codes which are available in other Regions Reserve Lists to his Region Reserve List.
- ✓ Provide a Forum for discussions between the different ICARD Data Managers and ICARD Route Planners through the ICARD System.

2.4 ICAO to consider the review of Appendix 2 to Annex 11 to provide more guidance on the Establishment and Identification of Designators for significant points not marked by the site of a radio navigation aid (5LNCs), taking into consideration the above proposals/suggestions.

2.5 The participants thanked ICAO for organizing such a successful Workshop and requested that similar Workshop(s) be organized in the future to address both the 5LNC and Route Designators related issues.

MID STRATEGY FOR SSR CODE ALLOCATION ISSUES**1) Medium Term Until 2020**

- a) transmission of EST and ABI be deferred until necessary – and no more than 30 minutes prior to ETO for the applicable COP;
- b) “Super-domestic” code allocation be introduced through bilateral measures (LOAs) where necessary to make use of Domestic codes to supplement Transit codes;
- c) codes should be assigned in a manner ensuring that the earliest available codes are reassigned first rather than using the assignment in numerical order;
- d) adopt the approach of “code sharing” between FIRs that are geographically adequately disparate and where directional assignment of SSR codes makes “code sharing” practical; and
- e) expedite the implementation of Mode S and/or ADS-B Surveillance to cater for the SSRCA long term measures for MID Region SSR code allocation.

2) Long Term

- a) consider the implementation of Two (2) ORCAM Participating Areas (PA); and
- b) consider the setup of a centralized SSR Code Allocation System.

INTERNATIONAL CIVIL AVIATION ORGANIZATION



MIDDLE EAST SECONDARY SURVEILLANCE RADAR (SSR) CODE MANAGEMENT PLAN

- First Edition -

2012

THE DESIGNATIONS AND THE PRESENTATION OF MATERIAL IN THIS PUBLICATION DO NOT IMPLY THE EXPRESSION OF ANY OPINION WHATSOEVER ON THE PART OF ICAO CONCERNING THE LEGAL STATUS OF ANY COUNTRY, TERRITORY, CITY OR AREA OF ITS AUTHORITIES, OR CONCERNING THE DELIMITATION OF ITS FRONTIERS OR BOUNDARIES.

TABLE OF CONTENTS

1	SCOPE	1
1.1	Relationship to MID Air Navigation Plan (Doc 9708)	1
2	DEFINITIONS AND ABBREVIATIONS	2
2.1	Definitions.....	2
2.2	Abbreviations	3
3	INTRODUCTION.....	4
3.1	Objectives of the Middle East SSR Code Management Plan	4
3.2	General Principles To Meet The Objectives	4
3.3	Monitoring of the Plan	5
4	PERMANENT CODE DISTRIBUTION AND CATEGORIES	5
4.1	Distribution of codes.....	5
4.2	Special purpose codes	6
4.3	Transit codes	7
4.4	Domestic codes	7
5	ORCAM.....	8
5.1	OUTLINE OF ORCAM OBJECTIVES	8
6	ORCAM SYSTEM REQUIREMENTS.....	9
6.1	Introduction.....	9
6.2	General System Considerations	9
6.3	Essential Capabilities for Automated ATC Ground Systems	10
	APPENDIX A - PARTICIPATING AREAS	i
	APPENDIX B - GENERAL PROCEDURES FOR SSR CODE ASSIGNMENT	iii
	APPENDIX C - IMPLICATIONS FOR AUTOMATION	vii
	APPENDIX D - DEVELOPMENT OF AUTOMATED SSR CODE ASSGNEMENT SYSTEMS...	xi

1 SCOPE

1.1 RELATIONSHIP TO MID AIR NAVIGATION PLAN (DOC 9708)

- 1.1.1 The *Middle East Secondary Surveillance Radar Code Management Plan* has been produced on behalf of the Middle East Air Navigation Planning and Implementation Regional Group (MIDANPIRG).
- 1.1.2 The purpose of MID CMP is to detail the requirements to be met by the States of the ICAO Middle East (MID) Region in order to comply with the provisions of the *Middle East Basic Air Navigation Plan* (MID ANP) (Doc 9708, Volume I) and the *Middle East Facilities and Services Implementation Document* (MID FASID) (Doc 9708, Volume II) as they pertain the management of Secondary Surveillance Radar (SSR) codes in the ICAO MID Region. This document incorporates text that currently comprises **Attachment B** to the MID FASID along with new material to document the management of the regional SSR Code pool.
- 1.1.3 The technical requirements and associated procedures may also be adopted by States in adjoining ICAO Regions which elect to participate in the Originating Region Code Assignment Methodology (ORCAM) for the management of SSR codes.
- 1.1.4 All references to SSR Codes are confined to Mode 3/A. The use and allocation of Mode S Interrogator Codes is covered by **Appendix 4A** to Table **CNS 4** to the MID FASID.

2 DEFINITIONS AND ABBREVIATIONS

2.1 DEFINITIONS

Assigned Secondary Surveillance Radar code (ASSR)	The SSR code assigned by an ATS Unit (ATSU) to a departing aircraft or to an aircraft entering the airspace of the ATSU. <i>Note: In cases where the Previous Secondary Surveillance Radar code (PSSR) can be retained, PSSR and ASSR can be the same code</i>
(SSR) Code	The number assigned to a particular multiple pulse reply signal transmitted by a transponder in Mode A or Mode C.
Code allocation	The distribution of SSR Codes to a State, unit or service.
Code assignment	The distribution of SSR codes to aircraft.
Code block	A continuous series of four-digit codes from the same code series.
Code series	A group of 64 four-digit codes having the same first two digits.
Direction of flight	The direction shall be defined as a combination of one or more: a) exit points or receiving Areas of Responsibility (AOR); and b) destinations (defined by the first, the first two, the first three or all four letters of an ICAO location indicator).
Directional assignment	Assignment of an SSR code based on the direction of the flight.
Discrete code	A four-digit code with the last two digits not being "00".
Domestic code	A code allocated to a specific AOR for use by designated ATC unit(s) within that AOR or, subject to certain conditions, across AOR boundaries.
Expectation window	A window of variable size around a 4D position, defined by flight plan information, at which a flight is expected to enter the AOR.
Four-digit code	An SSR identity code containing combinations of A, B, C and D pulses (any reply generated by a 4096-code transponder where the digits fall in the range 0-7).
Geographical correlation	Correlation of a flight with its flight plan using the geographical position of the flight by means of "Expectation Windows" in cases where the SSR code is already in use by one or more other flights within the same AOR.
Mode S Conspicuity Code	In order to maximise SSR code savings through Mode S Elementary Surveillance (ELS), all aircraft identified via the down linked Aircraft Identification (ACID) use the same SSR code, the Mode S Conspicuity Code A1000.
Octal block	A block of 8 four-digit codes from the Same Series and having the first three digits common. They may be identified by indicating their third digit when referring to the Code Series e.g. Codes 0010-0017 may be referred to as Codes 00(1).
Participating area (PA)	An area of specified dimensions comprising the areas of ATS unit responsibility of one or more States.
Previous Secondary Surveillance Radar code (PSSR)	The SSR code transmitted by an aircraft when entering the airspace of an ATSU or when being transferred by the transferring unit. <i>Note: In cases where the PSSR can be retained, PSSR and ASSR can be the same code.</i>

Simultaneous code use	Assignment of an SSR code, which is already in use within the same AOR, to an aircraft in accordance with procedures which ensure that the two aircraft will be exiting the AOR in opposite or nearly opposite directions.
Retention of an SSR code	Accepting an aircraft from the transferring unit without changing the SSR code. A code can be retained if no other aircraft within the AOR uses the same code and if the retention of the code is in accordance with the Code Allocation List (CAL).
Transit code	A code allocated to a State for a specified ACC for assignment to an aircraft engaged in transit flights within the originating PA or, subject to certain conditions, to specified locations in succeeding PAs.

2.2 ABBREVIATIONS

ABI	Advance Boundary Information
ACID	Aircraft Identification
ADEP	Aerodrome of Departure
ADES	Aerodrome of Destination
AOR	Area of Responsibility
ASSR	Assigned Secondary Surveillance Radar code
ATC	Air Traffic Control
ATS	Air Traffic Services
ATSU	Air Traffic Services Unit
CAL	Code Allocation List for the Middle East Region
CMP	Code Management Plan
COD	SSR Code Assignment Message
MIDANPIRG	Middle East Air Navigation Planning and Implementation Regional Group
ELS	Elementary Surveillance
FDPS	Flight Data Processing System
FIR	Flight Information Region
NM	Nautical Mile
ORCAM	Originating Region Code Assignment Method
PA	Participating Area
PSSR	Previous Secondary Surveillance Radar code
RDPS	Radar Data Processing System
SSR	Secondary Surveillance Radar
VSP	Variable System Parameter

3 INTRODUCTION

3.1 OBJECTIVES OF THE MIDDLE EAST SSR CODE MANAGEMENT PLAN

- 3.1.1 The Middle East SSR Code Management Plan (MID SSR CMP) has been established to provide States in the ICAO MID Region with means to coordinate the use of SSR codes based on the principles of the Originating Region Code Assignment Method (ORCAM), which provides for the most efficient and economical use of codes.
- 3.1.2 The MID SSR CMP will foster the implementation of ORCAM which will ultimately allow for an assigned discrete code which would, whenever possible, be retained throughout the flight.
- 3.1.3 For the development of automated SSR code assignment systems, reference should be made to Paragraph 6 below.
- 3.1.4 On the basis of the above, a detailed Code Allocation List (CAL) for the MID Region Participating Area (PA) and certain adjacent areas was developed. The CAL is maintained by the ICAO MID Regional Office as a Supplement to MID Doc 9708.
- 3.1.5 The agreed allocation of SSR codes to States and ATS units are documented in Part A of the CAL. The detailed listing of codes serving both transit and domestic purposes is shown in Part B of the CAL. The CAL is at **Attachment B** to the MID FASID, Part V.

3.2 GENERAL PRINCIPLES TO MEET THE OBJECTIVES

- 3.2.1 The detailed principles governing the use of SSR codes in the MID Region are based on the following general principles which are provided by or are complementary to the worldwide provisions detailed in *Procedures for Air Navigation Services — Air Traffic Management* (PANS-ATM, Doc 4444), Chapter 8:
 - a) codes shall be allocated to States in accordance with regional air navigation agreements, taking into account overlapping radar coverage over adjacent airspace;
 - b) codes are allocated to Air Traffic Services Units (ATSU) on the basis of duly justified operational requirements; their number is primarily established by taking into account the number of aircraft to be handled simultaneously and the system capabilities;
 - c) the appropriate ATS authority shall establish a plan and procedures for the allocation of codes to ATSUs;
 - d) the plan and procedures for the allocation of codes to ATSUs shall be compatible with those practised in adjacent States;
 - e) codes shall be assigned to aircraft in accordance with the plan and procedures laid down by the appropriate ATS authority;
 - f) whenever there is a need for individual aircraft identification, each aircraft shall be assigned a discrete code which should, whenever possible, be retained throughout the flight;
 - g) the assignment of a code should preclude the use of this code for any other function within the area of coverage of the same SSR for a prescribed time period; and
 - h) to reduce pilot/controller workload and the need for communications, the number of code changes required shall be kept to the minimum.
- 3.2.2 SSR codes should be used for ATS purposes only.

- 3.2.3 Code allocations are expressed in terms of complete code series or specified parts thereof. In special cases, such requirements may even cover designated discrete codes.
- 3.2.4 Codes intended to be used for transit purposes are allocated to States for use by specified ATSUs within the MID PA. Where provided for in the *Middle East SSR Code Management Plan* and under clearly defined circumstances, such codes may also be designated for use across PA boundaries.
- 3.2.5 Codes intended to be used for domestic purposes are allocated to States for use by specified ATSUs requiring limited geographical protection for such codes. Where provided for in the MID SSR CMP and under clearly defined circumstances, such codes may also be designated for use across national boundaries.

3.3 MONITORING OF THE PLAN

- 3.3.1 Provisions regarding the progressive implementation and monitoring of the MID SSR CMP have been agreed by the MIDANPIRG. In this connection, the management of the MID SSR CMP is exercised by the ICAO MID Regional Office. States expecting to introduce or change SSR facilities are requested to advise the ICAO MID Regional Office at least six months in advance, in order to provide sufficient time to carry out any necessary coordination.
- 3.3.2 To be effective, the MID SSR CMP must be kept up to date. While its contents will be reviewed regularly, it is the responsibility of all States to inform the ICAO MID Regional Office promptly of any variations proposed or considered necessary with respect to their code allocations, relevant to ATS infrastructure developments and/or the guidance material provided in the MID SSR CMP.
- 3.3.3 In order to serve their purposes it is imperative that the MID SSR CMP and the CAL are kept up to date. States are therefore required to inform the MID Office of ICAO promptly of any requests for changes, additions or deletions in regard to the use of specific codes, as follows:

ICAO MID Regional Office

Subject: SSR Code Management
E-mail:
icaomid@cairo.icao.int
Fax: +2 (02) 22674843

4 PERMANENT CODE DISTRIBUTION AND CATEGORIES

4.1 DISTRIBUTION OF CODES

- 4.1.1 Certain codes are reserved for special purposes on a worldwide scale or have been put in a common pool for use in the MID Region. The remaining code series for use in the ICAO MID Region are divided into two distinct types: transit codes and domestic codes. Both domestic and transit codes may be used as directionally assigned codes beyond their normal application under clearly defined and published circumstances, and appropriately coordinated through ORCAM.
- 4.1.2 The number of codes used for transit purposes has to take account of the extended geographical protection required, in order to reduce to a minimum the chances of confusion between the identities of two different aircraft assigned with the same discrete code. The MIDANPIRG has agreed that the retention time should normally be two hours.

- 4.1.3 The number of codes used for domestic purposes can be kept relatively small as they may be repeated within the same State or they can be used by other States provided a buffer is established. In some cases, by agreement, they can be used across national boundaries.
- 4.1.4 Furthermore, the allocation possibilities can be increased significantly by dividing specific code series into smaller contiguous codes. When this method is used for transit flights bilateral agreement may be required.

4.2 SPECIAL PURPOSE CODES

- 4.2.1 Specific codes in certain series are reserved for special purposes as follows:

Series 00	Code 0000 is available as a general purpose code for domestic use by any of the following States:

Bahrain, Egypt, Iran, Iraq, Jordan, Kuwait, Lebanon, Oman, Qatar, Saudi Arabia, Syria, United Arab Emirates, Yemen.

Series 10	Code 1000 reserved for use as a conspicuity code for Mode S

Series 20	Code 2000 shall be used by flight crews in the absence of any Air Traffic Control (ATC) instructions or regional agreements unless the conditions for the use of codes: 7000, 7500, 7600 and 7700 apply.

Series 70	Code 7000 shall be used by flight crews not receiving ATS service in order to improve detection of suitably equipped aircraft in areas specified by States, unless otherwise instructed by ATS.

Series 75	Code 7500 is reserved for use in the event of unlawful interference.

Series 76	Code 7600 is reserved for use in the event of radio communications failure.

Series 77	Code 7700 is reserved for use in the event of emergencies and interception*. Code 7776 and Code 7777 are reserved for SSR ground transponder monitoring.

Codes 7601-7612	Are reserved for humanitarian flights.

Common SSR Code Pool	The following code blocks have been reserved for tactical allocation to States on a temporary basis to support large scale activities:

- 4.2.2 Discrete codes in the series 00 are allocated to States for use for domestic purposes. States in the MID Region are generally allocated two octal blocks of four-digit codes per State in such a manner that code duplication is avoided at FIR boundaries. The allocation of octal blocks is shown in the CAL.

**Note.— The word “interception” in this context does not include intercept and escort service provided, on request, to an aircraft in distress, in accordance with Volumes II and III of the International Aeronautical and Maritime Search and Rescue Manual (Doc 9731).*

4.3 TRANSIT CODES

4.3.1 Transit codes are allocated for assignment to transit flights. Aircraft will retain the assigned code within the geographical limits of the MID PA or, in the case of an agreement between States concerned, across the PA boundary.

4.3.2 The allocation of transit codes in the MID Region is based on one PA¹ which has been determined on the basis of the flow of air traffic in the region. It is shown on the Chart at **Appendix A** and includes the following States:

PA MID Bahrain, Egypt, Iran, Iraq, Jordan, Kuwait, Lebanon, Oman, Qatar, Saudi Arabia, Syria, United Arab Emirates, Yemen.

4.3.3 Transit codes shall be assigned in accordance with the following principles:

- a) when an aircraft enters the MID PA (either on departure or in flight), it will be assigned a discrete code by the first ATSU concerned at a Variable System Parameter (VSP) of not less than 30 minutes prior to activation of the flight entering the MID PA or when departing, upon ATC clearance delivery or at start up, whichever is later;
- b) each aircraft will keep the original code assigned on entering the MID PA for the entire flight within the PA. Appropriate code protection criteria have to be applied in order to avoid duplication by too early reassignment of the same code. Efforts should be made to reduce the “protection period” while retaining adequate protection. It has been agreed that the normal retention value shall be two hours; and
- c) a code change will be required at the time an aircraft crosses the MID PA boundary, unless special provision has been made for retention beyond the PA boundary.

4.3.4 In establishing the number and series of transit codes for both omni-directional and directional application, account is taken of the following factors:

- a) the air traffic flows and main sources of transit traffic in the MID Region and likely trends;
- b) the requirement for code series for a given ATC Unit. This requirement is derived from the total number of aircraft requiring assignment of a specific code during the busiest period of activity of that ATC Unit, taking into account a “protection period” after which any specific code assigned to an aircraft by an ATC Unit is normally available for reuse; and
- c) the assignment of a specific code to an aircraft is ideally made, as late as possible before take-off, normally on start up or upon ATC clearance delivery, whichever is later or, when an aircraft in flight is imminently due to come under control, normally a VSP value of not less than 30 minutes.

4.3.5 The distribution of the available code series for transit purposes is shown in the CAL.

4.3.6 Specific arrangements are required to ensure that no conflicting situations will arise in border areas.

4.4 DOMESTIC CODES

4.4.1 Domestic codes are allocated for use by aircraft remaining within the boundaries of the agreed area of responsibility (AOR) (normally within one State) or, in the case of agreement between States concerned, across agreed AORs. Domestic codes can also be used for transit

¹ The actual number of PAs to be established will depend on the results of the Secretariat study.

aircraft entering the MID PA and landing at an aerodrome within the AOR of the ATSU that has assigned the SSR code. The relevant code series for domestic purposes are shown in the CAL.

- 4.4.2 Domestic codes should be used so that utmost economy in the number of codes required is achieved. Domestic codes used for terminal purposes or within specified portions of the airspace (sectors) or across national boundaries will be assured protection in these functions from other uses of the same code through suitable systematic or procedural methods.
- 4.4.3 More detailed information concerning the procedures to be used for SSR code assignment can be found in **Appendix B**.

5 ORCAM

5.1 OUTLINE OF ORCAM OBJECTIVES

- 5.1.1 The objectives of ORCAM are:
 - a) to ensure safety by uniqueness and continuity;
 - b) enhance safety;
 - c) reduce workload;
 - d) improve system capacity; and
 - e) increase efficiency.
- 5.1.2 Uniqueness and continuity criteria are intended to provide permanent perceptibility and identification of aircraft with a minimum of errors and interruptions.
- 5.1.3 *Uniqueness*. Depending on system functionality, only one aircraft should respond using a given code in any particular area and at any given time. This provides an unambiguous code/callsign correlation and consequently an easy identification of aircraft.
- 5.1.4 *Continuity*. A code assigned to an aircraft should, whenever possible, be retained throughout the flight. This secures permanent display of aircraft identification.
- 5.1.5 The uniqueness and continuity criteria of ORCAM enhance safety by limiting the likelihood of identification errors. They also assist traffic flows since radar identification and all aspects connected with transfers are facilitated. This results in a reduction of workload (radiotelephony, identification monitoring, etc.) and substantially improves the overall system capacity.
- 5.1.6 In some areas the number of flights could exceed the number of SSR codes available. Some rationalization according to the nature of the flight (short-, medium- or long-haul, domestic, international or transit) and of the capabilities of the system is necessary for the most intensive possible use of codes.
- 5.1.7 Permanent code assignments and allocations based on the aircraft callsign, control position or any other systematic distinguishing features cannot be accepted because of the wasteful effects on the efficiency in use of codes required.

6 ORCAM SYSTEM REQUIREMENTS

6.1 INTRODUCTION

- 6.1.1 Middle East States are relying on the extensive use of SSR in automated ATC ground systems to ensure uninterrupted aircraft identification and maintenance of radar/flight plan correlation.
- 6.1.2 They have recognized the common availability of specified capabilities in automated ATC ground systems as being essential for:
- a) participation of individual automated ATC units in a cooperative environment;
 - b) application of a common SSR Code assignment method in accordance with the ICAO principles;
 - c) efficient utilization of codes in automated ATC ground systems.
- 6.1.3 This “Statement of essential common capabilities for automated ATC ground systems in relation to the use of SSR” shown in paragraph 6.3 below, lists the capabilities concerned. It should be used by States as the basis to determine the minimum operational specifications for automated ground systems.

6.2 GENERAL SYSTEM CONSIDERATIONS

- 6.2.1 The application of automatic data processing in ATC ground systems allows for great freedom in the definition of system capabilities. This freedom should be exploited to:
- a) provide for all essential capabilities related to the use of SSR in the most simple manner having due regard to operational requirements; and
 - b) enable individual automated ATC ground systems to function as part of an inter-operable environment and to comply with agreed conventions facilitating such cooperation (e.g. principles and basic rules for code assignment, code assignment methods etc.).
- 6.2.2 Individual automated ATC ground systems should, as part of an inter-operable environment, be capable of making the maximum use of codes previously assigned by other units controlling the aircraft concerned; i.e. they should not introduce any code changes or if this is impossible in some circumstances, require only the minimum of changes.
- 6.2.3 Taking into account inter-operability of ATC ground systems within the MID Region with others outside that area and the range of codes which may be utilized under such arrangements, automated ATC ground systems should be capable of performing all system functions related to the use of SSR for any 4-digit identity code.
- 6.2.4 Automated ATC ground systems should be designed to allow the use of a minimum number of codes. The application of sophisticated code correlation methods may reduce the number of codes needed in comparison with those required when simpler methods are used.
- 6.2.5 The processing of SSR data in automated ATC ground systems should be aimed at reducing the need for controller intervention.
- 6.2.6 **Appendix C** and **Appendix D** provide greater detail regarding the implications for automation and the development of automated SSR code assignment systems respectively.

6.3 ESSENTIAL CAPABILITIES FOR AUTOMATED ATC GROUND SYSTEMS

6.3.1 It is essential that automated ATC ground systems be designed to have certain capabilities in common, based on the assumption that:

- a) the maximum use will be made of previously assigned codes;
- b) only where continuing use of previously assigned codes would give rise to ambiguity, new codes will be assigned in accordance with a suitable common SSR code assignment method;
- c) the prime use of codes will be to facilitate automatic identification, automatic tracking and automatic radar/flight plan data correlation; and
- d) the differentiation of aircraft essential for the execution of these functions can be achieved through the use of a single, adequately protected code per aircraft.

6.3.2 In detail, automated ATC ground systems should be capable of automatic:

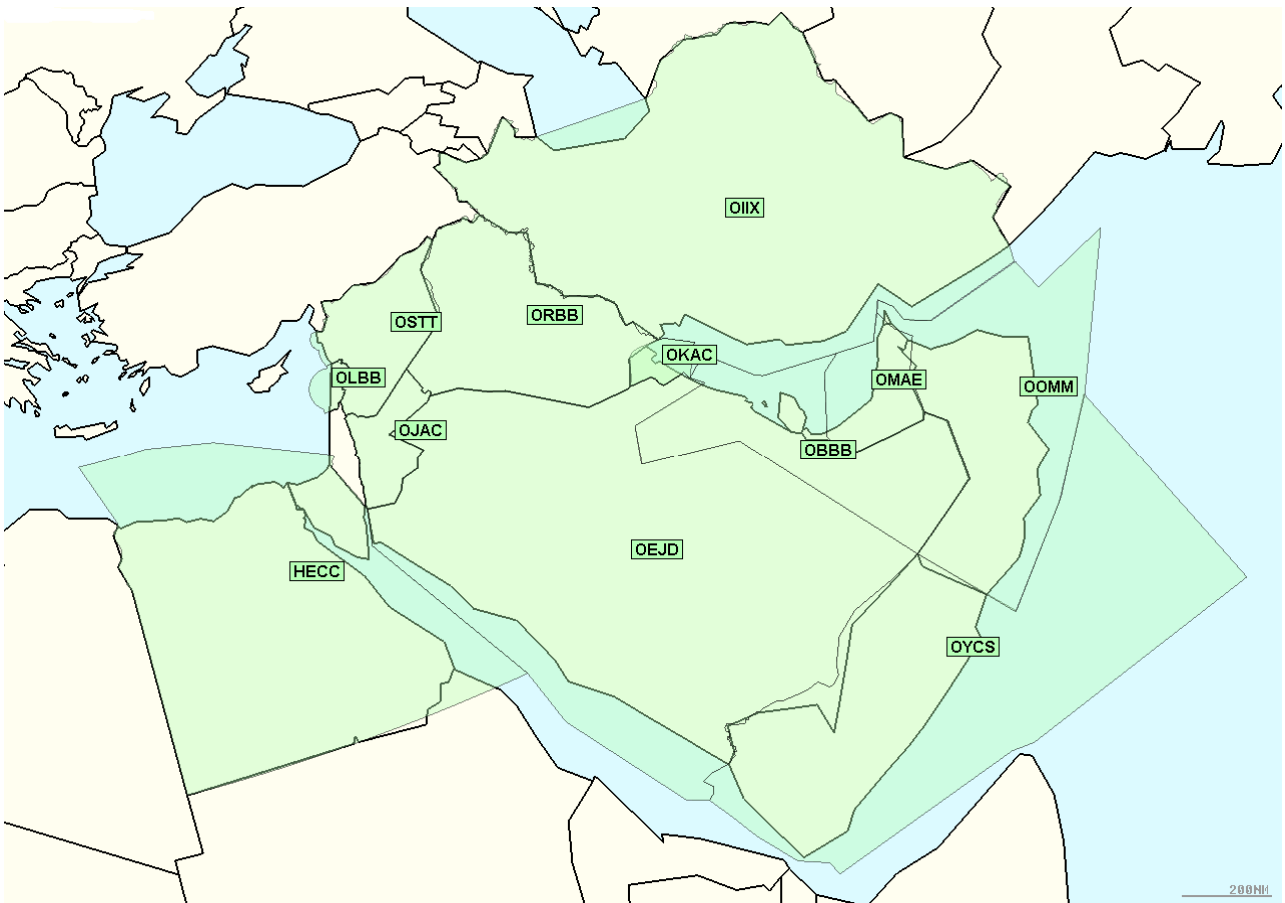
- a) **Exchange of codes:** in particular of timely transmission to adjacent centres concerned of information on the code previously assigned to flights to be transferred.
- b) **Assignment of codes:** in all instances where no previous code assignment has been made or where previous assignments are found to be unsuitable.
- c) **Processing of SSR code information, including:**
 - i) initiation of automatic tracking of SSR responses;
Note.— This does not exclude tracking on the basis of primary radar returns in areas where adequate primary coverage is available;
 - ii) determination for each code whether it meets the criteria to be established for unambiguous correlation;
 - iii) recognition of any code duplications affecting correlation;
 - iv) proposing action to controllers to resolve code duplications affecting correlation;
 - v) establishment of initial correlation between real-time radar information and current flight plan information on the basis of decoded SSR replies (including Mode C information). Correlation should be achieved sufficiently in advance of the time at which an aircraft enters the area of responsibility of a centre;
 - vi) maintenance of correlation between real-time radar information and current flight plan information on the basis of decoded SSR replies and/or coincidence of flight plan information (route, heading, altitude) or other distinguishing criteria and radar information;
 - vii) storage of code information until a VSP time at which its activation and protection is desired; and
 - viii) activation of stored information for correlation at a given VSP time and/or within a given airspace.

d) **Display of information including:**

- i) presentation in a suitable manner of decoded SSR replies and/or correlated flight plan information;
- ii) filtering of information to be displayed on the basis of SSR-derived data (Mode A/C); and
- iii) indication of code duplications.

e) **Special codes:** immediate recognition of special codes, as specified on a regional or world-wide basis, as well as maintenance of tracking and correlation of aircraft using these codes.

f) **Recovery from ground system degradation:** in cases of ground system degradation (excluding display component failure) to the extent that essential SSR-derived information is not displayed, automated ATC ground systems should be capable of restoring all essential information within the shortest possible time. Until full serviceability can be restored, the above aim may necessitate suppression of functions of secondary importance.

APPENDIX A - PARTICIPATING AREAS

SSR Code Allocation List

STATE FIR	Domestic Code	Domestic Code	Transit Code	Transit Code
Amman	0400 – 0477 1101 - 1177	2400 - 2477	0700 - 0777	
Baghdad	7400 - 7477	1300 – 1377	1001 - 1077	7200 - 7277
Bahrain	2100 – 2177 2700 - 2777	1200 - 1277	2200 – 2277 4400 - 4477	2600 - 2677
Beirut	2500 - 2577		4300 - 4377	
Cairo	0600 – 0677 2700 - 2777	2300 - 2377	1600 – 1677 7300 - 7377	3300 - 3377
Damascus	3000 - 3077		5700 - 5777	
Emirates	0400 – 0477 6000 - 6077	0600 – 0677 6100 - 6177	0500 – 0577 3400 - 3477	1700 – 1777 6200 - 6277
Jeddah	0100 - 0177 3500 – 3577 3000 - 3077	0200 – 0277 5000 – 5077 4100 - 4177	3100 – 3177 5200 - 5277	4500 – 4577 4200 – 4277
Kuwait	0600 – 0677		1400 – 1477	
Muscat	6600 – 6677 4600 – 4677	6500 – 6577	4000 – 4077	4700 – 4777
Sana’a	3700 – 3777		7001 – 7077	
Tehran	1101 - 1177 1500 – 1577 5600 -5677	4100 – 4177 6300 – 6377	3600 – 3677 5400 - 5477	5100 – 5177

SSR Code Reserve list

Domestic	Transit
0001 – 0077	2001 – 2077
0300 – 0377	3200 – 3277
6700 – 6777	5300 - 5377
7100 - 7177	5500 – 5577
7501 - 7577	6400 – 6477
7601-7612 Red Cross/humanitarian	
7613 - 7677	
7701 - 7777	
6700 – 6777	

APPENDIX B - GENERAL PROCEDURES FOR SSR CODE ASSIGNMENT

B.1 Retention of previous code

- B.1.1 Every endeavour shall be made to retain the code already assigned to the aircraft. This assumes that the code is known at the time of coordination (either by voice coordination or by transmission of an Air Traffic Services (ATS) Interfacility Data Communications (AIDC) message, or an On- Line Data-Interchange (OLDI) or via the pilot) and input into the system if automated. If a code is not already being used by another aircraft flying in an unprotected area and if the code assigned to the aircraft is acceptable for the flight category², the code shall be retained.

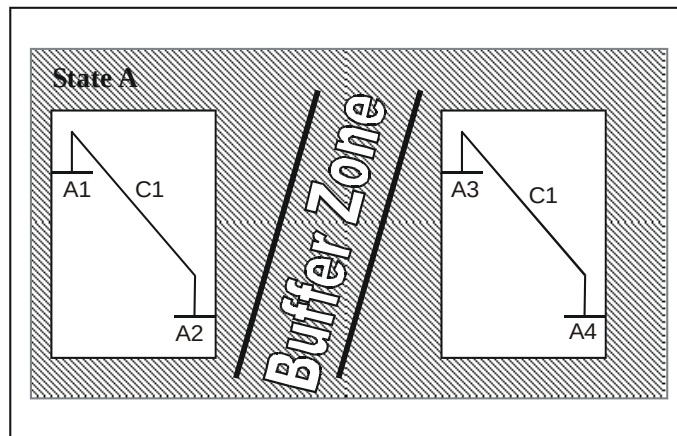
Note.— This should apply if the aircraft comes from an ATSU belonging to the same PA or a unit in another PA, but it may be retained in an area which has no conflicts with the other units in the area.

B.2 Code assignment or re-assignment

- B.2.1 The following rules will be applied to departing aircraft within the area of the control unit, or to aircraft whose previously assigned code failed to comply with the rules stated in B.1.1 above and consequently could not be retained:

- B.2.2 Where an aircraft remains inside a defined area of the AOR

Directional assignment of a domestic code - Code C1 can be assigned simultaneously to aircraft A1A2 and A3A4. C1 is protected for zone 1 and zone 2:

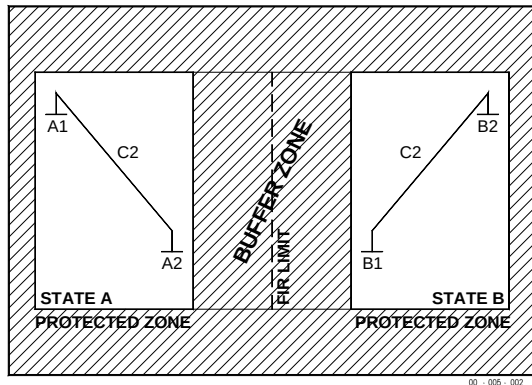


Note.— Domestic code allocation may be protected by buffer zones of at least 60 NM or separated by another unit. This rule is applicable within States, and also by arrangement between adjacent States. In order to make economic use of this type of allocation the same codes should preferably be disseminated (at most every 120 NM) in different small areas instead of having recourse to allocating codes belonging to an excessive number of different series.

² Flight category refers to transit, domestic or common pool codes.

B.2.3 Where an aircraft remains inside a State

Code C2 can be assigned simultaneously to aircraft A1A2 and B1B2 from different States A and B. C2 is protected for State A and State B:

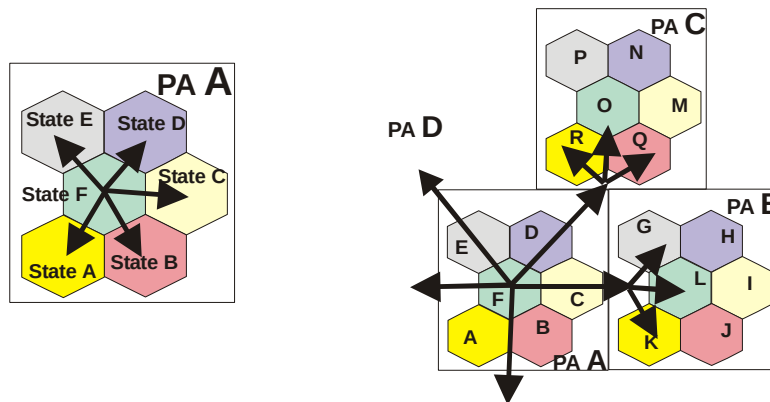


Note.— Domestic code allocation must be protected by buffer zones. Even more than in the case of B.2.2 above; consultation between adjacent States will be necessary to ensure such protection and rationalize excessive domestic code utilization as far as possible.

B.2.4 For an aircraft leaving a State

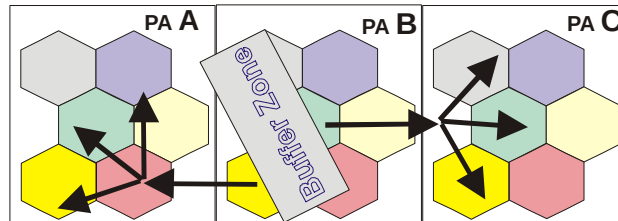
Transit codes are allocated by the Middle East SSR Code Management Plan to the various States for assignment to this flight category. Transit codes should be retained for the remainder of the flight in all States in the same PA and, if possible, other successive PAs, as agreed and reflected in Part B of the CAL. Transit codes received from a previous unit are maintained provided that they satisfy the assignment criteria.

B.2.4.1 *Omni-directional assignment of a transit code*



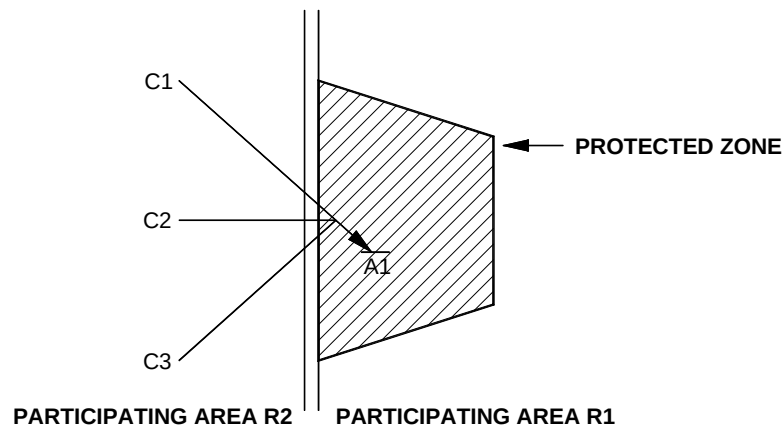
B.2.4.2 Directional assignment of a transit code

Allocated by the Middle East SSR Code Management Plan to the various States for assignment to aircraft under specific conditions: to specific destinations in the same PA or in different PAs; to specific directions of aircraft and/or via specific areas. Special attention shall be given in ensuring that when applying directional assignment of a transit code, no code conflict could occur.



B.2.4.3 Close to PA border, retention of transit codes of other PA

Codes C1, C2 and C3, which belong to R2 transit series are retained until landing at an airport A1 near the border between the two PAs, which is located in a protection area for the codes in question.



00 - 005 - 005 A

B.3 Code occupancy times

B.3.1 In order to ensure uniqueness of the code in the systems concerned by an aircraft, the ICAO MID Regional Office based its calculations on a “protection period” of approximately two hours, when establishing the number and series of transit codes (please see paragraph 4.3.4). At the same time, the protection period should be reduced when possible, while providing adequate protection (please see paragraph 4.3.3 b). Certain suggestions along these lines will be found below.

B.3.2 Point of time for code assignment to aircraft

In order to economize codes as much as possible, it is recommended that codes be assigned to flights which will be performed in the very near future (when ready for departure, or in flight, about to come under control).

Note.— The ideal moment is the flight activation point in the case of automated systems.

B.3.3 Assignment procedures

Codes are normally assigned according to the earliest time of release (a VSP). However, in units assigning codes manually such sophistication may be cumbersome. When sophisticated systems are not available, cyclical assignment of the codes released should be preferred instead of a systematic return to the beginning of the category.

B.3.4 Release of a code by an aircraft

When a system records an aircraft landing or passing a distant MID PA exit point, the code assigned to the aircraft may be regarded as released and be re-used. In the case of distant MID PA exit point, an additional VSP waiting time, normally thirty minutes, shall be added before re-use. In the event that a code has been assigned to flight that has been cancelled or which will not take place, the code assigned should be released for immediate re-use.

B.3.5 Saturation

When the traffic load is such that no code is available for a given flight category it may be necessary to assign codes in accordance with relaxed rules:

- a) reduced protection times –
(see B.3.4);
- b) using a different code category –
using an omni-directional assignment if no more codes for directional assignment

APPENDIX C - IMPLICATIONS FOR AUTOMATION

C.1 As stated in Appendix B, B.1.1, retention of the code assigned by the previous unit requires foreknowledge, implying capture of the data by the system in the event of automated assignment (direct capture by an AIDC or OLDI message, or indirect by manual input on coordination).

C.2 Assignment according to flight category implies that the system is capable of analysing the origin and destination of flights. If not, capture of units transferring and accepting, where applicable, may be used. For some cases one may need to process all four data items.

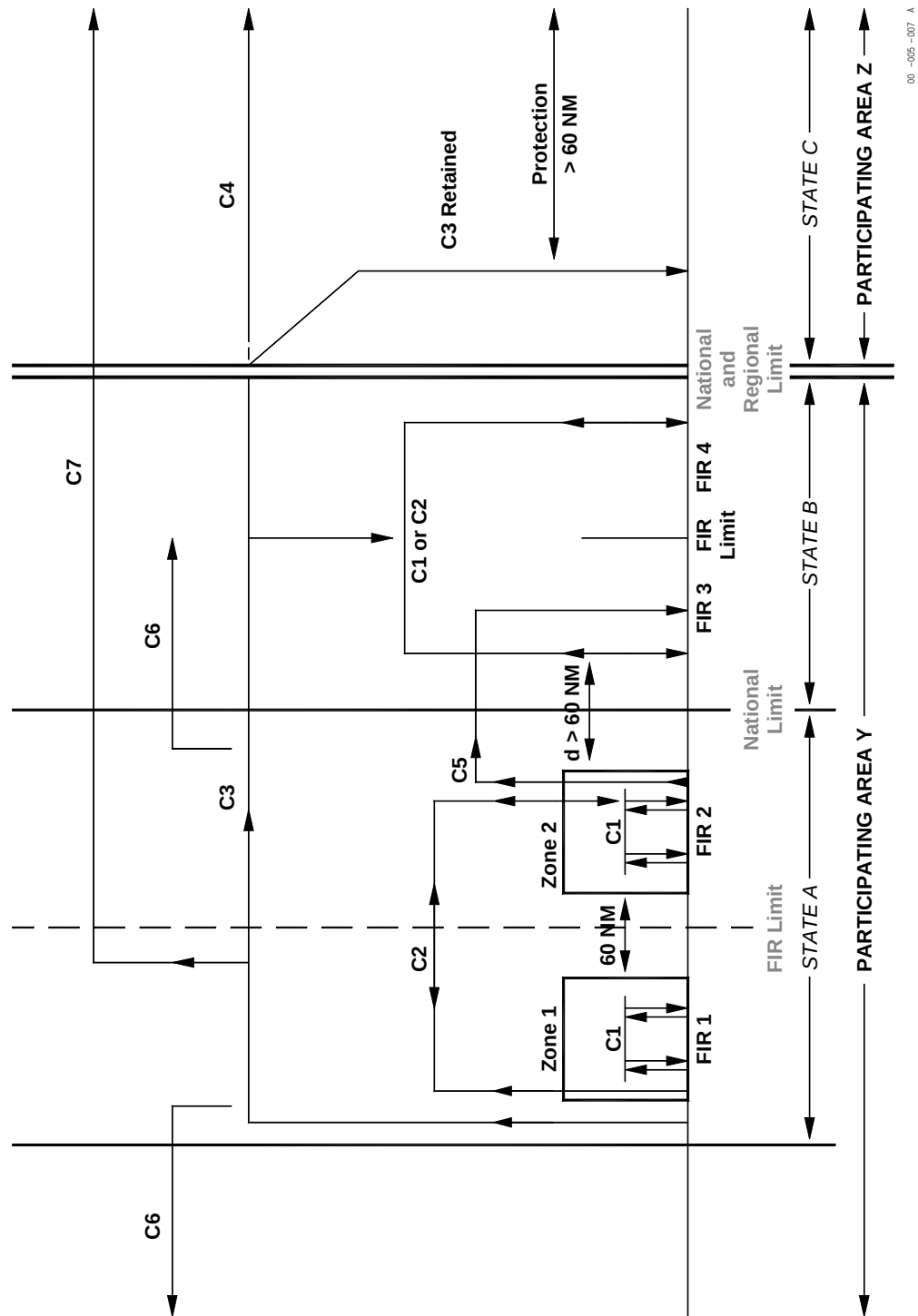
C.3 As in the case of any problem involving the “queuing management”, it is abundantly clear in the light of the previous remarks that the more centralized the allocation-assignment system, the more economical it will be. In other words, the less call there will be for allotment type solutions (provision of sub-banks to decentralized units), and the greater the use made of central assignment in accordance with overall criteria the more economical the system will be.

C.4 Likewise it has been seen that proper management of the assignment system presupposes knowledge of the actual traffic situation (entry into the system, route, exit from the system-landing etc.). Consequently, it is desirable that the assignment machinery should be linked with the real-time system.

C.5 A number of examples given in Appendix B show that despite the uniqueness by zone criterion, two codes may be found to be in use simultaneously in the same system (radar range is greater than the 60 NM buffer zone). Accordingly, the correlation systems should at least be capable of accommodating and unambiguously identifying two aircraft responding on the same code separated at the time of correlation by a designated geographical distance which will be a function of the automated system.

Note.— A geographical correlation filter should exist such that correlation will not be achieved if the calculated distance between the flight plan derived position based on estimate information and the SSR response corresponding to the SSR code in the flight plan is more than 30 NM.

C.6 Illustrative diagram for general code allocation and assignment



The following notes relate to the diagram:**Code C1:** Domestic code for PA Y (Domestic in STATE A Domestic in STATE B)

These codes can be used inside zone 1, inside zone 2, inside other zones of STATE B, and even inside the whole territory of STATE B if a buffer zone of 60 NM or a FIR separates them.

These codes could be used in PA Z under the same condition of protection against the allocation in STATE B.

Code C2: Domestic code for PA Y (Domestic in STATE A and STATE B)

Condition: a 60 NM buffer zone should be provided between these two assignments.

Code C3: Transit code for PA Y (STATE A)

In general such a code should be assigned to any aircraft originated in STATE A and leaving its boundaries, for overflying STATE B or landing in B.

In general this code may be changed at the entry in PA Z, but it could be retained for an arrival at an aerodrome close to the border and having a protection area of at least 60 NM against any other use in PA Z.

If C3 is planned for transit use from PA Y to PA Z it could be retained inside the whole PA Z.

Code C4: Transit code for PA Z (STATE C)

Such a code will be assigned to any flight whose code cannot be retained and overflying STATE C for a further destination in PA Z.

Code C5: Directional transit code between STATE A FIR2 and STATE B FIR3

C5 should be simultaneously protected in the two FIRs though domestic for PA Y. Such an allocation has the advantage of avoiding assignment of a transit code for such short middle-range flights.

Code C6: Transit code for PA Y

The example given with C6 is a duplication where the directional assignment by STATE A gives a guarantee of no conflicts occurring with the following units.

Code C7: Transit code for use for PA Y (STATE A) and PA Z

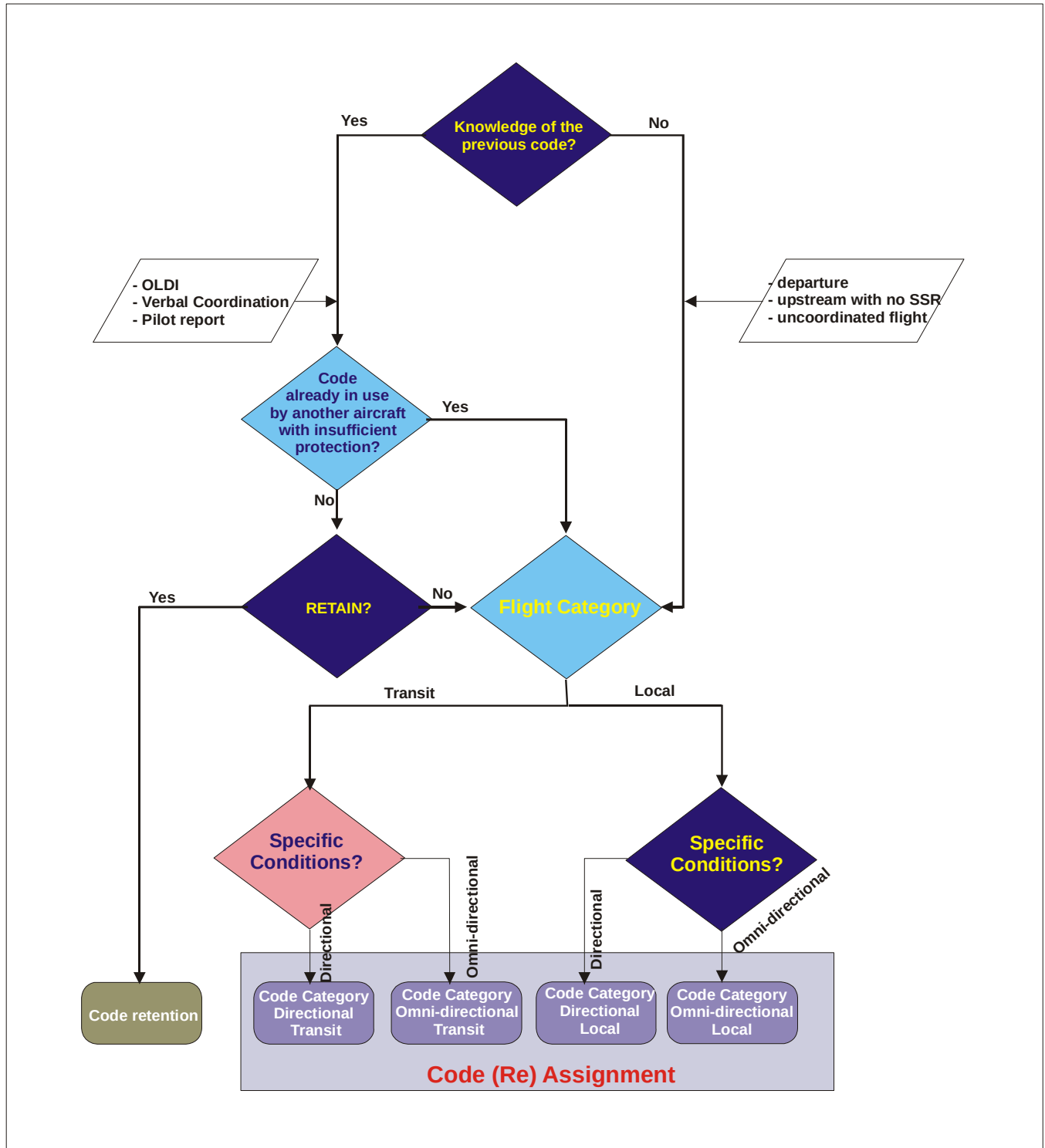
C7 which is at least transit in PA Y and having no domestic use in PA Z will be retained in the two areas.

Management of the code baskets for STATE A:

General:	Domestic basket				: C1, C2
	Transit basket				: C3, C6
Special:	Domestic State A	FIR 2	—	State B FIR 3	: C5
	Transit State A		—	PA Z	: C7
	Directional assignment	FIR 2	—	State B	
		FIR 1	—	Other State of PA Y	: C6

C.7 Flow Chart

The following chart outlines the retention/assignment procedures described above:



APPENDIX D - DEVELOPMENT OF AUTOMATED SSR CODE ASSIGNMENT SYSTEMS

D.1 As computer capabilities could be a limiting factor in code assignment and thus reflect on the code allocation, the following principles for the development of automated SSR code assignment systems should be observed:

- a) automated systems shall be capable of using code blocks (part of a code series) without getting confused if, in a neighbouring system, other blocks of the same code series (with the same first and second digits) are used;
- b) automated equipment shall be capable of coping with a limited number of code conflicts rather than preventing code duplications by means of more complicated and less economical code allocation and assignment methods;

Note.— It is expected that this feature will become even more important as traffic increases.

- c) automated systems shall be capable of assigning codes with reference to the category of a flight, i.e. transit codes shall be assigned to an aircraft engaged in transit flights and domestic codes to an aircraft confined within the smaller area of use reserved for such codes;
- d) automated systems shall permit the addition of a sophisticated capability of assigning codes with reference to the routing or special code protection required for specific aircraft, especially when this will permit economies in the number of codes required;
- e) the code assignment logic of an automated system shall not impose any restriction on the free choice of any specific additional codes if this is required to satisfy new requirements;
- f) automated code assignment systems shall be designed to conform to international cooperative principles and essential capabilities described in this Document.

MIDANPIRG/13
Appendix 4.2D to the Report on Agenda Item 4.2

Request for Temporary/Permanent SSR Codes

State: -----

Date of request: -----

Name of Unit Requesting SSR Code: -----

Number of Codes Required: -----

Purpose: -----

Duration: -----

Notes:

- 1- The official request from States DG should be sent to the ICAO MID Regional Office Director and copied Email: icaomid@cairo.icao.int or Fax: +2022674843
- 2- The temp assigned codes will be automatically withdrawn after the specified duration date.

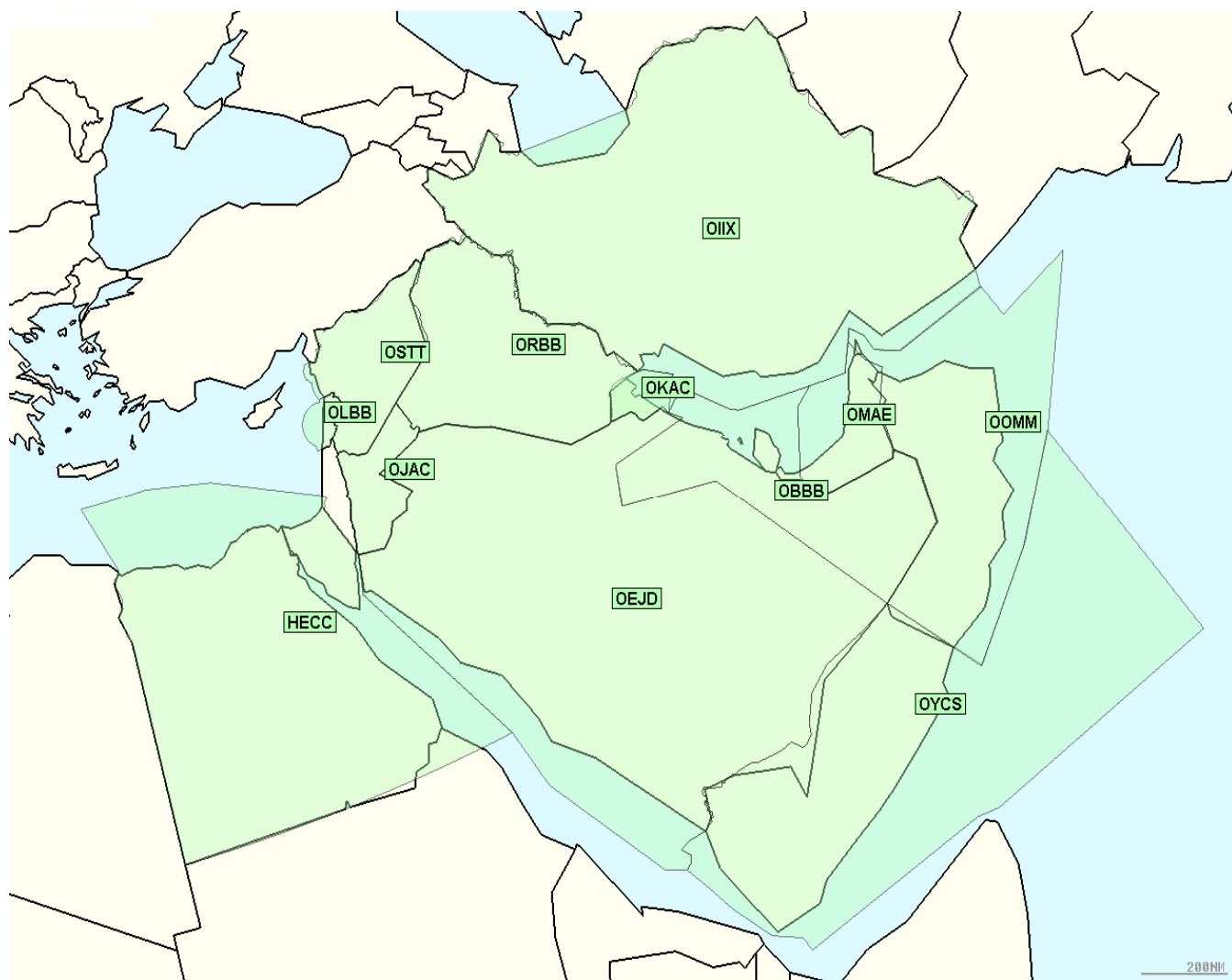
MIDANPIRG/13
Appendix 4.2E to the Report on Agenda Item 4.2



INTERNATIONAL CIVIL AVIATION ORGANIZATION

MID REGIONAL CONTINGENCY PLAN

The designations employed and the presentation of material in this publication do not imply the expression of any opinion whatsoever on the part of ICAO concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontier or boundaries.



Draft Version 1.0: April 2012

TABLE OF CONTENTS

EXCLUSION OF LIABILITY.....	
FOREWORD.....	
RECORD OF AMENDMENTS.....	
ATM CONTINGENCY CONTACT DETAILS	
ATM CONTINGENCY PLAN FOR FLIGHTS OPERATING WITHIN THE MID REGION CONTROL AREAS.....	
PART 1 - CONTINGENCY SITUATIONS AFFECTING ATC FACILITIES.....	
SCOPE OF THE PLAN.....	
COMMON PROCEDURES.....	
Implementation of the plan.....	
Traffic Information Broadcast by Aircraft (TIBA) procedures.....	
CHAPTER 1: DETAILED PROCEDURES – BAHRAIN ACC.....	
1.1 FIR FOR WHICH THE CONTINGENCY PLAN APPLIES.....	
1.2 FIRS WITH SUPPORTING PROCEDURES.....	
1.3 NOTIFICATION PROCEDURES.....	
1.4 LIMITED SERVICE - PROCEDURES.....	
1.4.1 Disruption of ground/air communication capability.....	
Effect on flights.....	
1.4.2 Disruption of ability to provide control services.....	
Separation standards.....	
Contingency tracks.....	
Air Traffic Flow Management.....	
Responsibilities of adjacent ANSPs.....	
1.5 NO SERVICE - PROCEDURES.....	
1.5.1 Loss of ground/air communication capability.....	
Effect on flights.....	
1.5.2 Loss of ability to provide control services.....	
1.6 FLIGHT CREW AND OPERATOR PROCEDURES.....	
1.6.1 for flights within the Bahrain FIR – General.....	
1.6.2 for flights within the Bahrain FIR – Westbound.....	

1.6.3	for flights within the Bahrain FIR – Eastbound.....
1.6.4	for flights approaching the Bahrain FIR when the contingency is activated.....
	Not in Receipt of an ATC Clearance.....
	In receipt of an acknowledged ATC Clearance outside Bahrain FIR.....
	In receipt of an acknowledged ATC Clearance within Bahrain FIR.....
1.6.5	Entering from another FIR.....
1.7	BAHRAIN ACC – CONTINGENCY ROUTE STRUCTURE.....
1.7.1	For activation within Bahrain FIR.....
1.7.2	for activation within adjacent FIR's.....
	Emirates FIR.....
	Jeddah FIR.....
	Kuwait FIR.....
	Muscat FIR.....
	Tehran FIR.....
	Sana'a FIR.....
1.8	QATAR TMA – CONTINGENCY ROUTE STRUCTURE.....
1.8.1	For activation within Bahrain FIR.....
1.8.2	for activation within adjacent FIR's.....
	Emirates FIR.....
	Jeddah FIR.....
	Kuwait FIR.....
	Muscat FIR.....
	Tehran FIR.....
	Sana'a FIR.....
1.9	LONG TERM CONTINGENCY ARRANGEMENTS.....
	STATES PROCEDURES IN EVENT OF BAHRAIN ACC EVACUATION.....
	CONTACT DETAILS – BAHRAIN ACC.....
	EVACUATION MESSAGES – BAHRAIN ACC.....
	CHAPTER 2: DETAILED PROCEDURES - CAIRO ACC.....
2.1	FIR FOR WHICH THE CONTINGENCY PLAN APPLIES.....
2.2	FIRS WITH SUPPORTING PROCEDURES.....
2.3	NOTIFICATION PROCEDURES.....
2.4	LIMITED SERVICE - PROCEDURES.....
2.5	NO SERVICE - PROCEDURES.....
2.6	CAIRO FIR CONTINGENCY ROUTE STRUCTURE
2.6.1	For activation within Cairo FIR.....
2.6.2	for activation within adjacent FIR's.....

2.7	LONG TERM CONTINGENCY ARRANGEMENTS.....
	STATES PROCEDURES IN EVENT OF CAIRO ACC EVACUATION.....
	CONTACT DETAILS – CAIRO ACC.....
	EVACUATION MESSAGES – CAIRO ACC.....
	CHAPTER 3: DETAILED PROCEDURES - IRAN ACC.....
3.1	FIR FOR WHICH THE CONTINGENCY PLAN APPLIES.....
3.2	FIRS WITH SUPPORTING PROCEDURES.....
3.3	NOTIFICATION PROCEDURES.....
3.4	LIMITED SERVICE - PROCEDURES.....
3.4.1	Disruption of ground/air communication capability.....
	Effect on flights.....
3.4.2	Disruption of ability to provide control services.....
	Separation standards.....
	Contingency tracks.....
	Air Traffic Flow Management.....
	Responsibilities of adjacent ANSPs.....
3.5	NO SERVICE - PROCEDURES.....
3.5.1	Loss of ground/air communication capability.....
	Effect on flights.....
3.5.2	Loss of ability to provide control services.....
3.6	FLIGHT CREW AND OPERATOR PROCEDURES.....
3.6.1	for flights within the Tehran FIR – General.....
3.6.2	for flights within the Tehran FIR – Westbound.....
3.6.3	for flights within the Tehran FIR – Eastbound.....
3.6.4	for flights approaching the Tehran FIR when the contingency is activated.....
	Not in Receipt of an ATC Clearance.....
	In receipt of an acknowledged ATC Clearance outside Tehran FIR.....
	In receipt of an acknowledged ATC Clearance within Tehran FIR.....
3.6.5	Entering from another FIR.....
3.7	TEHRAN ACC – CONTINGENCY ROUTE STRUCTURE.....
3.7.1	For activation within Tehran FIR.....
3.7.2	for activation within adjacent FIR's.....
	Ankara FIR.....
	Baghdad FIR.....
	Bahrain FIR.....
	Baku FIR.....
	Emirates FIR.....
	Kabul FIR.....

	Karachi FIR.....	
	Kuwait FIR.....	
	Muscat FIR.....	
	Turkmenbashi FIR.....	
	Yerevan FIR.....	
3.8	LONG TERM CONTINGENCY ARRANGEMENTS.....	
	STATES PROCEDURES IN EVENT OF TEHRAN ACC EVACUATION.....	
	CONTACT DETAILS – TEHRAN ACC.....	
	EVACUATION MESSAGES – TEHRAN ACC.....	
	CHAPTER 4: DETAILED PROCEDURES - IRAQ ACC.....	
4.1	FIR FOR WHICH THE CONTINGENCY PLAN APPLIES.....	
4.2	FIRS WITH SUPPORTING PROCEDURES.....	
4.3	NOTIFICATION PROCEDURES.....	
4.4	LIMITED SERVICE - PROCEDURES.....	
4.4.1	Disruption of ground/air communication capability.....	
	Effect on flights.....	
4.4.2	Disruption of ability to provide control services.....	
	Separation standards.....	
	Contingency tracks.....	
	Air Traffic Flow Management.....	
	Responsibilities of adjacent ANSPs.....	
4.5	NO SERVICE - PROCEDURES.....	
4.5.1	Loss of ground/air communication capability.....	
	Effect on flights.....	
4.5.2	Loss of ability to provide control services.....	
4.6	FLIGHT CREW AND OPERATOR PROCEDURES.....	
4.6.1	for flights within the Baghdad FIR – General.....	
4.6.2	for flights within the Baghdad FIR – Westbound.....	
4.6.3	for flights within the Baghdad FIR – Eastbound.....	
4.6.4	for flights approaching the Baghdad FIR when the contingency is activated.....	
	Not in Receipt of an ATC Clearance.....	
	In receipt of an acknowledged ATC Clearance outside Baghdad FIR.....	
	In receipt of an acknowledged ATC Clearance within Baghdad FIR.....	
4.6.5	Entering from another FIR.....	
4.7	BAGHDAD ACC – CONTINGENCY ROUTE STRUCTURE.....	
4.7.1	For activation within Baghdad FIR.....	
4.7.2	for activation within adjacent FIR's.....	
	Amman FIR.....	

	Ankara FIR.....
	Damascus FIR.....
	Jeddah FIR.....
	Kuwait FIR.....
	Tehran FIR.....
4.8	LONG TERM CONTINGENCY ARRANGEMENTS.....
	STATES PROCEDURES IN EVENT OF BAGHDAD ACC EVACUATION.....
	CONTACT DETAILS – BAGHDAD ACC.....
	EVACUATION MESSAGES – BAGHDAD ACC.....
	CHAPTER 5: DETAILED PROCEDURES - AMMAN ACC.....
5.1	FIR FOR WHICH THE CONTINGENCY PLAN APPLIES.....
5.2	FIRS WITH SUPPORTING PROCEDURES.....
5.3	NOTIFICATION PROCEDURES.....
5.4	LIMITED SERVICE - PROCEDURES.....
5.4.1	Disruption of ground/air communication capability.....
	Effect on flights.....
5.4.2	Disruption of ability to provide control services.....
	Separation standards.....
	Contingency tracks.....
	Air Traffic Flow Management.....
	Responsibilities of adjacent ANSPs.....
5.5	NO SERVICE - PROCEDURES.....
5.5.1	Loss of ground/air communication capability.....
	Effect on flights.....
5.5.2	Loss of ability to provide control services.....
5.6	FLIGHT CREW AND OPERATOR PROCEDURES.....
5.6.1	for flights within the Amman FIR – General.....
5.6.2	for flights within the Amman FIR – Westbound.....
5.6.3	for flights within the Amman FIR – Eastbound.....
5.6.4	for flights approaching the Amman FIR when the contingency is activated.....
	Not in Receipt of an ATC Clearance.....
	In receipt of an acknowledged ATC Clearance outside Amman FIR.....
	In receipt of an acknowledged ATC Clearance within Amman FIR.....
5.6.5	Entering from another FIR.....
5.7	AMMAN ACC – CONTINGENCY ROUTE STRUCTURE.....
5.7.1	For activation within Amman FIR.....
5.7.2	for activation within adjacent FIR's.....
	Baghdad FIR.....

	Cairo FIR.....
	Damascus FIR.....
	Jeddah FIR.....
	Tel Aviv FIR.....
5.8	LONG TERM CONTINGENCY ARRANGEMENTS.....
	STATES PROCEDURES IN EVENT OF AMMAN ACC EVACUATION.....
	CONTACT DETAILS – AMMAN ACC.....
	EVACUATION MESSAGES – AMMAN ACC.....
CHAPTER 6: DETAILED PROCEDURES - KUWAIT ACC.....	
6.1	FIR FOR WHICH THE CONTINGENCY PLAN APPLIES.....
6.2	FIRS WITH SUPPORTING PROCEDURES.....
6.3	NOTIFICATION PROCEDURES.....
6.4	LIMITED SERVICE - PROCEDURES.....
6.4.1	Disruption of ground/air communication capability.....
	Effect on flights.....
6.4.2	Disruption of ability to provide control services.....
	Separation standards.....
	Contingency tracks.....
	Air Traffic Flow Management.....
	Responsibilities of adjacent ANSPs.....
6.5	NO SERVICE - PROCEDURES.....
6.5.1	Loss of ground/air communication capability.....
	Effect on flights.....
6.5.2	Loss of ability to provide control services.....
6.6	FLIGHT CREW AND OPERATOR PROCEDURES.....
6.6.1	for flights within the Kuwait FIR – General.....
6.6.2	for flights within the Kuwait FIR – Westbound.....
6.6.3	for flights within the Kuwait FIR – Eastbound.....
6.6.4	for flights approaching the Kuwait FIR when the contingency is activated.....
	Not in Receipt of an ATC Clearance.....
	In receipt of an acknowledged ATC Clearance outside Kuwait FIR.....
	In receipt of an acknowledged ATC Clearance within Kuwait FIR.....
6.6.5	Entering from another FIR.....
6.7	KUWAIT ACC – CONTINGENCY ROUTE STRUCTURE.....
6.7.1	For activation within Kuwait FIR.....
6.7.2	for activation within adjacent FIR's.....
	Baghdad FIR.....
	Bahrain FIR.....

	Jeddah FIR.....
	Tehran FIR.....
6.8	LONG TERM CONTINGENCY ARRANGEMENTS.....
	STATES PROCEDURES IN EVENT OF KUWAIT ACC EVACUATION.....
	CONTACT DETAILS – KUWAIT ACC.....
	EVACUATION MESSAGES – KUWAIT ACC.....
	CHAPTER 7: DETAILED PROCEDURES - BEIRUT ACC.....
7.1	FIR FOR WHICH THE CONTINGENCY PLAN APPLIES.....
7.2	FIRS WITH SUPPORTING PROCEDURES.....
7.3	NOTIFICATION PROCEDURES.....
7.4	LIMITED SERVICE - PROCEDURES.....
7.4.1	Disruption of ground/air communication capability.....
	Effect on flights.....
7.4.2	Disruption of ability to provide control services.....
	Separation standards.....
	Contingency tracks.....
	Air Traffic Flow Management.....
	Responsibilities of adjacent ANSPs.....
7.5	NO SERVICE - PROCEDURES.....
7.5.1	Loss of ground/air communication capability.....
	Effect on flights.....
7.5.2	Loss of ability to provide control services.....
7.6	FLIGHT CREW AND OPERATOR PROCEDURES.....
7.6.1	for flights within the Beirut FIR – General.....
7.6.2	for flights within the Beirut FIR – Westbound.....
7.6.3	for flights within the Beirut FIR – Eastbound.....
7.6.4	for flights approaching the Beirut FIR when the contingency is activated.....
	Not in Receipt of an ATC Clearance.....
	In receipt of an acknowledged ATC Clearance outside Beirut FIR.....
	In receipt of an acknowledged ATC Clearance within Beirut FIR.....
7.6.5	Entering from another FIR.....
7.7	BEIRUT ACC – CONTINGENCY ROUTE STRUCTURE.....
7.7.1	For activation within Beirut FIR.....
7.7.2	for activation within adjacent FIR's.....
	Damascus FIR.....
	Nicosia FIR.....
7.8	LONG TERM CONTINGENCY ARRANGEMENTS.....

STATES PROCEDURES IN EVENT OF BEIRUT ACC EVACUATION.....	
CONTACT DETAILS – BEIRUT ACC.....	
EVACUATION MESSAGES – BEIRUT ACC.....	

CHAPTER 8: DETAILED PROCEDURES - TRIPOLI ACC.....

8.1	FIR FOR WHICH THE CONTINGENCY PLAN APPLIES.....	
8.2	FIRS WITH SUPPORTING PROCEDURES.....	
8.3	NOTIFICATION PROCEDURES.....	
8.4	LIMITED SERVICE - PROCEDURES.....	
8.4.1	Disruption of ground/air communication capability.....	
	Effect on flights.....	
8.4.2	Disruption of ability to provide control services.....	
	Separation standards.....	
	Contingency tracks.....	
	Air Traffic Flow Management.....	
	Responsibilities of adjacent ANSPs.....	
8.5	NO SERVICE - PROCEDURES.....	
8.5.1	Loss of ground/air communication capability.....	
	Effect on flights.....	
8.5.2	Loss of ability to provide control services.....	
8.6	FLIGHT CREW AND OPERATOR PROCEDURES.....	
8.6.1	for flights within the Tripoli FIR – General.....	
8.6.2	for flights within the Tripoli FIR – Westbound.....	
8.6.3	for flights within the Tripoli FIR – Eastbound.....	
8.6.4	for flights approaching the Tripoli FIR when the contingency is activated.....	
	Not in Receipt of an ATC Clearance.....	
	In receipt of an acknowledged ATC Clearance outside Tripoli FIR.....	
	In receipt of an acknowledged ATC Clearance within Tripoli FIR.....	
8.6.5	Entering from another FIR.....	
8.7	TRIPOLI ACC – CONTINGENCY ROUTE STRUCTURE.....	
8.7.1	For activation within Tripoli FIR.....	
8.7.2	for activation within adjacent FIR's.....	
	Algiers FIR.....	
	Cairo FIR.....	
	Khartoum FIR	
	Malta FIR.....	
	N'Djamena FIR.....	
	Niamey UIR.....	
	Nicosia FIR.....	
	Tunis FIR.....	

8.8	LONG TERM CONTINGENCY ARRANGEMENTS.....
	STATES PROCEDURES IN EVENT OF TRIPOLI ACC EVACUATION.....
	CONTACT DETAILS – TRIPOLI ACC.....
	EVACUATION MESSAGES – TRIPOLI ACC.....
	CHAPTER9: DETAILED PROCEDURES - MUSCAT ACC.....
9.1	FIR FOR WHICH THE CONTINGENCY PLAN APPLIES.....
9.2	FIRS WITH SUPPORTING PROCEDURES.....
9.3	NOTIFICATION PROCEDURES.....
9.4	LIMITED SERVICE - PROCEDURES.....
9.4.1	Disruption of ground/air communication capability.....
	Effect on flights.....
9.4.2	Disruption of ability to provide control services.....
	Separation standards.....
	Contingency tracks.....
	Air Traffic Flow Management.....
	Responsibilities of adjacent ANSPs.....
9.5	NO SERVICE - PROCEDURES.....
9.5.1	Loss of ground/air communication capability.....
	Effect on flights.....
9.5.2	Loss of ability to provide control services.....
9.6	FLIGHT CREW AND OPERATOR PROCEDURES.....
9.6.1	for flights within the Muscat FIR – General.....
9.6.2	for flights within the Muscat FIR – Westbound.....
9.6.3	for flights within the Muscat FIR – Eastbound.....
9.6.4	for flights approaching the Muscat FIR when the contingency is activated.....
	Not in Receipt of an ATC Clearance.....
	In receipt of an acknowledged ATC Clearance outside Muscat FIR.....
	In receipt of an acknowledged ATC Clearance within Muscat FIR.....
9.6.5	Entering from another FIR.....
9.7	MUSCAT ACC – CONTINGENCY ROUTE STRUCTURE.....
9.7.1	For activation within Muscat FIR.....
9.7.2	for activation within adjacent FIR's.....
	Bahrain FIR.....
	Emirates FIR.....
	Karachi FIR.....
	Mumbai FIR.....
	Tehran FIR.....
	Sana'a FIR.....

9.8	LONG TERM CONTINGENCY ARRANGEMENTS.....
	STATES PROCEDURES IN EVENT OF MUSCAT ACC EVACUATION.....
	CONTACT DETAILS – MUSCAT ACC.....
	EVACUATION MESSAGES – MUSCAT ACC.....
	CHAPTER 10: DETAILED PROCEDURES – JEDDAH ACC.....
10.1	FIR FOR WHICH THE CONTINGENCY PLAN APPLIES.....
10.2	FIRS WITH SUPPORTING PROCEDURES.....
10.3	NOTIFICATION PROCEDURES.....
10.4	LIMITED SERVICE - PROCEDURES.....
10.4.1	Disruption of ground/air communication capability.....
	Effect on flights.....
10.4.2	Disruption of ability to provide control services.....
	Separation standards.....
	Contingency tracks.....
	Air Traffic Flow Management.....
	Responsibilities of adjacent ANSPs.....
10.5	NO SERVICE - PROCEDURES.....
10.5.1	Loss of ground/air communication capability.....
	Effect on flights.....
10.5.2	Loss of ability to provide control services.....
10.6	FLIGHT CREW AND OPERATOR PROCEDURES.....
10.6.1	for flights within the Jeddah FIR – General.....
10.6.2	for flights within the Jeddah FIR – Westbound.....
10.6.3	for flights within the Jeddah FIR – Eastbound.....
10.6.4	for flights approaching the Jeddah FIR when the contingency is activated.....
	Not in Receipt of an ATC Clearance.....
	In receipt of an acknowledged ATC Clearance outside Jeddah FIR.....
	In receipt of an acknowledged ATC Clearance within Jeddah FIR.....
10.6.5	Entering from another FIR.....
10.7	JEDDAH ACC – CONTINGENCY ROUTE STRUCTURE.....
10.7.1	for activation within Jeddah FIR.....
10.7.2	for activation within adjacent FIR's.....
	Amman FIR.....
	Asmara FIR.....
	Bahrain FIR.....
	Baghdad FIR.....
	Cairo FIR.....
	Khartoum FIR.....

	Kuwait FIR.....	
	Sana'a FIR.....	
10.8	RIYADH ACC – CONTINGENCY ROUTE STRUCTURE.....	
10.8.1	for activation within Jeddah FIR.....	
10.8.2	for activation within adjacent FIR's.....	
	Amman FIR.....	
	Asmara FIR.....	
	Bahrain FIR.....	
	Baghdad FIR.....	
	Cairo FIR.....	
	Khartoum FIR.....	
	Kuwait FIR.....	
	Sana'a FIR.....	
10.9	LONG TERM CONTINGENCY ARRANGEMENTS.....	
	STATES PROCEDURES IN EVENT OF JEDDAH ACC EVACUATION.....	
	CONTACT DETAILS – RIYADH AND JEDDAH ACC.....	
	EVACUATION MESSAGES – RIYADH AND JEDDAH ACC.....	
	CHAPTER 11: DETAILED PROCEDURES – KHARTOUM ACC.....	
11.1	FIR FOR WHICH THE CONTINGENCY PLAN APPLIES.....	
11.2	FIRS WITH SUPPORTING PROCEDURES.....	
11.3	NOTIFICATION PROCEDURES.....	
11.4	LIMITED SERVICE - PROCEDURES.....	
11.4.1	Disruption of ground/air communication capability.....	
	Effect on flights.....	
11.4.2	Disruption of ability to provide control services.....	
	Separation standards.....	
	Contingency tracks.....	
	Air Traffic Flow Management.....	
	Responsibilities of adjacent ANSPs.....	
11.5	NO SERVICE - PROCEDURES.....	
11.5.1	Loss of ground/air communication capability.....	
	Effect on flights.....	
11.5.2	Loss of ability to provide control services.....	
11.6	FLIGHT CREW AND OPERATOR PROCEDURES.....	
11.6.1	for flights within the Khartoum FIR – General.....	
11.6.2	for flights within the Khartoum FIR – Westbound.....	
11.6.3	for flights within the Khartoum FIR – Eastbound.....	
11.6.4	for flights approaching the Khartoum FIR when the contingency is activated.....	

	Not in Receipt of an ATC Clearance.....
	In receipt of an acknowledged ATC Clearance outside Khartoum FIR.....
	In receipt of an acknowledged ATC Clearance within Khartoum FIR.....
11.6.5	Entering from another FIR.....
11.7	KHARTOUM ACC – CONTINGENCY ROUTE STRUCTURE.....
11.7.1	for activation within Khartoum FIR.....
11.7.2	for activation within adjacent FIR's.....
	Addis Abeba FIR.....
	Asmara FIR.....
	Brazzaville FIR.....
	Cairo FIR.....
	Entebbe FIR.....
	Jeddah FIR.....
	Nairobi FIR.....
	N'Djamena FIR.....
	Tripoli FIR.....
11.8	LONG TERM CONTINGENCY ARRANGEMENTS.....
	STATES PROCEDURES IN EVENT OF KHARTOUM ACC EVACUATION.....
	CONTACT DETAILS – RIYADH AND KHARTOUM ACC.....
	EVACUATION MESSAGES – KHARTOUM ACC.....
	CHAPTER 12: DETAILED PROCEDURES - DAMASCUS ACC.....
12.1	FIR FOR WHICH THE CONTINGENCY PLAN APPLIES.....
12.2	FIRS WITH SUPPORTING PROCEDURES.....
12.3	NOTIFICATION PROCEDURES.....
12.4	LIMITED SERVICE - PROCEDURES.....
12.4.1	Disruption of ground/air communication capability.....
	Effect on flights.....
12.4.2	Disruption of ability to provide control services.....
	Separation standards.....
	Contingency tracks.....
	Air Traffic Flow Management.....
	Responsibilities of adjacent ANSPs.....
12.5	NO SERVICE - PROCEDURES.....
12.5.1	Loss of ground/air communication capability.....
	Effect on flights.....
12.5.2	Loss of ability to provide control services.....
12.6	FLIGHT CREW AND OPERATOR PROCEDURES.....
12.6.1	for flights within the Damascus FIR – General.....

12.6.2	for flights within the Damascus FIR – Westbound.....
12.6.3	for flights within the Damascus FIR – Eastbound.....
12.6.4	for flights approaching the Damascus FIR when the contingency is activated.....
	Not in Receipt of an ATC Clearance.....
	In receipt of an acknowledged ATC Clearance outside Damascus FIR.....
	In receipt of an acknowledged ATC Clearance within Damascus FIR.....
12.6.5	Entering from another FIR.....
12.7	DAMASCUS ACC – CONTINGENCY ROUTE STRUCTURE.....
12.7.1	For activation within Damascus FIR.....
12.7.2	for activation within adjacent FIR's.....
	Amman FIR.....
	Ankara FIR.....
	Baghdad FIR.....
	Beirut FIR.....
	Nicosia FIR.....
12.8	LONG TERM CONTINGENCY ARRANGEMENTS.....
	STATES PROCEDURES IN EVENT OF DAMASCU ACC EVACUATION.....
	CONTACT DETAILS – DAMASCUS ACC.....
	EVACUATION MESSAGES – DAMASCUS ACC.....
CHAPTER 13: DETAILED PROCEDURES – EMIRATES ACC.....	
13.1	FIR FOR WHICH THE CONTINGENCY PLAN APPLIES.....
13.2	FIRS WITH SUPPORTING PROCEDURES.....
13.3	NOTIFICATION PROCEDURES.....
13.4	LIMITED SERVICE - PROCEDURES.....
13.4.1	Disruption of ground/air communication capability.....
	Effect on flights.....
13.4.2	Disruption of ability to provide control services.....
	Separation standards.....
	Contingency tracks.....
	Air Traffic Flow Management.....
	Responsibilities of adjacent ANSPs.....
13.5	NO SERVICE - PROCEDURES.....
13.5.1	Loss of ground/air communication capability.....
	Effect on flights.....
13.5.2	Loss of ability to provide control services.....
13.6	FLIGHT CREW AND OPERATOR PROCEDURES.....
13.6.1	for flights within the Emirates FIR – General.....
13.6.2	for flights within the Emirates s FIR – Westbound.....

13.6.3	for flights within the Emirates FIR – Eastbound.....
13.6.4	for flights approaching the Emirates FIR when the contingency is activated.....
	Not in Receipt of an ATC Clearance.....
	In receipt of an acknowledged ATC Clearance outside Emirates FIR.....
	In receipt of an acknowledged ATC Clearance within Emirates FIR.....
13.6.5	Entering from another FIR.....
13.7	EMIRATES ACC – CONTINGENCY ROUTE STRUCTURE.....
13.7.1	For activation within Emirates FIR.....
13.7.2	for activation within adjacent FIR's.....
	Bahrain FIR.....
	Muscat FIR.....
	Qatar.....
	Tehran FIR.....
13.8	LONG TERM CONTINGENCY ARRANGEMENTS.....
	STATES PROCEDURES IN EVENT OF EMIRATES ACC EVACUATION.....
	CONTACT DETAILS – EMIRATES ACC.....
	EVACUATION MESSAGES – EMIRATES ACC.....
CHAPTER 14: DETAILED PROCEDURES – YEMEN ACC.....	
14.1	FIR FOR WHICH THE CONTINGENCY PLAN APPLIES.....
14.2	FIRS WITH SUPPORTING PROCEDURES.....
14.3	NOTIFICATION PROCEDURES.....
14.4	LIMITED SERVICE - PROCEDURES.....
14.4.1	Disruption of ground/air communication capability.....
	Effect on flights.....
14.4.2	Disruption of ability to provide control services.....
	Separation standards.....
	Contingency tracks.....
	Air Traffic Flow Management.....
	Responsibilities of adjacent ANSPs.....
14.5	NO SERVICE - PROCEDURES.....
14.5.1	Loss of ground/air communication capability.....
	Effect on flights.....
14.5.2	Loss of ability to provide control services.....
14.6	FLIGHT CREW AND OPERATOR PROCEDURES.....
14.6.1	for flights within the Sana'a FIR – General.....
14.6.2	for flights within the Sana'a FIR – Westbound.....
14.6.3	for flights within the Sana'a FIR – Eastbound.....
14.6.4	for flights approaching the Sana'a FIR when the contingency is activated.....

	Not in Receipt of an ATC Clearance.....	
	In receipt of an acknowledged ATC Clearance outside Sana'a FIR.....	
	In receipt of an acknowledged ATC Clearance within Sana'a FIR.....	
14.6.5	Entering from another FIR.....	
14.7	SANA'A ACC – CONTINGENCY ROUTE STRUCTURE.....	
14.7.1	for activation within Sana'a FIR.....	
14.7.2	for activation within adjacent FIR's.....	
	Addis Ababa FIR.....	
	Asmara FIR.....	
	Bahrain FIR.....	
	Jeddah FIR.....	
	Mogadishu FIR.....	
	Mumbai FIR.....	
	Muscat FIR.....	
14.8	LONG TERM CONTINGENCY ARRANGEMENTS.....	
	STATES PROCEDURES IN EVENT OF SANA'A ACC EVACUATION.....	
	CONTACT DETAILS – SANA'A ACC.....	
	EVACUATION MESSAGES – SANA'A ACC.....	
PART II - CONTINGENCY SITUATIONS AFFECTING MULTIPLE FIRS		
SCOPE OF THE PLAN		
MID REGIONAL VOLCANIC ASH CONTINGENCY PLAN - TABLE OF CONTENTS		
FOREWORD		
ALERTING PHASE		
Originating ACC actions (eruption in its own flight information region).....		
Adjacent ACC actions		
Flow management units' action		
REACTIVE PHASE		
Originating ACC actions (eruption in its own FIR).....		
120 NM temporary danger area.		
Contaminated area based on SIGMET.		
Contaminated area based on VAA.		
Adjacent ACC actions		

ATFM unit actions	
PROACTIVE PHASE	
ATFM PROCEDURES	
AIR TRAFFIC CONTROL PROCEDURES	
Air traffic control procedures for ACCs	
GENERAL GUIDANCE FOR THE DEVELOPMENT OF ATS CONTINGENCY PLANS FOR VOLCANIC ASH CLOUDS	
APPENDIX - ANTICIPATED PILOT ISSUES WHEN ENCOUNTERING VOLCANIC ASH CLOUDS	
PPENDIX - ACTION TAKEN BY METEOROLOGICAL WATCH OFFICES IN THE EVENT OF A VOLCANIC ERUPTION.....	
APPENDIX - ACTION TO BE TAKEN BY THE VAAC IN THE EVENT OF A VOLCANIC ERUPTION	
MID REGIONAL DIVERSION AND MASS TURNBACK PLAN	

FOREWORD

This Document is for guidance only. Regulatory material relating to the MID Regional aircraft operations is contained in relevant ICAO Annexes, PANS/ATM (Doc.4444), Regional Supplementary Procedures (Doc.7030), State AIPs and current NOTAMs, which should be read in conjunction with the material contained in this Document.

The MID Region is fast growing continental airspace in the world, and is strategically situated between EUR/NAT Region to the North, WACAF Region to the west ESAF Region to the South East and APAC Region to the East. In 2010 in excess of **976400** flights transited the airspace. The ATS Route accommodates a high concentration of traffic which regularly sees traffic flows in excess of 100 flights per hour. Control of traffic in this vast and complex airspace is delegated to a number of states, with their Continental Control facilities geographically dispersed.

The MID Regional Air Traffic Management Operational Contingency Plan is primarily for the information of operators and pilots planning and conducting operations in MID Region. The intent is to provide a description of the arrangements in place to deal with a range of contingency situations.

The Manual has been produced with the approval and on behalf of the Middle East Air Navigation Planning and Implementation Regional Group (MIDANPIRG); a MID Regional planning body established under the auspices of the International Civil Aviation Organisation (ICAO). This Group is responsible for developing the required operational procedures; specifying the necessary services and facilities and; defining the aircraft and operator approval standards employed in the MID Region.

Edited by Middle East Regional Office of ICAO
P. O. Box 85, Airport Post Office
Cairo 11776, Egypt

Tel: +20 2 2267 4845/46/41
Fax : +20 2 2267 4843
Email : icaomid@cairo.icao.int
[http:// www.icao.int/mid/](http://www.icao.int/mid/)

This Document will be made available to users from a number of web sites including the ICAO MID website [http:// www.icao.int/mid/](http://www.icao.int/mid/)

To assist with the editing of this Manual and to ensure the currency and accuracy of future editions it would be appreciated if readers would submit their comments/suggestions for possible amendments/additions, to the ICAO MID Regional Office at the above Email address.

RECORD OF AMENDMENTS

[illegible]

4.2-22

ATM CONTINGENCY CONTACT DETAILS

NAMES	PHONE (WORK)	PHONE (HOME)	MOBILE PHONE	FAX	E-MAIL	OTHER CONTACT DETAILS
BAHRAIN						
Ali Ahmed Mohammed	+ 973 17321116		+ 973 39969399	+ 973 17329977	aliahmed@caa.gov.bh	
Sleem Mohammed Hasan	+ 973 17321117		+ 973 39608860	+ 973 17329977	sleemmh@caa.gov.bh	
Air Traffic Duty Supervisor	+ 973 17321081 + 973 17321082			+ 973 17321029		
EGYPT						
IRAN Mr. M. Rasouli Nejad Deputy of IAC in Operations	+98214454435		+989123874921			
Mr. E. Shoustari General Director Of ATS	+982144544101		+989121861900	+982144544102		
Mr. A. Majzoubi Chief of ACC	+982144544114		+989123053095			
Mr. Khodakarami Deputy of ATS Dept.	21 4087386		98 9132843796			
JORDAN						
Mr. Khalaf Al- Showbaki	+ 962 6 4451 672 + 962 6 4451 607		+962777904724	+962 4452 312	kshowbki@yahoo.co.nz	
KUWAIT						
Mr. Mukhled Kh. Al- Sawagh	+ 965 24346220		+ 965 97666979	+ 965 24346221	q8dgca_danoff@hotmail.com	

4.2E-23

NAMES	PHONE (WORK)	PHONE (HOME)	MOBILE PHONE	FAX	E-MAIL	OTHER CONTACT DETAILS
LEBANON						
Walid Al Hassanieh Chief Air Navigation Dept.	+ 961 1 628178		+961 70474517	+961 1 629023	hassaniehw@beirutairport.gov.lb	AFTN olbazpzx
OMAN						
SAUDI ARABIA						
Mr. Fahad Al – Ghamdi	+966 26850505 +966 26855765		+966 503624810		atcudfahad@hotmail.com	
SYRIA						
UNITED ARAB EMIRATES (UAE)						
Mr. Ahmed Al Jallaf Executive Director ANS	971 2 599 6888		971 50 614 9065	971 2 599 5883	aljallaf@szc.gcaa.ae	AFTN: OMAEZQZX OMAEYAYH
YEMEN						
IATA – MID						
Mr. Achim Baumann	+962 6 580 4256		96279 704 5556	+962-6 593 9912	baumanna@iata.org	
ICAO Cairo						
S. Al Adhoobi (RO/ATM)	202 267 4845 ext 104		201 113910327	202 267 4843	sadhoobi@cairo.icao.int	
M.R. Khonji (DRD)	202 267 4841 ext. 116/115	202 415 2073	201 232 14946	202 267 4843	mkhonji@cairo.icao.int mkhonji@hotmail.com	
ICAO Headquarters – Montreal						
Vince Galotti (C/ATM)	1 514 954-6711	1 514 281-0731	1 514 951-0283	1-514-954 8197	vgalotti@icao.int	
Chris Dalton (TO/ATM)	1 514 954-8219 ext. 6710	1 514 485-3635		1-514-954 8197	cdalton@icao.int	
Gustavo De Leon (TO/ATM)	1 514 954-8219 ext. 6199	1 514 482-7182	1 514 883-4847	1-514-954 8197	gdeleon@icao.int g_deleon_p@hotmail.com	
Aleksandar Pavlovic (C/AIS/MAP)	1-514 954 8162	1-514 932 7632		1-514-954 6077	apavlovic@icao.int	

ATM CONTINGENCY PLAN
FOR FLIGHTS OPERATING
WITHIN THE MID REGIONAL CONTINENTAL CONTROL AREAS

Objective

The Air Traffic Management (ATM) Contingency Plan contains details of the arrangements in place to ensure, as far as possible, the continued safety of air navigation in the event of partial or total disruption of Air Traffic Services within the MID region. This document is produced in accordance with the requirement of ICAO Annex 11 – Air Traffic Services, Chapter 2, paragraph 2.30.

This plan details both common procedures throughout the MID Region and the procedures specific to the individual ANSPs within the MID region. The plan is presented in two parts:

Part 1 – Contingency Situations Affecting ATC Facilities

ATC services within the MID region are provided from a number of geographical locations and this plan details the contingency arrangements at each of these facilities. It is considered unlikely that any physical contingency at one particular facility will affect another directly, hence in Part 1 of this document the procedures for each ACC are considered independently.

Part 2 – Contingency Situations Affecting Multiple FIRs

This part of the plan considers events which are likely to affect more than one facility within the MID region. In particular these include the contingency arrangements in place to deal with;

- the airspace suffering contamination by volcanic ash.
- the steps taken to deal with a mass turn back of traffic over the MID region.

States and FIRs affected

This document contains contingency procedures for those Air Navigation Service Providers (ANSPs) who provide an ATC service within the MID region, and those ANSPs whose airspace has a common boundary with the MID region for which supporting procedures are published.

The states, FIRs and ACCs affected by this contingency plan and for which procedures are promulgated are as follows:

Bahrain

- Bahrain FIR

Egypt

- Cairo FIR

Iran, Islamic Republic of

- Tehran Control

Iraq

- Baghdad Control

Jordan

- Amman Control

Kuwait

- Kuwait Control

Lebanon

- Beirut Control

Libya

- Tripoli Control

Oman

- Muscat Control

Qatar

- Bahrain Control

Saudi Arabia

- Jeddah Control
- Riyadh Control

Sudan

- Khartoum Control

Syrian Arab Republic

- Damascus Control

United Arab Emirates

- Emirates Control

Yemen

- Sana'a Control

PART 1 –

CONTINGENCY SITUATIONS AFFECTING ATC FACILITIES

SCOPE OF THE PLAN

This part of the Contingency Plan considers:

- Common procedures adopted by ATC facilities in the event of contingency situations.
- Detailed procedures adopted by individual ATC facilities in the event of contingency situations. The plan considers contingency situations which may result in a degradation of the ATC service provided (limited service) as well as situations where there is a total loss of the ability to provide ATC services (no service).

Where available, information is also provided outlining the steps taken by ANSPs to deal with a long term unavailability of an ATC facility. In particular the procedures detailed by each ATC facility will, insofar as possible, comprise the following:

- FIRs for which the Contingency Plan applies
- FIRs with supporting procedures
- Notification procedures
- Implementation of the plan
- Limited service
 - disruption of ground/air communication capability
 - disruption of ability to provide control services
- No service
 - loss of ground/air communication capability
 - loss of ability to provide control services
- Contingency Route Structure:
 - for activation within that FIR
 - for activation within adjacent FIR
- Long term contingency arrangements
- Contact details

COMMON PROCEDURES

Implementation of the plan

In the event of adoption of contingency procedures ANSPs will notify all affected agencies and operators appropriately.

In **Limited Service** situations the individual ANSP will decide upon the level of notification necessary and take action as required to cascade the information.

In **No Service** situations it is likely that the ATC facility involved will be subject to evacuation. In this instance the ANSP will issue NOTAMs and broadcast on appropriate frequencies that contingency procedures have been initiated. The notification process employed by individual ANSPs is detailed in their respective entries in this plan, However the general format will be as follows:

Issue a NOTAM advising operators of the evacuation. The following is an example of the type of information which may be promulgated:

“Due to emergency evacuation of (States ACC) all ATC services are terminated. Flights within (States ACC) FIR should continue as cleared and contact the next ATC agency as soon as possible. Flights not in receipt of an ATC clearance should land at an appropriate airfield or request clearance to avoid (State) FIR. Flights should monitor (defined frequencies).”

Broadcast an evacuation message on appropriate frequencies:

“Emergency evacuation of (Sates ACC) is in progress. No air traffic control service will be provided by (States ACC). Use extreme caution and monitor (control frequencies), emergency frequencies and air to air frequencies. Contact the next air traffic control unit as soon as possible”.

Traffic Information Broadcast by Aircraft (TIBA) procedures

The following communications procedures have been developed in accordance with the Traffic Information Broadcast by Aircraft (TIBA) procedures recommended by ICAO (Annex 11 – Air Traffic Services, Attachment C). These procedures should be applied when completing an altitude change to comply with the ATC clearance.

At least 3 minutes prior to the commencement of a climb or descent the flight should broadcast on the last assigned frequency, 121.5, 243.0 and 123.45 the following:

“ALL STATION (callsign) (direction) DIRECT FROM (landfall fix) TO (oceanic entry point) LEAVING FLIGHT LEVEL (number) FOR FLIGHT LEVEL (number) AT (distance)(direction) FROM (oceanic entry point) AT (time)”.

When the level change begins, the flight should make the following broadcast:

“ALL STATIONS (callsign) (direction) DIRECTION FROM (landfall fix) TO (oceanic entry point) LEAVING FLIGHT LEVEL (number) NOW FOR FLIGHT LEVEL (number).”

When level, the flight should make the following broadcast:

“ALL STATIONS (callsign) MAINTAINING FLIGHT LEVEL (number).”

CHAPTER 1: DETAILED PROCEDURES – BAHRAIN FIR

1.1 FIR FOR WHICH THE CONTINGENCY PLAN APPLIES

Bahrain FIR

1.2 FIRs WITH SUPPORTING PROCEDURES

Emirates FIR
Jeddah FIR
Riyadh ACC
Kuwait FIR
Muscat FIR
Tehran FIR
Sana'a FIR

1.3 NOTIFICATION PROCEDURES

In a limited service situation notification of any service limitations and traffic management measures will be promulgated to operators and adjacent ANSPs via AFTN.

In a no service situation the ACC is likely to have been evacuated. As soon as possible after evacuation a contingency message will be sent to all adjacent ANSP's and operators. An evacuation message will be broadcast on appropriate frequencies and operators in receipt of the contingency message are asked to forward this information to affected flights wherever possible.

1.4 LIMITED SERVICE – PROCEDURES

1.4.1 Disruption of ground/air communication capability

A limited communication service will be maintained with the assistance of adjacent Aerodromes. VHF services on the Bahrain frequency normally provided by Bahrain Control will be delegated as appropriate to the other ATS units namely Doha, Riyadh and Dhahran. Appropriate frequencies will be advised by Bahrain and the assisting ATS units.

Situations which could result in a Limited Service are:

Equipment Failure

- a) Transmitters (Loss of a number of Transmitters)
- b) Receivers (Loss of a number of Receivers)
- c) Aerials (Loss of a number of Aerials)
- d) Data Lines (Loss of data lines between Bahrain Communications center and Bahrain ACC)

Propagation

Radio Propagation resulting in partial fade-out can be affected by many factors including Solar Flares and Geomagnetic Storms.

Staffing

Reduced Staffing
Illness
Weather (Severe Weather i.e. Storm, Snow, Flooding)

Security Threat

Depending on the level of the Security threat and if essential staff are allowed to remain on Station

In the event that the operation is degraded substantially, ATFM measures may be imposed as necessary.

1.4.2 Disruption of ability to provide control services

Bahrain ACC shall determine, co-ordinate and promulgate any necessary restrictions to meet the service limitation. Traffic in possession of a valid ATC clearance shall have priority over any other traffic. En-route re-clearance of such traffic shall not be permitted except in emergency.

Traffic without a valid clearance may be subject to tactical traffic management measurements to meet the requirements of the service limitation.

Separation standards

Bahrain ACC will be responsible for ensuring the co-ordination and implementation of any additional separation requirements.

Contingency tracks

Dependant on the nature of the service limitation, Bahrain may promulgate and activate contingency tracks for use in addition to the normal ATS Routes available.

Air Traffic Flow Management

Bahrain ACC shall co-ordinate any necessary traffic management measures where necessary. Such measures may include, but are not limited to, temporary capacity restrictions and tactical rerouting measures.

Bahrain ACC shall co-ordinate these restrictions where necessary with adjacent ANSPs where they may affect the flow of traffic through these units airspace.

Responsibilities of adjacent ANSPs

The action required of adjacent ANSPs will vary dependant on the nature of the service limitation. Where such action is not contained within the inter-centre Letters of Agreement (LOAs) the requirement will be promulgated within the initial failure and restrictions message.

1.5 NO SERVICE – PROCEDURES

1.5.1 Loss of ground/air communication capability

In the event of Bahrain ACC being unable to provide ground/air communications for Bahrain FIR **Bahrain and Qatar APP Units** will coordinate with adjacent FIR's to provide ground/communications to the best of their ability.

Situations which could result in No Service being provided are:

- a) Equipment Failure;
 - Transmitters (Loss of all Transmitters)
 - Receivers (Loss of all Receivers)
 - Aerials (Loss of all Aerials)
 - Data Lines (Loss of data lines)
- b) Propagation;
 - Radio Propagation resulting in total fade-out which can be caused by many factors including Solar Flares and Geomagnetic Storms.
- c) Staffing
 - No Staff
 - Illness (Seasonal Influenza)
 - Weather
 - Industrial Relations issues
- d) Evacuation of Bahrain ACC
 - Fire
 - Bomb threat

Effect on flights

In the event of Bahrain ACC being unable to provide ground/air communications for a sustained period of time **Bahrain CAA** in coordination with adjacent FIR's could provide a limited communications facility to flights in the Bahrain FIR.

ATFM measures may be imposed as necessary.

1.5.2 Loss of ability to provide control services

Should Bahrain ACC be evacuated the potential would exist for a major disruption to Air Traffic Control (ATC) within the Bahrain FIR.

In the event that Bahrain ACC is evacuated, the unit evacuation procedures will be activated, and time permitting, controllers will make an emergency evacuation transmission on the radio

frequency in use providing pilots with alternate means of communication. The procedures to be adopted are detailed in the Bahrain Contingency plan.

The Plan will be activated by promulgation of a NOTAM issued by (CAA) as far in advance as is practicable. However, when such prior notification is Impracticable for any reason, the Plan will be put into effect on notification by (CAA) and/or ICAO MID office.

As soon as possible after evacuation a contingency message will be sent to all adjacent ANSP's and operators as, detailed in the Bahrain Contingency Procedures. In turn they are expected to advise the affected traffic.

Other ATSUs will provide guidance as far as possible in the circumstances.

Contact information that may be used in the event of an emergency evacuation is provided in ATM Contingency Contact Detail List.

1.6 FLIGHT CREW AND OPERATOR PROCEDURES

1.6.1 For flights within the Bahrain FIR – General

The procedures outlined below are to be used as guidance for pilots in the immediate aftermath of a sudden withdrawal of the ATC service as described above.

On receipt of the contingency message pilots are requested to broadcast to other flights on 121.5 and 123.45 and the assigned Unit frequency. A listening watch on these frequencies must be maintained.

1.6.2 For flights within the Bahrain FIR – Westbound

Emirates ACC will endeavour to provide an ATC service throughout the Bahrain FIR as soon as evacuation commences. These procedures are detailed at Bahrain Contingency Procedures in Paragraph 1.72.

Flights should establish communication with the next agency at the earliest opportunity stating current position, cleared flight level, next position and estimate and subsequent position.

Any flights involved in level changes should complete the manoeuvre as soon as possible in accordance with the clearance.

UNIT	TEL. No	FAX No	EMAIL	AFTN
Tehran ACC	00982144544116 or 44554060 or 44544133 (Sector Controller)	00982144544117	maj.alireza@yahoo.com alireza.majzoubi@gmail.com	OIIIZGZX
Muscat ACC	00968 24 519 550	00968 24519 930		OOMMZQZX
Riyadh ACC	+966 1 221 1121	00966	atskia@gmail.com	
Jeddah ACC	+9662685 5764/5	+9662 685 54021	atcfahad@hotmail.com	

Sana'a ACC	00967 1345402/3	00967 1344047	atccns@gmail.com	OYSNZQZX OYSNZQZA
Bahrain ACC	009731732 1080/1081	0097317321029	bahatc@caa.gov.bh	OBBBZQZX OBBBZQZA
Emirates ACC	0097125996969	0097125996850 0097125996852	atc@szc.gcaa.ae mdolbey@szc.gcaa.ae	OMAEZQZX OMAEYAYH
Kuwait ACC	+96524346220 / 24710268	+965 24346221	baracoda99@hotmail.com q8dgca_danoff@hotmail.com	
Qatar APP	+974 4462 2300	+974 4465 6554	ahmed@caa.gov.qa	

ICAO MID	0020 2 2267 4845/46/41	0020 2 2267 4843	
IATA	OO962 6 569 8728	OO962 6 560 4548	saidh@iata.org

Flights may request their flight dispatch offices to forward position reports, if sending position reports to multiple ATS Units or if otherwise unable to forward position reports.

1.6.3 For flights within the Bahrain FIR – Eastbound

Jeddah ACC, Riyadh ACC and Kuwait ACC will endeavour to provide an ATC service throughout the Bahrain FIR as soon as evacuation commences. These procedures are detailed at Bahrain Contingency Procedures in **paragraph 1.7.2**

Flights operating with a received and acknowledged ATC clearance will be expected to continue in accordance with the last clearance issued unless otherwise advised by ATC.

Communications with the next ATSU should be established at the earliest opportunity.

1.6.4 For flights approaching the Bahrain FIR when the contingency is activated.

Not in Receipt of an ATC Clearance

In the event that Bahrain ACC must be evacuated, only aircraft with received and acknowledged ATC clearances shall be permitted to transit Bahrain FIR.

If unable to obtain or acknowledge an ATC clearance, flights should plan to re-route around the Bahrain FIR or to land at an appropriate airfield.

In receipt of an acknowledged ATC Clearance outside Bahrain FIR

Aircraft operating with a received and acknowledged ATC clearance can, at pilot's discretion, continue, but must expect a limited ATC service or no service within the Bahrain FIR.

However, due to the uncertainty surrounding the contingency situation pilots are strongly advised to comply with the procedures detailed above for flights not in receipt of an ATC clearance even if they are in receipt of an acknowledged ATC clearance.

1.7 BAHRAIN FIR – CONTINGENCY ROUTE STRUCTURE

1.7.1 For activation within Bahrain FIR

In a **limited service** contingency situation Bahrain ACC may promulgate additional contingency tracks in addition to the published ATS Routes. Any contingency track design within the Bahrain FIR will be effected at the time of the event and be dependent on the nature of the service limitation. Promulgation will be via AFTN

1.7.2 For activation within adjacent FIR

Unless instructed otherwise, flights entering the Bahrain FIR should use the following contingency routes:

CONTINGENCY ROUTE STRUCTURE FOR BAHRAIN FIR

ROUTE NAME	ENTRY FIX	AIRWAY ROUTING	EXIT FIX	ALTITUDES
BAHCR1WB	BALUS	UL768 RAMSI UL602	DAVUS	FL260+ EXCEPT FL340
BAHCR2WB	BALUS	UL768	COPPI	FL260+ EXCEPT FL340
BAHCR3WB	BALUS	N929 SILNO A791	BPN	FL260+ EXCEPT FL340
BAHCR4WB	BALUS	N929 SILNO G663	GIBUS	FL260+ EXCEPT FL340
BAHCR5WB	ALSER	G663 SILNO G663	GIBUS	FL340 ONLY
BAHCR6WB	ALSER	G663 SILNO A791	BPN	FL340 ONLY
BAHCR7WB	COPPI	G667	AVOBO	FL240 ONLY
BAHCR8EB	AKRAM	B418 MUTAR G663	ALSER	FL270, FL350
BAHCR9EB	AKRAM	B41B ASPAN UN318	OXAT	FL270, 290, 350
BAHCR10EB	MGA	UP891	EMILU	FL250
BAHCR11EB	TAGSO	UN318	LOXAT	FL310, FL370
BAHCR12EB	ULOVO	UP559 KEDAT UM691 KUŞAR UN318	LOXAT	FL330, FL390+
BAHCR13EB	RABAP	UM667 UMAMA UP559 LOTIT A791	NADAM	FL250, 290, 330, 370+
BAHCRE14B	AMBIK	→GEVAL →	KUVER	FL270, FL350

CONDITIONS

1. all aircraft to be level prior to entry fix
2. mach speeds assigned to all aircraft
3. no altitude changes in Bahrain fir
4. all aircraft will correct altitude for direction of flight.

SEPARATION

1. all inbound aircraft to be separated by **minimum 15 minutes** longitudinally at entry fix. separation shall be **constant or increasing** as per assigned speeds/mach numbers;
2. all inbound aircraft to be separated by **minimum 20 minutes** longitudinally at entry fix **if faster aircraft behind; maximum overtake speed difference of m.04 or 25KTS IAS.**

Communications with the next ATSU should be established at the earliest opportunity.

**CONTINGENCY FREQUENCIES FOR CONTROL AND/OR FLIGHT
MONITORING SERVICES**

CONTINGENCY ROUTE	ROUTE	MANDATORY REPORT	MANDATORY REPORT	EXIT FREQUENCY
BAHCR1WB	BALUS UL768 RAMSI UL602 DAVUS	BALUS 132.12MHZ B/U 121.1 DOHA	RAMSI 132.45MHZ B/U 127.85	IVONI KUW 125.3MHZ
BAHCR2WB	BALUS UL768 COPPI	BALUS 132.12MHZ B/U 121.1 DOHA	RAMSI 132.45MHZ B/U 127.85	COPPI JED 134.4 FL340 and Below RIY 132.5 FL360 and above
BAHCR3WB	BALUS N929 SILNO A791 BPN	BALUS 132.12MHZ B/U 121.1 DOHA	RULEX 132.45MHZ B/U 127.85	BPN JED 134.3 FL340 and Below RIY 125.9 FL360 and above
BAHCR4WB	BALUS N929 SILNO G663 GIBUS	BALUS 132.12MHZ B/U 121.1 DOHA	RULEX 132.45MHZ B/U 127.85	GIBUS RIY 126.0MHZ
BAHCR5WB	ALSER G663 GIBUS	ALSER 132.45MHZ B/U 127.85	SILNO 125.05MHZ B/U 126.3 DAM	GIBUS RIY 126.0MHZ
BAHCR6WB	ALSER G663 SILNO A791 BPN	ALSER 132.45MHZ B/U 127.85	SILNO 125.05MHZ B/U 126.3 DAM	BPN JED 134.3MHZ
BAHCR7WB	COPPI G667 AVOBO	COPPI 132.45MHZ B/U 126.3 DAM		MGA RIY 126.0MHZ
BAHCR8EB	B418 NUTAR G663	AKRAM 126.7MHZ B/U 126.3 DAM	MUTAR 132.45 MHZ B/U 126.3 DAM	ALSER TEH 133.4 MHZ
BAHCR9EB	B418 ASPAN UN318	AKRAM 126.7MHZ B/U 126.3 DAM	ASPAN 132.45MHZ B/U 126.3DAM	LOXAT UAE 128.25MHZ
BAHCR10EB	UP891	MGA 126.7MHZ B/U 126.3 DAM		EMILU KUW 125.3MHZ
BAHCR11EB	UN318	EGNOV 126.7MHZ B/U 126.3DAM	ASPAN 132.45MHZ B/U 126.3 DAM	LOXAT UAE 128.25MHZ

BAHCR12EB	UP559 KEDAT KUSAR UN318	KEDAT 126.7 MHZ B/U 126.3 DAM	ASPAN 132.45 MHZ B/U 126.3	LOXAT UAE 128.25MHZ
BAHCR13EB	UM667 UMAMA UP559 LOTIT A791	GEVAL 132.45 MHZ B/U 126.3 DAM	LOTIT 132.12 MZH B/U 126.3 DAM	NADAM UAE 132.15 MHZ
BAHCR14EB	AMBIK → GEVAL → KUEVER	GEVAL 132.45 MHZ B/U 126.3 DAM		KUEVER TEH 133.4 MHZ

Note: Any Aircraft with HF capabilities can make position reports on BAH
HF frequencies 8910KHZ 5667KHZ 2992KHZ

1.8 LONG TERM CONTINGENCY ARRANGEMENTS

In the event that Bahrain loses the ability to provide an ATC service in the FIR for an extended period, and contingency plans are in place to provide the service from an alternate location.

The facility will be or is established at another location but will take some time to put in place as equipment and communication links have to be brought into operation and staff relocated. The nature of the loss of the Bahrain facility may influence the time required to bring the contingency facility into service, but it is expected that under most circumstances an ATC service will be available in the Bahrain FIR after several days. In the interim period, flight operations in Bahrain would be severely restricted and all flights will be required to route clear of the Bahrain FIR.

When established, the contingency facility will comprise a slightly reduced complement of control and support workstations, but with the existing range of communication facilities for clearance delivery.

Operators can expect that ATFM regulations will be in place throughout the period of the transition, with a gradual build up to near normal operating levels.

SAMPLE NOTAMS

a) Avoidance of airspace

NOTAM.....DUE TO DISRUPTION OF ATS IN THE BAHRAIN FIR ALL ACFT ARE ADVISED TO AVOID BAHRAIN FIR.

b) Airspace available with limited ATS

NOTAM DUE TO ANTICIPATED DISRUPTION OF ATS IN THE BAHRAIN FIR ALL ACFT ARE ADVISED THAT THERE WILL BE LIMITED ATS. PILOTS MAY EXPERIENCE DELAY AND OVERFLIGHTS MAY CONSIDER AVOIDING THE AIRSPACE.

c) Contingency plan activated

NOTAM DUE TO DISRUPTION OF ATS IN BAHRAIN FIR ALL ACFT ARE ADVISED THAT THE BAHRAIN AIR TRAFFIC SERVICES CONTINGENCY PLAN FOR ACFT INTENDING TO OVERFLY BAHRAIN FIR IS IN EFFECT. FLIGHT PLANNING MUST BE IN ACCORDANCE WITH THE CONTINGENCY ROUTES LISTED AND FL ASSIGNMENT. PILOTS MUST STRICTLY ADHERE TO THE CONTINGENCY PROCEDURES. ONLY APPROVED INTERNATIONAL FLIGHTS ARE PERMITTED TO OVERFLY BAHRAIN AIRSPACE.

d) Non adherence to the Contingency Plan

NOTAM.....OPERATORS NOT ABLE TO ADHERE TO THE CONTINGENCY PLAN SHALL AVOID THE BAHRAIN FIR.

CHAPTER 2: DETAILED PROCEDURES – CAIRO FIR

2.1 FIR FOR WHICH THE CONTINGENCY PLAN APPLIES

Cairo FIR

2.2 FIRs WITH SUPPORTING PROCEDURES

Athens FIR
Nicosia FIR
Amman FIR
Jeddah FIR
Riyadh ACC,
Khartoum FIR
Tripoli FIR

2.3 NOTIFICATION PROCEDURES

In a limited service situation notification of any service limitations and traffic management measures will be promulgated to operators and adjacent ANSPs via AFTN.

In a no service situation the ACC is likely to have been evacuated. As soon as possible after evacuation a contingency message will be sent to all adjacent ANSP's and operators. An evacuation message will be broadcast on appropriate frequencies and operators in receipt of the contingency message are asked to forward this information to affected flights wherever possible.

2.4 LIMITED SERVICE – PROCEDURES

2.4.1 The various circumstances surrounding each contingency situation make it difficult to establish exact and detailed procedures to be followed in each case. Here are the general guidelines which should be followed in case of limited service.

- The **AOCT "ATS Operational Contingency Team"** will convene to have the appropriate procedures applied according to the situation arising.
- The **AOCT** will take the necessary action As Soon As Possible to inform all adjacent ANSPs and Operators.
- The Limited Service message will be broadcast on appropriate frequencies and operators in receipt of such message are asked to forward this information to affected flights wherever possible.
- Cairo ACC shall determine, co-ordinate and promulgate any necessary restrictions to meet the service limitation. Traffic in possession of a valid ATC clearance shall have priority over any other traffic. En-route re-clearance of such traffic shall not be permitted except in emergency.
- Traffic without a valid clearance may be subject to tactical traffic management measurements to meet the requirements of the service limitation.
- Cairo ACC will be responsible for ensuring the co-ordination and implementation of any additional separation requirements.

- Dependant on the nature of the service limitation, Cairo ACC may promulgate and activate contingency tracks for use in addition to the normal ATS Routes available.
- Cairo ACC shall co-ordinate any necessary traffic management measures where necessary. Such measures may include, but are not limited to, temporary capacity restrictions and tactical rerouting measures.

2.5 NO SERVICE – PROCEDURES

In the event of Cairo ACC being unable to provide the Air Traffic Services (ATS), the head of ECAA will activate the Egyptian Air Traffic Services contingency plan, the civil aviation authorities of the adjacent FIRs will be notified in accordance with the Operational Coordination Agreement (OCA) signed between Cairo ACC and the adjacent ACCs. The adjacent ACCs will in return activate the procedures stated in the OCA.

The Plan will be activated by promulgation of a NOTAM issued by (ECAA) as far in advance as is practicable. However, when such prior notification is Impracticable for any reason, the Plan will be put into effect on notification by (ECAA) and/or ICAO MID office.

2.6 CAIRO FIR – CONTINGENCY ROUTE STRUCTURE

2.6.1 For activation within Cairo FIR

In a **limited service** contingency situation Cairo ACC may promulgate additional contingency tracks in addition to the published ATS Routes. Any contingency track design within the Cairo FIR will be effected at the time of the event and be dependent on the nature of the service limitation. Promulgation will be via AFTN and/or any other means available.

2.6.2 For activation within adjacent FIR

Unless instructed otherwise, flights entering the Cairo FIR should use the following contingency routes.

UNIT	TEL. No	FAX No	EMAIL	AFTN
Athens ACC				
Nicosia ACC				
Amman ACC				
Jeddah ACC	00966	00966		
Riyadh ACC	00966	00966		
Khartoum ACC				
Tripoli ACC				

ICAO MID	0020 2 2267 4845/46/41	0020 2 2267 4843	
IATA	00962 6 569 8728	00962 6 560 4548	saidh@iata.org

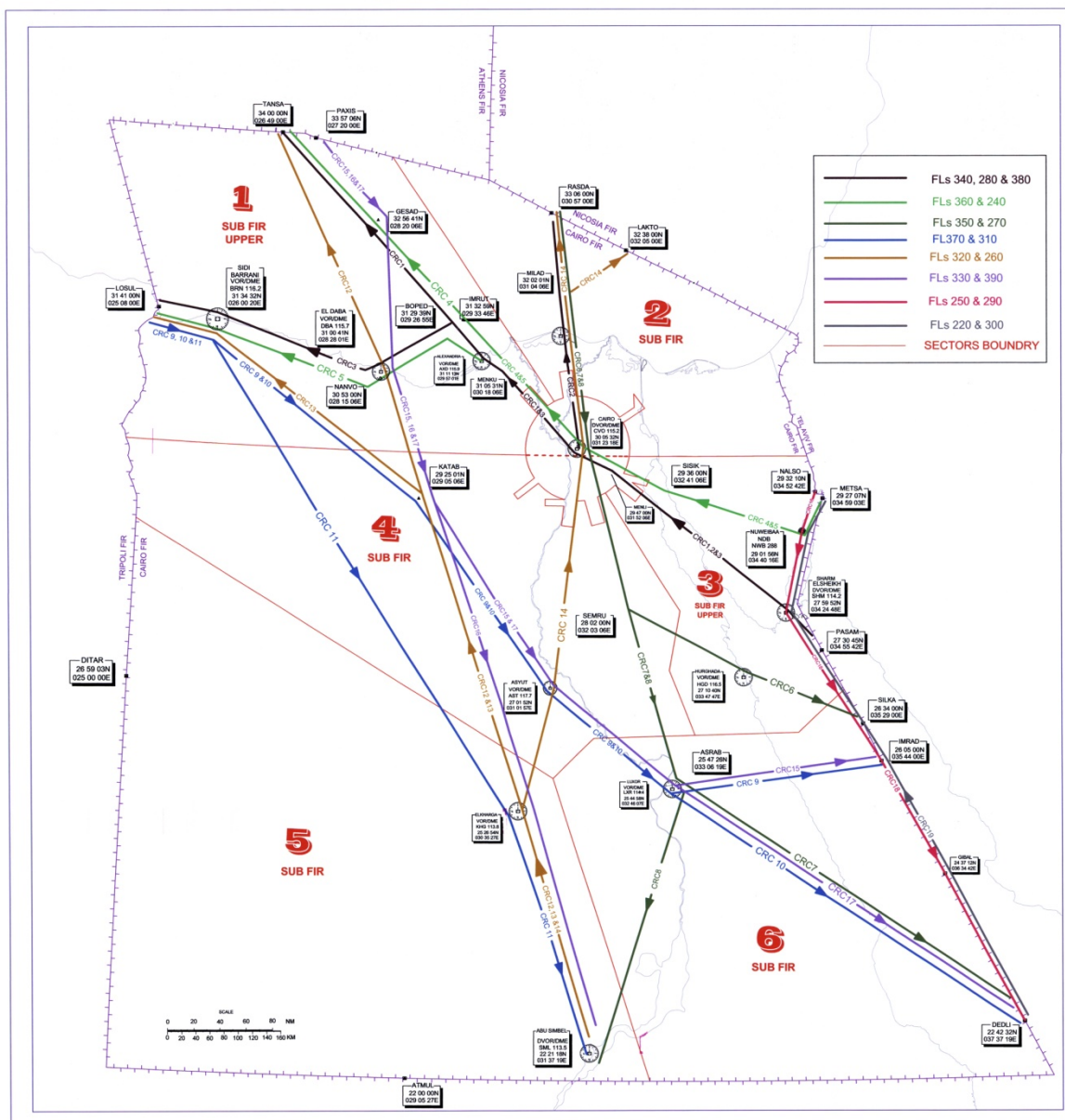
**CONTINGENCY ROUTE STRUCTURE AND FREQUENCIES FOR FLIGHT MONITORING
SERVICES CAIRO FIR**

CONTINGENCY ROUTES IN CAIRO (CRC)	ATS ROUTES	FREQUENCIES	FL ASSIGNMENT
CRC1	PASAM-A411-CVO-IMRUT-UL617-TANSA	126.6Mhz CVO 127.7Mhz	FLs 380, 340 and 280
CRC 2	PASAM-A411-CVO-A16-RASDA	126.6Mhz CVO 124.7Mhz	FLs 380,340 and 280
CRC 3	PASAM-A411-CVO-A727-OTIKO- W725-BRN-A411-LOSUL	126.6Mhz CVO 127.7Mhz	FLs 380,340 and 280
CRC 4	METSA-W733-NWB-A791-MENLI-A411-CVO-A727-IMRUT- L617/UL617- TANSA	126.6Mhz CVO 127.7Mhz	FLs 360 and 240
CRC 5	METSA-W733-NWB-A791-MENLI-A411-CVO-A1-BOPED- W725-BRN- A411- LOSUL	126.6Mhz CVO 127.7Mhz	FLs 360 and 240
CRC 6	RASDA-A16-CVO-A727-SEMRU-B418-SILKA	124.7Mhz CVO 132.2Mhz SEMRU 126.6Mhz	FLs 350 and 270
CRC 7	RASDA-A16-CVO-A727-LXR-R775-DEDLI	124.7Mhz CVO 132.2Mhz SEMRU 129.4Mhz	FLs 350 and 270
CRC 8	RASDA-A16-CVO-A727-SML	124.7Mhz CVO 132.2Mhz SEMRU 129.4Mhz	FLs 350 and 270
CRC 9	LOSUL-A411-BRN-UP751-LXR-A145-IMRAD	127.7Mhz KATAB 132.2Mhz AST 129.4Mhz	FLs 370 and 310
CRC 10	LOSUL-A411-BRN-UP751-LXR-R775-DEDLI	127.7Mhz KATAB 132.2Mhz AST 129.4Mhz	FLs 370 and 310
CRC 11	LOSUL-A411-BRN-A145-KHG-B12-SML	127.7Mhz DANAD 132.2Mhz/ ABM AST 129.4Mhz	FLs 370 and 310
CRC 12	SML-B12-DBA-UL613-TANSA	129.4Mhz ABM AST 132.2Mhz KATAB 127.7Mhz	FLs 320 and 260
CRC 13	SML-B12-KATAB-UP751-BRN-A411-LOSUL	129.4Mhz ABM AST 132.2Mhz KATAB 127.7Mhz	FLs 320 and 260
CRC14	SML-B12-KHG-W8-CVO-A16-MILAD-A16-RASDA OR N307-LAKTO	129.4Mhz AST 132.2mhz CVO 124.7Mhz	FLs 320 and 260
CRC15	PAXIS-UL607-GESAD-L551-DBA-B12-KATAB-UP751-LXR-A145-IMRAD	127.7Mhz KATAB 132.2Mhz AST 129.4Mhz	FLs 330 and 390
CRC16	PAXIS-UL607-GESAD-L551-DBA-B12-SML	127.7Mhz KATAB 132.2Mhz ABM AST 129.4Mhz	FLs 330 and 390
CRC17	PAXIS-UL607-GESAD-L551-DBA-B12-KATAB-UP751-LXR-R775-DEDLI	127.7Mhz KATAB 132.2Mhz AST 129.4Mhz	FLs 330 and 390
CRC18	NALSO-NWB-SHM-IMRAD-GIBAL-DEDLI	126.6Mhz SILKA 129.4Mhz	FLs 290 and 250
CRC19	DEDLI-GIBAL-IMRAD-SHM-NWB-NALSO	129.4Mhz SILKA 126.6Mhz	FLs 300 and 220

This CRCs table does not include any eastbound routes to AMMAN FIR.

Note; Cairo FIR served as well by HF Frequency 11300 KHz

APPENDIX 1E



Communications with the next ATSU should be established at the earliest opportunity.

2.7 LONG TERM CONTINGENCY ARRANGEMENTS

In the event that Egypt loses the ability to provide an ATC service in the Cairo FIR for an extended period, and contingency plans are in place to provide the service from an alternate location.

The facility will be or is established at another location but will take some time to put in place as equipment and communication links have to be brought into operation and staff relocated. The nature of the loss of the Cairo facility may influence the time required to bring the contingency facility into service, but it is expected that under most circumstances an ATC service will be available in the Cairo FIR after several days. In the interim period no ATC service will be available and all flights will be required to route clear of the Cairo FIR.

When established, the contingency facility will comprise a slightly reduced complement of control and support workstations, but with the existing range of communication facilities for clearance delivery.

Operators can expect that ATFM regulations will be in place throughout the period of the transition, with a gradual build up to near normal operating levels.

SAMPLE NOTAMS

a) Avoidance of airspace

NOTAM.....DUE TO DISRUPTION OF ATS IN THE CAIRO FIR ALL ACFT ARE ADVISED TO AVOID THE CAIRO FIR.

b) Airspace available with limited ATS

NOTAM DUE TO ANTICIPATED DISRUPTION OF ATS IN THE CAIRO FIR ALL ACFT ARE ADVISED THAT THERE WILL BE LIMITED ATS. PILOTS MAY EXPERIENCE DLA AND OVERFLIGHTS MAY CONSIDER AVOIDING THE AIRSPACE.

c) Contingency plan activated

NOTAM DUE TO DISRUPTION OF ATS IN CAIRO FIR ALL ACFT ARE ADVISED THAT THE Cairo FIR INTERNATIONAL CONTINGENCY PLAN FOR ACFT INTENDING TO OVERFLY THE FIR IS IN EFFECT. FLIGHT PLANNING MUST BE IN ACCORDANCE WITH THE ROUTES LISTED AND FL ASSIGNMENT. PILOTS MUST STRICTLY ADHERE TO THE CONTINGENCY PROCEDURES. ONLY APPROVED INTERNATIONAL FLIGHTS ARE PERMITTED TO OVERFLY CAIRO AIRSPACE.

d) Non adherence to the Contingency Plan

NOTAM.....OPERATORS NOT ABLE TO ADHERE TO THE CONTINGENCY PLAN SHALL AVOID THE CAIRO FIR.

CHAPTER 3: DETAILED PROCEDURES – TEHRAN FIR

3.1 FIR FOR WHICH THE CONTINGENCY PLAN APPLIES

Tehran FIR

3.2 FIRs WITH SUPPORTING PROCEDURES

Ankara FIR
Baghdad FIR
Bahrain FIR
Baku FIR
Emirates FIR
Kabul FIR
Karachi FIR
Kuwait FIR
Muscat FIR
Turkmenbashi FIR
Yerevan FIR

3.3 NOTIFICATION PROCEDURES

In a limited service situation notification of any service limitations and traffic management measures will be promulgated to operators and adjacent ANSPs via AFTN.

In a no service situation the ACC is likely to have been evacuated. As soon as possible after evacuation a contingency message will be sent to all adjacent ANSP's and operators. An evacuation message will be broadcast on appropriate frequencies and operators in receipt of the contingency message are asked to forward this information to affected flights wherever possible.

3.4 LIMITED SERVICE – PROCEDURES

3.4.1 Disruption of ground/air communication capability

A limited communication service will be maintained with the assistance of adjacent Aerodromes. VHF services on the Tehran frequency normally provided by Tehran Control will be delegated as appropriate to the other ATS units namely ----- . Appropriate frequencies will be advised by Tehran and the assisting ATS units.

Situations which could result in a Limited Service are:

Equipment Failure

- a) Transmitters (Loss of a number of Transmitters)
- b) Receivers (Loss of a number of Receivers)
- c) Aerials (Loss of a number of Aerials)
- d) Data Lines (Loss of data lines between Tehran Communications center and Tehran ACC)

Propagation

Radio Propagation resulting in partial fade-out can be affected by many factors including Solar Flares and Geomagnetic Storms.

Staffing

Reduced Staffing
Illness
Weather (Severe Weather i.e. Storm, Snow, Flooding)

Security Threat

Depending on the level of the Security threat and if essential staff are allowed to remain on Station

In the event that the operation is degraded substantially, ATFM measures may be imposed as necessary.

3.4.2 Disruption of ability to provide control services

Tehran ACC shall determine, co-ordinate and promulgate any necessary restrictions to meet the service limitation. Traffic in possession of a valid ATC clearance shall have priority over any other traffic. En-route re-clearance of such traffic shall not be permitted except in emergency.

Traffic without a valid clearance may be subject to tactical traffic management measurements to meet the requirements of the service limitation.

Separation standards

Tehran ACC will be responsible for ensuring the co-ordination and implementation of any additional separation requirements.

Contingency tracks

Dependant on the nature of the service limitation, Tehran may promulgate and activate contingency tracks for use in addition to the normal ATS Routes available.

Air Traffic Flow Management

Tehran ACC shall co-ordinate any necessary traffic management measures where necessary. Such measures may include, but are not limited to, temporary capacity restrictions and tactical rerouting measures.

Tehran ACC shall co-ordinate these restrictions where necessary with adjacent ANSPs where they may affect the flow of traffic through these units airspace.

Responsibilities of adjacent ANSPs

The action required of adjacent ANSPs will vary dependant on the nature of the service limitation. Where such action is not contained within the inter-centre Letters of Agreement (LOAs) the requirement will be promulgated within the initial failure and restrictions message.

3.5 NO SERVICE – PROCEDURES

3.5.1 Loss of ground/air communication capability

In the event of Tehran ACC being unable to provide ground/air communications for Tehran FIR ----- ATC Unit will coordinate with adjacent FIR's to provide ground/communications to the best of their ability.

Situations which could result in No Service being provided are:

- a) Equipment Failure;
 - Transmitters (Loss of all Transmitters)
 - Receivers (Loss of all Receivers)
 - Aerials (Loss of all Aerials)
 - Data Lines (Loss of data lines)
- b) Propagation;
 - Radio Propagation resulting in total fade-out which can be caused by many factors including Solar Flares and Geomagnetic Storms.
- c) Staffing
 - No Staff
 - Illness (Seasonal Influenza)
 - Weather
 - Industrial Relations issues
- d) Evacuation of Tehran ACC
 - Fire
 - Bomb threat

Effect on flights

In the event of Tehran ACC being unable to provide ground/air communications for a sustained period of time ----- ATC Unit in coordination with adjacent FIR's could provide a limited communications facility to flights in the Tehran FIR.

ATFM measures may be imposed as necessary.

3.5.2 Loss of ability to provide control services

Should Tehran ACC be evacuated the potential would exist for a major disruption to Air Traffic Control (ATC) within the Tehran FIR.

In the event that Tehran ACC is evacuated, the unit evacuation procedures will be activated, and time permitting, controllers will make an emergency evacuation transmission on the radio frequency in use providing pilots with alternate means of communication. The procedures to be adopted are detailed in the Tehran Contingency plan.

The Plan will be activated by promulgation of a NOTAM issued by (IRCAO) as far in advance as is practicable. However, when such prior notification is Impracticable for any reason, the Plan will be put into effect on notification by (IRCAO) and/or ICAO MID office

As soon as possible after evacuation a contingency message will be sent to all adjacent ANSP's and operators as, detailed in the Tehran Contingency Procedures. In turn they are expected to advise the affected traffic.

Other ATSUs will provide guidance as far as possible in the circumstances.

Contact information that may be used in the event of an emergency evacuation is provided in ATM Contingency Contact Detail List.

3.6 FLIGHT CREW AND OPERATOR PROCEDURES

3.6.1 For flights within the Tehran FIR – General

The procedures outlined below are to be used as guidance for pilots in the immediate aftermath of a sudden withdrawal of the ATC service as described above.

On receipt of the contingency message pilots are requested to broadcast to other flights on 121.5 and 123.45. A listening watch on these frequencies must be maintained.

3.6.2 For flights within the Tehran FIR – Westbound

----- ACC's will endeavour to provide an ATC service throughout the Tehran FIR as soon as evacuation commences. These procedures are detailed at Tehran Contingency Procedures in **Paragraph 3.7.2**

Flights should establish communication with the next agency at the earliest opportunity stating current position, cleared flight level, next position and estimate and subsequent position.

Any flights involved in level changes should complete the manoeuvre as soon as possible in accordance with the clearance.

UNIT	TEL. No	FAX No	EMAIL	AFTN
Ankara FIR	+903123980000 +903123981153 +903123981614 +903123980296	+903123980961		LTAAZRZX LTAAZQZX
Baghdad FIR	+9647901655461			
Bahrain ACC	+97317321080 +97317321081 +97317320486	+97317321029	bahatc@caa.gov.bh	OBBBZQZX OBBBZQZA
Baku FIR	+994124971673			UBBBZRZX UBBBZQZX
NAKHCEVAN ACC	+994136446950			UBBNZPZX UBBNZQZX
UAE ACC	00971	00971		OMAEZQZX OMAEYAYH
Kabul FIR	+873781338375			
Karachi FIR	+922199248038 +922199071953 +922199242148	+922134604322		OPKCZRZX OPKCZRZA
Kuwait FIR	+9654762994 +9654342476 +9654760763	+9654310096		
Muscat ACC	+96824519550 +96824519507	+96824519939		OOMMZQZX
Turkmenbashi FIR	+99312396664 +99312510162 +99312377750	+99312331352		
Yerevan FIR	+37410593479 +37410593260 +37410593304	+37410593304		

ICAO MID	0020 2 2267 4845/46/41	0020 2 2267 4843	
IATA	OO962 6 569 8728	OO962 6 560 4548	saidh@iata.org

Flights may request their flight dispatch offices to forward position reports, if sending position reports to multiple ATS Units or if otherwise unable to forward position reports.

3.6.3 For flights within the Tehran FIR – Eastbound

----- ACC will endeavour to provide an ATC service throughout the Bahrain FIR as soon as evacuation commences. These procedures are detailed at Bahrain Contingency Procedures in **Paragraph 3.72**.

Flights operating with a received and acknowledged ATC clearance will be expected to continue in accordance with the last clearance issued unless otherwise advised by ATC.

Communications with the next ATSU should be established at the earliest opportunity.

3.6.4 For flights approaching the Tehran FIR when the contingency is activated.

Not in Receipt of an ATC Clearance

In the event that Tehran ACC must be evacuated, only aircraft with received and acknowledged ATC clearances shall be permitted to transit Tehran FIR.

If unable to obtain or acknowledge an ATC clearance, flights should plan to re-route around the Tehran FIR or to land at an appropriate airfield.

In receipt of an acknowledged ATC Clearance outside Tehran FIR

Aircraft operating with a received and acknowledged ATC clearance can, at pilot's discretion, continue, but must expect a limited ATC service or no service within the Tehran FIR.

However, due to the uncertainty surrounding the contingency situation pilots are strongly advised to comply with the procedures detailed above for flights not in receipt of an ATC clearance even if they are in receipt of an acknowledged ATC clearance.

3.7 TEHRAN FIR – CONTINGENCY ROUTE STRUCTURE

3.7.1 For activation within Tehran FIR

In a **limited service** contingency situation Tehran ACC may promulgate additional contingency tracks in addition to the published ATS Routes. Any contingency track design within the Tehran FIR will be effected at the time of the event and be dependent on the nature of the service limitation. Promulgation will be via AFTN

3.7.2 For activation within adjacent FIR

Unless instructed otherwise, flights entering the Tehran FIR should use the following contingency routes:

Communications with the next ATSU should be established at the earliest opportunity.

Contingency Route Scheme

Entry FIR	Exit FIR	Entry FIX	Route Designator	Exit FIX	Flight Levels	Remarks
Ankara	Nakhchivan	DASIS	UL333 R661	DULAV	FL330	
		ALRAM	G208 A422 R661	DULAV	FL310, FL410	ALRAM-UMH Eastbound (one way) then two way
Ankara	Yerevan	ALRAM	UL333 G482	MAGRI	FL330	
		ALRAM	G208 A422 G482	MAGRI	FL310, FL410	ALRAM-UMH Eastbound then two way
Ankara	Ashgabat	ALRAM	-G208-G781-A416-W4	RIKOP	FL310, FL410	
		DASIS	UL333-A416-W4	RIKOP	FL330	ALRAM-UMH Eastbound then two way
Ankara	Karachi bound to Delhi and beyond	DASIS	R660-A416-N39-G208 G452	DERBO	FL330	
		ALRAM	G208-G208 UL124 - R661-T210-G208 UL125-G452	DERBO	FL310, FL410	ALRAM-UMH Eastbound then two way

4.2E-49

Ankara	Karachi Bound to Mumbai and beyond	ALRAM	G208-UL124 R661 -T210-G208 UL125	KEBUD	FL310, FL410	ALRAM-UMH Eastbound then two way
		DASIS	G208-R654-G665	ASVIB	FL330	
Ankara	Bahrain	ALRAM	G208-UL223-G667- W31-B417	TULAX	FL310, FL410	ALRAM-UMH Eastbound then two way
			G208-UL223-W3-R659	MIDSI		
			G208 - UL223 W3 -G663	ALSER		
			G208-R654-R659	MIDSI		
			G208-R654-R659-G663	ALSER		
		DASIS	UL333 R660-R661-R654-R659	MIDSI	FL330	
			UL333 R660-R661-R654-R659-G663	ALSER		
Ankara	Kuwait	ALRAM	G208-UL223-G667- W31-B417	TULAX	FL310, FL410	ALRAM-UMH Eastbound then two way
		DASIS	UL333 R660-R661-R654-G667-W31-B417	TULAX	FL330	
Ankara	Emirates	ALRAM	G208-R654-R659-G666-UL223	SIR	FL310, FL410	ALRAM-UMH Eastbound then two way
		DASIS	UL333 R660-R661-R654-R659-G666-UL223	SIR	FL330	
	Landing UAE	ALRAM	G208-UL223-W3-G666	ORSAR	FL310, FL410	ALRAM-UMH Eastbound then two way
			G208-R654-R659-G666			
		DASIS	UL333 R660-R661-R654-R659-G666-		FL330	
Ankara	Kabul	DASIS	R660-B121-T210-G208-R205-G202	KAMAR	FL330	
			R660-A416-or MSD-G792	SOKAM CHARN		
		ALRAM	G208-G208/UL124-T210-G208-R205-G202	KAMAR	FL310, FL410	ALRAM-UMH Eastbound then two way
			G208-G208/UL124-G781-A416-or G792	SOKAM CHARN		
Ankara	Muscat	DASIS	R660-B121-T210-G208-W32-R654-	ORBIX	FL330	
		ALRAM	G208-R661-T210-G208-W32-R654	ORBIX	FL310, FL410	ALRAM-UMH Eastbound then two way
Yerevan	Bahrain	MAGRI	G482-R661-R654-R659-G663	ALSER	FL390	
			G482-R661-R654-R659	MIDSI		
Yerevan	Kuwait	MAGRI	G482-R661-R654-G667-W30-B417	TULAX	FL390	
Yerevan	Emirates	MAGRI	G482-R661-R654-R659-G666-W147 UL223	SIR	FL390	
	Landing UAE	MAGRI	G482-R661-R654-R659-G666	ORSAR		
Yerevan	Karachi bound to Delhi and beyond	MAGRI	-B121-UL333-UN319-G452	DERBO	FL390	
	Karachi Bound to Mumbai and beyond		B121-A416-N39-G208/UL125-W32-UL124-UL124	KEBUD		
Yerevan	Kabul	MAGRI	B121-UL333-UN319-R794-G202-	KAMAR	FL390	
			B121-A416-or G792	SOKAM CHARN		
Yerevan	Muscat	MAGRI	B121-A416-T212 G208 UL125-W32-R654	ORBIX	FL390	
		ULDUS	P574-R654-R659-G666-		FL370	

Baku Nakhchivan	Emirates		UL223	SIR		
		DULAV	R661 UL125-R654-R659-G666-UL223		FL290	
		LALDA	G670-B121-G667-R654-R659-G666-UL223		FL250	
	Landing UAE	ULDUS	P574-R659-G666	ORSAR	FL370	
		DULAV	R661 UL125-R654-R659-G666		FL290	
		LALDA	G670-B121-G667-R654-R659-G666		FL250	
Baku Nakhchivan	Bahrain	ULDUS	P574-R659-G663	ALSER	FL370	
			P574-R659	MIDSI		
		DULAV	R661 UL125-R654-R659-G663	MIDSI	FL290	
		LALDA	G670-B121-G667-R654-R659-G663	ALSER	FL250	
			G670-B121-G667-R654-R659	MIDSI	FL250	
Baku Nakhchivan	Kuwait	ULDUS	P574-SAV-G667-AWZ-W30-MAH-B417	TULAX	FL370	
		DULAV	R661 UL125-R654-G667-W30-B417		FL290	
Baku Nakhchivan	Baghdad	ULDUS	P574-B411	PAXAT	FL370	
		DULAV	R661 UL125-R654-B411		FL290	
		LALDA	G670-B121-G667-B411		FL250	
Baku Nakhchivan	Muscat	ULDUS	UN319-A419-R654	ORBIX	FL370	
		DULAV	R661-R660-A416-N39-G208-W32-R654		FL290	
		LALDA	G670-A416-N39-G208-W32-R654-		FL250	
Baku Nakhchivan	Kabul	ULDUS	UN319-R794-G202	KAMAR	FL370	
			UN319-A416-or G792	SOKAM CHARN		
		DULAV	UL125-UP146-UL333-UN319-R794-G202-	KAMAR	FL290	
		DULAV	R661-R660-B121		FL290	
Baku Nakhchivan	Karachi bound to Delhi and beyond	DULAV	UL125 -UL333 - UN319 - G452	DERBO	FL290	
		ULDUS	UN319-G452		FL370	
		LALDA	G670-A416-N39-G208-G452		FL250	
	Karachi Bound to Mumbai and beyond	DULAV	R661-R660-A416- N39-G208-	KEBUD	FL290	
		ULDUS	UN319-UL125 G208		FL370	
		LALDA	G670-A416-N39-G208		FL250	
Ashgabat	Karachi	ORPAB	G775-G208 UL125-PG or G452	KEBUD DERBO	FL270	
		GIRUN	G792-G775-G208 UL125-or G452		FL310	
Ashgabat	Kabul	ORPAB	G775-G792- or A416	SOKAM	FL270	
		GIRUN	G792 or A416	CHARN	FL310	
Ashgabat	Muscat	ORPAB	G775-W2-R654	ORBIX	FL270	
		GIRUN	G775-W2-R654		FL310	
Ashgabat	Emirates	RIKOP	A419	DARAX	FL280	
Ashgabat	Bahrain	RIKOP	A419-G663	ALSER	FL280	
			A419-G663-R659	MIDSI		
Ashgabat	Kuwait	RIKOP	A419-G663-G669	NANPI	FL280	
Ashgabat	Baghdad	RIKOP	W4-A416-R660	DASIS	FL280	
Ashgabat	Ankara	RIKOP	W4-A416-G781-G208-G781	BONAM	FL280	BONAM-UMH West bound then two way
Emirates	Nakhchivan	DARAX	A419-W10-R659-R654-R661	DULAV	FL240,	
	Baku		W32-G208-N39-R794	ULDUS	FL300, FL400	
Emirates	Yerevan	DARAX	A419-W10-R659-R654-R661-G482	MAGRI	FL240, FL300, FL400	
Emirates	Ashgabat	DARAX	A419	RIKOP	FL270	
Emirates	Kabul	DARAX	A419-A453	PIRAN	FL270	

4.2E-51

Emirates	Baghdad	DARAX	A419-W10-R659-G202-B411	PAXAT	FL240,FL300, FL400	
Emirates	Ankara	DARAX	A419-W10-R659-R654-R661-R660-	DASIS	FL240,FL300, FL400	BONAM-UMH West bound then two way
			A419-W10-R659-R654-G208-G781-	BONAM		
			A419-W10-W3-UL223-G781			
Kuwait	Baku	TULAX	B417-W30-G667-P574	ULDUS	FL250	
	Nakhchivan		B417-W30-G667-R654-R661	DULAV		
Kuwait	Yerevan	TULAX	B417-W30-G667-R654-R661-G482	MAGRI	FL250	
Kuwait	Ashgabat	NANPI	G669-G663-A419	RIKOP	FL350	
Kuwait	Kabul	NANPI	G669-G452-A453	PIRAN	FL350	
Kuwait	Karachi	NANPI	G669-G452	DERBO	FL350	
			G669-G452-UL124	KEBUD		
			G669-G452-R654-G665	ASVIB		
Kuwait	Muscat	NANPI	G669-W10-R654	ORBIX	FL350	
Kuwait	Landing UAE	NANPI	R784-W143-G666	ORSAR	FL350	
	UAE		R784-W143-G666-UL223	SIR		
Bahrain	Karachi	MIDSI	A453-G452	DERBO	FL190	
			A453-M561	ASVIB		
Bahrain	Baku	MIDSI	R659-R654-P574	ULDUS	FL200,FL340	BONAM-UMH West bound then two way
		ALSER	G663-R659-R654-P574		FL220,FL380	
	Nakhchivan	MIDSI	R659-R654-R661	DULAV	FL200,FL340	
		ALSER	G663-R659-R654-R661		FL220,FL380	
Bahrain	Yerevan	MIDSI	R659-R654-R661-G482	MAGRI	FL200,FL340	
		ALSER	G663-R659-R654-R661-G482		FL220,FL380	
Bahrain	Ashgabat	MIDSI	R659-G663-A419	RIKOP	FL190	
		ALSER	G663-A419		FL250	
Bahrain	Kabul	MIDSI	A453	PIRAN	FL190	
Bahrain	Landing UAE	KUPER	B416-R784-W143-G666	ORSAR	FL270	
	UAE		B416-R784-W143-G666-UL223	SIR		
Bahrain	Ankara	MIDSI	R659-R654-R661-R660	DASIS	FL200,FL340	BONAM-UMH West bound then two way
		MIDSI	R659-R654-G208-G781	BONAM		
		MIDSI	R659-W3-UL223-G781			
		ALSER	G663-R659-R654-R661-R660	DASIS	FL220,FL380	BONAM-UMH West bound then two way
		ALSER	G663-R659-R654-G208-G781	BONAM		
		ALSER	G663-W3-UL223-G781			
Muscat	Karachi	IMLOT	A791	JI	FL270, FL370, FL390	
		DENDA	R462		FL290, FL310, FL350	
Muscat	Baku	ORBIX	R654-W32-G208-N39-R794	ULDUS	FL360	
	Nakhchivan		R654-W32-G208-N39-A416-R661	DULAV		
Muscat	Yerevan	ORBIX	R654-W32-G208-N39-A416-B121	MAGRI	FL360	
Muscat	Ashgabat	ORBIX	R654-W2-G775	ORPAB	FL360	
Muscat	Kabul	ORBIX	R654-W2-A453	PIRAN	FL360	
Muscat	Baghdad	ORBIX	-R654-G202-B411	PAXAT	FL360	
Muscat	Ankara	ORBIX	R654-W32-G208-N39-A416-R660-	DASIS	FL360	BONAM-UMH West bound then two way
			R654-W32-G208-T210-R661-G208-G781	BONAM		
Baghdad	Baku	PAXAT	B411-G202-G667-P574	ULDUS	FL270	
Baghdad	Yerevan	PAXAT	B411-G202-G667-R654-R661-G482	MAGRI	FL270	
Baghdad	Ashgabat	PAXAT	B411-G202-G663-A419	RIKOP	FL270	
Baghdad	Kabul	PAXAT	B411-G202	KAMAR	FL270	

Baghdad	Karachi	PAXAT	B411-G202-R654-G452-	DERBO	FL270	
			B411-G202-R654-UL124	KEBUD		
			B411-G202-R654-G665	ASVIB		
Baghdad	Muscat	PAXAT	B411-G202-R654	ORBIX	FL270	
Baghdad	Landing UAE	PAXAT	B411-G202-R659-G666	ORSAR	FL270	
	UAE		B411-G202-R659-G666-UL223-	SIR		
Kabul	Ankara	KAMAR	G202-R794-UN319-A416-R660	DASIS	FL380	
		SOKAM	A416-R660		FL340	
		CHARN	G792-B411-A416-RR660		FL360	
Kabul	Baku	KAMAR	G202-R794-UN319	ULDUS	FL380	
		SOKAM	A416-UN319		FL340	
		CHARN	G792-B411-A416-UN319		FL360	
Kabul	Nakhchivan	KAMAR	G202-R794-UN319-A416-R660-R661	DULAV	FL380	
		SOKAM	A416-R660-R661		FL340	
		CHARN	G792-B411-A416-R660-R661		FL360	
Kabul	Yerevan	KAMAR	G202-R794-UN319-A416-R660-G482	MAGRI	FL380	
		SOKAM	A416-R660-G482		FL340	
		CHARN	G792-B411-A416-R660-G482-		FL360	
Kabul	Ashgabat	SOKAM	A416-G775	ORPAB	FL340	
			A416-G792	GIRUN		
		CHARN	G792		FL360	
			G792-G775	ORPAB		
Kabul	Muscat	PIRAN	A453-W2-R654	ORBIX	FL200	
Kabul	UAE	PIRAN	A453-A419	DARAX	FL200	
Kabul	Bahrain	PIRAN	A453	MIDSI	FL200	
Kabul	Kuwait	PIRAN	A453-G452-G669	NANPI	FL200	
		KAMAR	G202-W6-W30-B417	TULAX	FL380	
Kabul	Baghdad	PIRAN	A453-G452-R654-G202-B411	PAXAT	FL200	
		KAMAR	G202-B411		FL380	
Karachi	Baku	ASVIB	G665-R654-W32-G208-N39-R794	ULDUS	FL260	
		KEBUD	UL124-R654-W32-G208-N39-R794-		FL360	
		DERBO	G452-G208-N39-R794		FL320	
	Nakhchivan	ASVIB	G665-R654-W32-G208-N39-A416-R660-R661	DULAV	FL260	
		KEBUD	UL124-R654-W32-G208-N39-A416-R660-R661		FL360	
		DERBO	G452-G208-N39-A416-R660-R661		FL320	
Karachi	Yerevan	ASVIB	G665-R654-W32-G208-N39-A416-B121	MAGRI	FL260	
		KEBUD	UL124-R654-W32-G208-N39-A416-B121		FL360	
		DERBO	G452-G208-N39-A416-B121		FL320	
Karachi	Ashgabat	DERBO	G452-G775	ORPAB	FL320	
		KEBUD	G208-G775		FL360	
Karachi	Muscat	DERBO	G452-W2-R654	ORBIX	FL320	
		ASVIB	M561-W2-R654		FL260	
Karachi	UAE	DERBO	G452-A453-A419	DARAX	FL320	
		ASVIB	M561-A419		FL260	
Karachi	Bahrain	DERBO	G452-A453	MIDSI	FL320	
		ASVIB	M561-A453		FL260	
Karachi	Kuwait	ASVIB	G665-R654-G452-G669	NANPI	FL260	
		KEBUD	UL124-R654-G452-G669		FL360	
		DERBO	G452-G669		FL320	
Karachi	Baghdad	ASVIB	G665-R654-G202-B411	PAXAT	FL260	
		KEBUD	UL124-R654-G202-B411		FL360	
		DERBO	G452-R654-G202-B411		FL320	

4.2E-53

Karachi	Ankara	ASVIB	G665-R654-W32-G208-N39-A416-R660	DASIS	FL260	
		KEBUD	UL124-R654-W32-G208-N39-A416-R660		FL360	
		DERBO	G452-G208-N39-A416-R660-		FL320	
		ASVIB	G665-R654-W32-G208-T210-R661-G208-G781	BONAM	FL260	
		KEBUD	UL124-R654-W32-G208-T210-R661-G208-G781		FL360	
		DERBO	G452-G208-T210-R661-G208-G781		FL320	

ADJACENT FIR FREQUENCIES AND TELEPHONE NUMBERS

ATS UNIT	RTF Call Sign	Frequency		Telephone NO
Baku	Baku RADAR	Main	133.100	+994124971673
		Stand by	133.300, 129.000, 135.100	
Yerevan	Yerevan RADAR	Main	128.800	+37410593304
		Stand by	124.000	
Nakhchivan	Nakhchivan RADAR	Main	127.900	+994136446950
		Stand by	118.200	
Ankara	Ankara RADAR Via DASIS	Main	127.300	+903123980000 ext. 1153 or 1614 +903123980961
		Stand by	129.300, 122.275	
	Ankara RADAR Via BONAM, ALRAM	Main	128.100	
		Stand by	132.900, 129.450	
Baghdad	Tehran Control	Main	123.000	+9647901655461
		Stand by	123.525	
Kuwait	Kuwait RADAR	Main	125.300	+9654762994 +9654342476 +9654760763
		Stand by	124.800, 132.100	
Bahrain	Bahrain RADAR	Main	132.120	+97317321080 +97317321081 +97317320486
		Stand by	125.700	
UAE	UAE RADAR	Main	132.150, 124.850	+97317321080 +97317321081 +97317320486
		Stand by		
Muscat	Muscat CONTROL	Main	128.150, 119.800	+96824519550 +96824519507
		Stand by		
Kabul	Kabul Information	Main	120.900, 128.500	+873761336375
		Stand by		
Karachi	Karachi Control	Main	128.300	+922199248038 +922199071953 +922199242148
		Stand by		
Ashgabat	Ashgabat RADAR	Main	135.200	
		Stand by	135.800	
Turkmenbashi	Turkmenbashi RADAR	Main		
		Stand by		

3.8 LONG TERM CONTINGENCY ARRANGEMENTS

In the event that Tehran loses the ability to provide an ATC service in the FIR for an extended period, and contingency plans are in place to provide the service from an alternate location to backup ACC (located in IKIA).

The facility is established at another location IKIA but will take some time to put in place as equipment and communication links have to be brought into operation and staff relocated. The nature of the loss of the Tehran facility may influence the time required to bring the contingency facility into service, but it is expected that under most circumstances an ATC service will be available in the Tehran FIR after several days. In the interim period no ATC service will be available and all flights will be required to route clear of the Tehran FIR.

When established, the contingency facility will comprise a slightly reduced complement of control and support workstations, but with the existing range of communication facilities for clearance delivery.

Operators can expect that ATFM regulations will be in place throughout the period of the transition, with a gradual build up to near normal operating levels.

SAMPLE NOTAMS

a) Avoidance of airspace

NOTAM.....DUE TO DISRUPTION OF ATS IN THE TEHRAN FIR ALL ACFT ARE ADVISED TO AVOID THE FIR.

b) Airspace available with limited ATS

NOTAM DUE TO ANTICIPATED DISRUPTION OF ATS IN THE TEHRAN FIR ALL ACFT ARE ADVISED THAT THERE WILL BE LIMITED ATS. PILOTS MAY EXPERIENCE DLA AND OVERFLIGHTS MAY CONSIDER AVOIDING THE AIRSPACE.

c) Contingency plan activated

NOTAM DUE TO DISRUPTION OF ATS IN TEHRAN FIR ALL ACFT ARE ADVISED THAT THE Tehran FIR INTERNATIONAL CONTINGENCY PLAN FOR ACFT INTENDING TO OVERFLY THE FIR IS IN EFFECT. FLIGHT PLANNING MUST BE IN ACCORDANCE WITH THE ROUTES LISTED AND FL ASSIGNMENT. PILOTS MUST STRICTLY ADHERE TO THE CONTINGENCY PROCEDURES. ONLY APPROVED INTERNATIONAL FLIGHTS ARE PERMITTED TO OVERFLY TEHRAN AIRSPACE.

d) Non adherence to the Contingency Plan

NOTAM OPERATORS NOT ABLE TO ADHERE TO THE CONTINGENCY PLAN SHALL AVOID THE TEHRAN FIR.

CHAPTER 4: DETAILED PROCEDURES – BAGHDAD FIR

4.1 FIR FOR WHICH THE CONTINGENCY PLAN APPLIES

Baghdad FIR

4.2 FIRs WITH SUPPORTING PROCEDURES

Amman FIR
Ankara FIR
Damascus FIR
Jeddah FIR
Kuwait FIR
Tehran FIR

4.3 NOTIFICATION PROCEDURES

In a limited service situation notification of any service limitations and traffic management measures will be promulgated to operators and adjacent ANSPs via AFTN.

In a no service situation the ACC is likely to have been evacuated. As soon as possible after evacuation a contingency message will be sent to all adjacent ANSP's and operators. An evacuation message will be broadcast on appropriate frequencies and operators in receipt of the contingency message are asked to forward this information to affected flights wherever possible.

Note:- In the event of an evacuation, Iraq must assume that the Tower at ORBI is also evacuated. There needs to be a system in place where Iraq can initiate the evacuation messages via cell phone (call Erbil tower, Najaf Tower and Basra Tower and they broadcast the evacuation message and implement the contingency routes, they will also need to issue the NOTAM and contact adjacent FIRs).

4.4 LIMITED SERVICE – PROCEDURES

4.4.1 Disruption of ground/air communication capability

A limited communication service will be maintained with the assistance of adjacent Aerodromes. VHF services on the Baghdad frequency normally provided by Baghdad Control will be delegated as appropriate to the other ATS units namely *Erbil, Najaf and Basra Towers*. Appropriate frequencies will be advised by Baghdad and the assisting ATS units.

Situations which could result in a Limited Service are:

Equipment Failure

- a) Transmitters (Loss of a number of Transmitters)
- b) Receivers (Loss of a number of Receivers)
- c) Aerials (Loss of a number of Aerials)
- d) Data Lines (Loss of data lines between Baghdad Communications center and Baghdad ACC)

Propagation

Radio Propagation resulting in partial fade-out can be affected by many factors including Solar Flares and Geomagnetic Storms.

Staffing

Reduced Staffing
Illness
Weather (Severe Weather i.e. Storm, Snow, Flooding)

Security Threat

Depending on the level of the Security threat and if essential staff are allowed to remain on Station

In the event that the operation is degraded substantially, ATFM measures may be imposed as necessary.

4.4.2 Disruption of ability to provide control services

Baghdad ACC shall determine, co-ordinate and promulgate any necessary restrictions to meet the service limitation. Traffic in possession of a valid ATC clearance shall have priority over any other traffic. En-route re-clearance of such traffic shall not be permitted except in emergency.

Traffic without a valid clearance may be subject to tactical traffic management measurements to meet the requirements of the service limitation.

Separation standards

Baghdad ACC will be responsible for ensuring the co-ordination and implementation of any additional separation requirements.

Contingency tracks

Dependant on the nature of the service limitation, Baghdad may promulgate and activate contingency tracks for use in addition to the normal ATS Routes available.

Air Traffic Flow Management

Baghdad ACC shall co-ordinate any necessary traffic management measures where necessary. Such measures may include, but are not limited to, temporary capacity restrictions and tactical rerouting measures.

Baghdad ACC shall co-ordinate these restrictions where necessary with adjacent ANSPs where they may affect the flow of traffic through these units airspace.

Responsibilities of adjacent ANSPs

The action required of adjacent ANSPs will vary dependant on the nature of the service limitation. Where such action is not contained within the inter-centre Letters of Agreement (LOAs) the requirement will be promulgated within the initial failure and restrictions message.

4.5 NO SERVICE – PROCEDURES

4.5.1 Loss of ground/air communication capability

In the event of Baghdad ACC being unable to provide ground/air communications for Baghdad FIR *Erbil, Najaf and Basra Towers* will coordinate with adjacent FIR's to provide ground/communications to the best of their ability.

Situations which could result in No Service being provided are:

- a) Equipment Failure;
 - Transmitters (Loss of all Transmitters)
 - Receivers (Loss of all Receivers)
 - Aerials (Loss of all Aerials)
 - Data Lines (Loss of data lines)
- b) Propagation;
 - Radio Propagation resulting in total fade-out which can be caused by many factors including Solar Flares and Geomagnetic Storms.
- c) Staffing
 - No Staff
 - Illness (Seasonal Influenza)
 - Weather
 - Industrial Relations issues
- d) Evacuation of Baghdad ACC
 - Fire
 - Bomb threat

Effect on flights

In the event of Baghdad ACC being unable to provide ground/air communications for a sustained period of time *Erbil, Najaf and Basrah Towers* in coordination with adjacent FIR's could provide a limited communications facility to flights in the Baghdad FIR.

ATFM measures may be imposed as necessary.

4.5.2 Loss of ability to provide control services

Should Baghdad ACC be evacuated the potential would exist for a major disruption to Air Traffic Control (ATC) within the Baghdad FIR.

In the event that Baghdad ACC is evacuated, the unit evacuation procedures will be activated, and time permitting, controllers will make an emergency evacuation transmission on the radio frequency in use providing pilots with alternate means of communication. The procedures to be adopted are detailed in the Baghdad Contingency plan.

The Plan will be activated by promulgation of a NOTAM issued by (ICAA) as far in advance as is practicable. However, when such prior notification is Impracticable for any reason, the Plan will be put into effect on notification by (ICAA) and/or ICAO MID office, as authorized by Head of ICAA. It is expected that the civil aviation authorities concerned and the airline operators will fully cooperate to implement the Plan as soon as possible.

As soon as possible after evacuation a contingency message will be sent to all adjacent ANSP's and operators as, detailed in the Baghdad Contingency Procedures. In turn they are expected to advise the affected traffic.

Other ATSUs will provide guidance as far as possible in the circumstances.

Contact information that may be used in the event of an emergency evacuation is provided in ATM Contingency Contact Detail List.

4.6 FLIGHT CREW AND OPERATOR PROCEDURES

4.6.1 For flights within the Baghdad FIR – General

The procedures outlined below are to be used as guidance for pilots in the immediate aftermath of a sudden withdrawal of the ATC service as described above.

On receipt of the contingency message pilots are requested to broadcast to other flights on 121.5, 123.45 and the assigned Unit frequency. A listening watch on these frequencies must be maintained.

4.6.2 For flights within the Baghdad FIR – Westbound

Kuwait ACC will endeavour to provide an ATC service throughout the Baghdad FIR as soon as evacuation commences. These procedures are detailed at Baghdad Contingency Procedures in Paragraph 4.7.2.

Flights should establish communication with the next agency at the earliest opportunity stating current position, cleared flight level, next position and estimate and subsequent position.

Any flights involved in level changes should complete the manoeuvre as soon as possible in accordance with the clearance.

UNIT	TEL. No	FAX No	EMAIL	AFTN
Amman FIR	+ 962 64 451672			
Ankara FIR	+903123 980290	+903 12 398 0961	cellatin.brozkurt@dhmi.gov.tr	
Damascus FIR	+963 115 400164	+963 11 540 0312		
Jeddah FIR	+966 26 8550067			
Kuwait FIR	+965 43432476 or +965 4760463			
Tehran FIR	+982 144 544116			

ICAO MID	0020 2 2267 4845/46/41	0020 2 2267 4843	
IATA	OO962 6 569 8728	OO962 6 560 4548	saidh@iata.org

Flights may request their flight dispatch offices to forward position reports, if sending position reports to multiple ATS Units or if otherwise unable to forward position reports.

4.6.3 For flights within the Baghdad FIR – Eastbound

Ankara **ACC** will endeavour to provide an ATC service throughout the Baghdad FIR as soon as evacuation commences. These procedures are detailed at Baghdad Contingency Procedures in **Paragraph 4.7.2.**

Flights operating with a received and acknowledged ATC clearance will be expected to continue in accordance with the last clearance issued unless otherwise advised by ATC.

Communications with the next ATSU should be established at the earliest opportunity.

4.6.4 For flights approaching the Baghdad FIR when the contingency is activated.

Not in Receipt of an ATC Clearance

In the event that Baghdad ACC must be evacuated, only aircraft with received and acknowledged ATC clearances shall be permitted to transit Baghdad FIR.

If unable to obtain or acknowledge an ATC clearance, flights should plan to re-route around the Baghdad FIR or to land at an appropriate airfield.

In receipt of an acknowledged ATC Clearance outside Baghdad FIR

Aircraft operating with a received and acknowledged ATC clearance can, at pilot's discretion, continue, but must expect a limited ATC service or no service within the Baghdad FIR.

However, due to the uncertainty surrounding the contingency situation pilots are strongly advised to comply with the procedures detailed above for flights not in receipt of an ATC clearance even if they are in receipt of an acknowledged ATC clearance.

4.7 BAGHDAD FIR – CONTINGENCY ROUTE STRUCTURE

4.7.1 For activation within Baghdad FIR

In a **limited service** contingency situation Baghdad ACC may promulgate additional contingency tracks in addition to the published ATS Routes. Any contingency track design within the Baghdad FIR will be effected at the time of the event and be dependent on the nature of the service limitation. Promulgation will be via AFTN

4.7.2 For activation within adjacent FIR

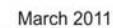
Unless instructed otherwise, flights entering the Baghdad FIR should use the following contingency routes:

Communications with the next ATSU should be established at the earliest opportunity.

For Transit Flights South North Except traffic Landing Kuwait

Entry FIR	Exit FIR	Entry FIX	Route Designator	Exit FIX	Flight Levels	Frequencies
Ankara	Kuwait	NINVA	UM688	SIDAD	FL330, FL350, FL370, FL390, FL410	NINVA 129.10 VAXEN 123.0 PEBAD 125.3
Damascus	Kuwait	MODIK	G202 M320 UM688	SIDAD	FL 270	MODIK 121.3 RAPLU 129.10 LOPAM 123.0 PEBAD 125.3
Amman	Kuwait	PASIP	L200 M320 UM688	SIDAD	FL 230	PASIP 128.5 GIBUX 129.10 LOPAM 123.0 PEBAD 125.3
Kuwait	Ankara	TASMI	UL602	KABAN	FL320, FL360, FL400	TASMI 123.0 SEPTU 129.10 UMESA 132.9
Kuwait	Damascus	TASMI	UL602 M320 G202	MODIK	FL280	TASMI 123.0 ELODI 129.10 MODIK 121.3
Kuwait	Amman	TASMI	UL602 M320 L200	PASIP	FL240	TASMI 123.0 ELODI 129.10 PASIP 128.5
Tehran	Damascus	PAXAT	DCT G202	MODIK	FL 260	PAXAT 129.1 MODIK 121.3

- 1) Note No ATC Service provided to any flight Departing from within the Baghdad FIR;
- 2) Adjacent FIRs to provide 10Minutes Longitudinal Separation between Aircraft at the same Flight Level, with similar or faster performance Aircraft proceeding; and
- 3) UP975 from **SIDAD** to **UKMUGNOT** USABLE Air Route Segment.



4.8 LONG TERM CONTINGENCY ARRANGEMENTS

In the event that Baghdad loses the ability to provide an ATC service in the FIR for an extended period, and contingency plans are in place to provide the service from an alternate location.

The facility will be or is established at another location but will take some time to put in place as equipment and communication links have to be brought into operation and staff relocated. The nature of the loss of the Baghdad facility may influence the time required to bring the contingency facility into service, but it is expected that under most circumstances an ATC service will be available in the Baghdad FIR after several days. In the interim period no ATC service will be available and all flights will be required to route clear of the Baghdad FIR.

When established, the contingency facility will comprise a slightly reduced complement of control and support workstations, but with the existing range of communication facilities for clearance delivery.

Operators can expect that ATFM regulations will be in place throughout the period of the transition, with a gradual build up to near normal operating levels.

SAMPLE NOTAMS

a) Avoidance of airspace

NOTAM.....DUE TO DISRUPTION OF ATS IN THE BAGHDAD FIR ALL ACFT ARE ADVISED TO AVOID THE FIR.

b) Airspace available with limited ATS

NOTAM DUE TO ANTICIPATED DISRUPTION OF ATS IN THE BAGHDAD FIR ALL ACFT ARE ADVISED THAT THERE WILL BE LIMITED ATS. PILOTS MAY EXPERIENCE DLA AND OVERFLIGHTS MAY CONSIDER AVOIDING THE AIRSPACE.

c) Contingency plan activated

NOTAM DUE TO DISRUPTION OF ATS IN BAGHDAD FIR ALL ACFT ARE ADVISED THAT THE Baghdad FIR INTERNATIONAL CONTINGENCY PLAN FOR ACFT INTENDING TO OVERFLY THE FIR IS IN EFFECT. FLIGHT PLANNING MUST BE IN ACCORDANCE WITH THE ROUTES LISTED AND FL ASSIGNMENT. PILOTS MUST STRICTLY ADHERE TO THE CONTINGENCY PROCEDURES. ONLY APPROVED INTERNATIONAL FLIGHTS ARE PERMITTED TO OVERFLY TEHRAN AIRSPACE.

d) Non adherence to the Contingency Plan

NOTAM OPERATORS NOT ABLE TO ADHERE TO THE CONTINGENCY PLAN SHALL AVOID THE BAGHDAD FIR.

CHAPTER 5: DETAILED PROCEDURES – AMMAN FIR

5.1 FIR FOR WHICH THE CONTINGENCY PLAN APPLIES

Amman FIR

5.2 FIRs WITH SUPPORTING PROCEDURES

Jeddah FIR
Riyadh ACC
Baghdad FIR
Damascus FIR
Tel Aviv FIR
Cairo FIR

5.3 NOTIFICATION PROCEDURES

In a limited service situation notification of any service limitations and traffic management measures will be promulgated to operators and adjacent ANSPs via AFTN.

In a no service situation the ACC is likely to have been evacuated. As soon as possible after evacuation a contingency message will be sent to all adjacent ANSP's and operators. An evacuation message will be broadcast on appropriate frequencies and operators in receipt of the contingency message are asked to forward this information to affected flights wherever possible.

5.4 LIMITED SERVICE – PROCEDURES

5.4.1 Disruption of ground/air communication capability

A limited communication service will be maintained with the assistance of adjacent Aerodromes. VHF services on the Amman frequency normally provided by Amman Control will be delegated as appropriate to the other ATS units namely ----- . Appropriate frequencies will be advised by Amman and the assisting stations.

Situations which could result in a Limited Service are:

Equipment Failure

- a) Transmitters (Loss of a number of Transmitters)
- b) Receivers (Loss of a number of Receivers)
- c) Aerials (Loss of a number of Aerials)
- d) Data Lines (Loss of data lines between Amman Communications center and Amman ACC)

Propagation

Radio Propagation resulting in partial fade-out can be affected by many factors including Solar Flares and Geomagnetic Storms.

Staffing

Reduced Staffing
Illness
Weather (Severe Weather i.e. Storm, Snow, Flooding)

Security Threat

Depending on the level of the Security threat and if essential staff are allowed to remain on Station

In the event that the operation is degraded substantially, ATFM measures may be imposed as necessary.

5.4.2 Disruption of ability to provide control services

Amman ACC shall determine, co-ordinate and promulgate any necessary restrictions to meet the service limitation. Traffic in possession of a valid ATC clearance shall have priority over any other traffic. En-route re-clearance of such traffic shall not be permitted except in emergency.

Traffic without a valid clearance may be subject to tactical traffic management measurements to meet the requirements of the service limitation.

Separation standards

Amman ACC will be responsible for ensuring the co-ordination and implementation of any additional separation requirements.

Contingency tracks

Dependant on the nature of the service limitation, Amman may promulgate and activate contingency tracks for use in addition to the normal ATS Routes available.

Air Traffic Flow Management

Amman ACC shall co-ordinate any necessary traffic management measures where necessary. Such measures may include, but are not limited to, temporary capacity restrictions and tactical rerouting measures.

Amman ACC shall co-ordinate these restrictions where necessary with adjacent ANSPs where they may affect the flow of traffic through these units airspace.

Responsibilities of adjacent ANSPs

The action required of adjacent ANSPs will vary dependant on the nature of the service limitation. Where such action is not contained within the inter-centre Letters of Agreement (LOAs) the requirement will be promulgated within the initial failure and restrictions message.

5.5 NO SERVICE – PROCEDURES

5.5.1 Loss of ground/air communication capability

In the event of Amman ACC being unable to provide ground/air communications for Amman FIR ----- ATC Unit will coordinate with adjacent FIR's to provide ground/communications to the best of their ability.

Situations which could result in No Service being provided are:

- a) Equipment Failure;
 - Transmitters (Loss of all Transmitters)
 - Receivers (Loss of all Receivers)
 - Aerials (Loss of all Aerials)
 - Data Lines (Loss of data lines)
- b) Propagation;
 - Radio Propagation resulting in total fade-out which can be caused by many factors including Solar Flares and Geomagnetic Storms.
- c) Staffing
 - No Staff
 - Illness (Seasonal Influenza)
 - Weather
 - Industrial Relations issues
- d) Evacuation of Amman ACC
 - Fire
 - Bomb threat

Effect on flights

In the event of Amman ACC being unable to provide ground/air communications for a sustained period of time ----- ATC Unit in coordination with adjacent FIR's could provide a limited communications facility to flights in the Amman FIR.

ATFM measures may be imposed as necessary.

5.5.2 Loss of ability to provide control services

Should Amman ACC be evacuated the potential would exist for a major disruption to Air Traffic Control (ATC) within the Amman FIR.

In the event that Amman ACC is evacuated, the unit evacuation procedures will be activated, and time permitting, controllers will make an emergency evacuation transmission on the radio

frequency in use providing pilots with alternate means of communication. The procedures to be adopted are detailed in the Jordan Contingency Plan.

The Plan will be activated by promulgation of a NOTAM issued by (CARC) as far in advance as is practicable. However, when such prior notification is Impracticable for any reason, the Plan will be put into effect on notification by (CARC) and/or ICAO MID office

As soon as possible after evacuation a contingency message will be sent to all adjacent ANSP's and operators as, detailed in the Amman Contingency Procedures. In turn they are expected to advise the affected traffic.

Other ATSUs will provide guidance as far as possible in the circumstances.

Contact information that may be used in the event of an emergency evacuation is provided in ATM Contingency Contact Detail List.

5.6 FLIGHT CREW AND OPERATOR PROCEDURES

5.6.1 For flights within the Amman FIR – General

The procedures outlined below are to be used as guidance for pilots in the immediate aftermath of a sudden withdrawal of the ATC service as described above.

On receipt of the contingency message pilots are requested to broadcast to other flights on 121.5 and 123.45. A listening watch on these frequencies must be maintained.

5.6.2 For flights within the Amman FIR – Westbound

Cairo, Damascus, Jeddah ACC and Tel Aviv ACC will endeavour to provide an ATC service throughout the Amman FIR as soon as evacuation commences. These procedures are detailed at Amman Contingency Procedures in **Paragraph 5.7.2.**

Flights should establish communication with the next agency at the earliest opportunity stating current position, cleared flight level, next position and estimate and subsequent position.

Any flights involved in level changes should complete the manoeuvre as soon as possible in accordance with the clearance.

UNIT	TEL. No	FAX No	EMAIL	AFTN
Jeddah ACC	00966	00966		
Riyadh ACC	00966	00966		
Baghdad ACC				
Damascus ACC				
Tel Aviv ACC				
Cairo ACC				

ICAO MID	0020 2 2267 4845/46/41	0020 2 2267 4843	
IATA	OO962 6 569 8728	OO962 6 560 4548	saidh@iata.org

Flights may request their flight dispatch offices to forward position reports, if sending position reports to multiple ATS Units or if otherwise unable to forward position reports.

5.6.3 For flights within the Amman FIR – Eastbound

Cairo, Damascus, Jeddah ACC and Tel Aviv ACC will endeavour to provide an ATC service throughout the Amman FIR as soon as evacuation commences. These procedures are detailed at Amman Contingency Procedures in **Paragraph 5.7.2**.

Flights operating with a received and acknowledged ATC clearance will be expected to continue in accordance with the last clearance issued unless otherwise advised by ATC.

Communications with the next ATSU should be established at the earliest opportunity.

5.6.4 For flights approaching the Amman FIR when the contingency is activated.

Not in Receipt of an ATC Clearance

In the event that Amman ACC must be evacuated, only aircraft with received and acknowledged ATC clearances shall be permitted to transit Amman FIR.

If unable to obtain or acknowledge an ATC clearance, flights should plan to re-route around the Amman FIR or to land at an appropriate airfield.

In receipt of an acknowledged ATC Clearance outside Amman FIR

Aircraft operating with a received and acknowledged ATC clearance can, at pilot's discretion, continue, but must expect a limited ATC service or no service within the Amman FIR.

However, due to the uncertainty surrounding the contingency situation pilots are strongly advised to comply with the procedures detailed above for flights not in receipt of an ATC clearance even if they are in receipt of an acknowledged ATC clearance.

5.7 AMMAN FIR – CONTINGENCY ROUTE STRUCTURE

5.7.1 For activation within Amman FIR

In a **limited service** contingency situation Amman ACC may promulgate additional contingency tracks in addition to the published ATS Routes. Any contingency track design within the Amman FIR will be effected at the time of the event and be dependent on the nature of the service limitation. Promulgation will be via AFTN

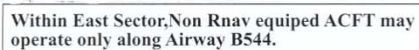
5.7.2 For activation within adjacent FIR

Unless instructed otherwise, flights entering the Amman FIR should use the following contingency routes:

CONTINGENCY ROUTE STRUCTURE FOR AMMAN FIR

Present ATS Route	Contingency Routings	FIRs Involved
EAST SECTOR: ATS routes B544, UR219, UR785 In case of closure: these routes, all traffic will have to be re routed as follows:	a) East Bound Traffic: all traffic has to follow the routes: L513 to BUSRA and HAZEM, A412/L513 to QAA-GRY, W333/R652 in JEDDAH FIR. Other traffic coming from the north through ZELAF or TANF will have to continue on A412/L513 to QAA-GRY, W333/R652 in JEDDAH FIR. b) West Bound Traffic: all traffic has to come through GRY/ ATS route R652 then on W333/A412/L513, GRY – QAA then L513 HAZEM to BUSRA and DAMASCUS FIR.	• Damascus FIR • Jeddah FIR
WEST SECTOR : this sector has four outlets: North Border: ATS route A412/L513 and W2 with DAMASCUS in case of closure	a) All west bound traffic has to go through TALMI. Or ATS route A412/L513 – QTR then ATS route R652 to METSA and CAIRO FIR. As for the east bound traffic it will, be through SALAM or METSA on route R652 - QTR, thereafter to QAA or to continue to GRY in JEDDAH.FIR.	• Tel Aviv FIR • CAIRO FIR • JEDDAH FIR
West Border Air Corridors with TELAVIV FIR: in case of being closed, east bound traffic has to follow:	b) A412/L513 to HAZEM then L513 to BUSRA and DAMASCUS or to continue on A412/L513 to ZELAF or TANF in DAMASCUS FIR. West bound traffic will use A412/L513 to QTR then R652 to METSA and CAIRO FIR. Arrivals have to come through A412/L513 or L513 - BUSRA and QAA or on R652 from CAIRO FIR through METSA.	• Damascus FIR • Cairo FIR
South border METSA and R652 to and from CAIRO FIR: in case of closure	Departures or arrivals have to use W2 to BUSRA – HAZEM – A412/L513 to QAA and vice versa. OR via TELAVIV FIR instead of L513 or A412	• Damascus FIR • Tel Aviv FIR
East border ATS route R652 QTR – PARAM – GRY in case of closure	c) East bound traffic has to use A412/L513 to ZELAF then UR785 to JEDDAH FIR. West bound traffic will proceed through OTILA to SOKAN UR219 to ZELAF then A412 to QAAVOR.	• DAMASCUS FIR • Jeddah FIR

Communications with the next ATSU should be established at the earliest opportunity.



CONTINGENCY FREQUENCIES FOR CONTROL AND/OR FLIGHT MONITORING SERVICES

CONTINGENCY ROUTES IN AMMAN (CRJ)	ATS ROUTES	COM

5.8 LONG TERM CONTINGENCY ARRANGEMENTS

In the event that Jordan loses the ability to provide an ATC service in the Amman FIR for an extended period, and contingency plans are in place to provide the service from an alternate location.

The facility will be or is established at another location but will take some time to put in place as equipment and communication links have to be brought into operation and staff relocated. The nature of the loss of the Amman facility may influence the time required to bring the contingency facility into service, but it is expected that under most circumstances an ATC service will be available in the Amman FIR within 48 hours. In the interim period no ATC service will be available and all flights will be required to route clear of the Amman FIR.

When established, the contingency facility will comprise a slightly reduced complement of control and support workstations, but with the existing range of communication facilities for clearance delivery.

Operators can expect that ATFM regulations will be in place throughout the period of the transition, with a gradual build up to near normal operating levels.

SAMPLE NOTAMS

a) Avoidance of airspace

NOTAM.....DUE TO DISRUPTION OF ATS IN THE AMMAN FIR ALL ACFT ARE ADVISED TO AVOID THE FIR.

b) Airspace available with limited ATS

NOTAM DUE TO ANTICIPATED DISRUPTION OF ATS IN THE AMMAN FIR ALL ACFT ARE ADVISED THAT THERE WILL BE LIMITED ATS. PILOTS MAY EXPERIENCE DLA AND OVERFLIGHTS MAY CONSIDER AVOIDING THE AIRSPACE.

c) Contingency plan activated

NOTAM DUE TO DISRUPTION OF ATS IN AMMAN FIR ALL ACFT ARE ADVISED THAT THE AMMAN FIR INTERNATIONAL CONTINGENCY PLAN FOR ACFT INTENDING TO OVERFLY THE FIR IS IN EFFECT. FLIGHT PLANNING MUST BE IN ACCORDANCE WITH THE ROUTES LISTED AND FL ASSIGNMENT. PILOTS MUST STRICTLY ADHERE TO THE CONTINGENCY PROCEDURES. ONLY APPROVED INTERNATIONAL FLIGHTS ARE PERMITTED TO OVERFLY AMMAN AIRSPACE.

d) Non adherence to the Contingency Plan

NOTAM OPERATORS NOT ABLE TO ADHERE TO THE CONTINGENCY PLAN SHALL AVOID THE AMMAN FIR

CHAPTER 6: DETAILED PROCEDURES – KUWAIT FIR

6.1 FIR FOR WHICH THE CONTINGENCY PLAN APPLIES

Kuwait FIR

6.2 FIRs WITH SUPPORTING PROCEDURES

Baghdad FIR
Bahrain FIR
Jeddah FIR
Tehran FIR

6.3 NOTIFICATION PROCEDURES

In a limited service situation notification of any service limitations and traffic management measures will be promulgated to operators and adjacent ANSPs via AFTN.

In a no service situation the ACC is likely to have been evacuated. As soon as possible after evacuation a contingency message will be sent to all adjacent ANSP's and operators. An evacuation message will be broadcast on appropriate frequencies and operators in receipt of the contingency message are asked to forward this information to affected flights wherever possible.

6.4 LIMITED SERVICE – PROCEDURES

6.4.1 Disruption of ground/air communication capability

A limited communication service will be maintained with the assistance of adjacent Aerodromes. VHF services on the Kuwait frequency normally provided by Kuwait Control will be delegated as appropriate to the other ATS units namely ----- . Appropriate frequencies will be advised by Kuwait and the assisting ATS units.

Situations which could result in a Limited Service are:

Equipment Failure

- a) Transmitters (Loss of a number of Transmitters)
- b) Receivers (Loss of a number of Receivers)
- c) Aerials (Loss of a number of Aerials)
- d) Data Lines (Loss of data lines between Kuwait Communications center and Kuwait ACC)

Propagation

Radio Propagation resulting in partial fade-out can be affected by many factors including Solar Flares and Geomagnetic Storms.

Staffing

Reduced Staffing

Illness
Weather (Severe Weather i.e. Storm, Snow, Flooding)

Security Threat

Depending on the level of the Security threat and if essential staff are allowed to remain on Station

In the event that the operation is degraded substantially, ATFM measures may be imposed as necessary.

6.4.2 Disruption of ability to provide control services

Kuwait ACC shall determine, co-ordinate and promulgate any necessary restrictions to meet the service limitation. Traffic in possession of a valid ATC clearance shall have priority over any other traffic. En-route re-clearance of such traffic shall not be permitted except in emergency.

Traffic without a valid clearance may be subject to tactical traffic management measurements to meet the requirements of the service limitation.

Separation standards

Kuwait ACC will be responsible for ensuring the co-ordination and implementation of any additional separation requirements.

Contingency tracks

Dependant on the nature of the service limitation, Kuwait may promulgate and activate contingency tracks for use in addition to the normal ATS Routes available.

Air Traffic Flow Management

Kuwait ACC shall co-ordinate any necessary traffic management measures where necessary. Such measures may include, but are not limited to, temporary capacity restrictions and tactical rerouting measures.

Kuwait ACC shall co-ordinate these restrictions where necessary with adjacent ANSPs where they may affect the flow of traffic through these units airspace.

Responsibilities of adjacent ANSPs

The action required of adjacent ANSPs will vary dependant on the nature of the service limitation. Where such action is not contained within the inter-centre Letters of Agreement (LOAs) the requirement will be promulgated within the initial failure and restrictions message.

6.5 NO SERVICE – PROCEDURES

6.5.1 Loss of ground/air communication capability

In the event of Kuwait ACC being unable to provide ground/air communications for Kuwait FIR ----- ATC Unit will coordinate with adjacent FIR's to provide ground/communications to the best of their ability.

Situations which could result in No Service being provided are:

- a) Equipment Failure;
 - Transmitters (Loss of all Transmitters)
 - Receivers (Loss of all Receivers)
 - Aerials (Loss of all Aerials)
 - Data Lines (Loss of data lines)
- b) Propagation;
 - Radio Propagation resulting in total fade-out which can be caused by many factors including Solar Flares and Geomagnetic Storms.
- c) Staffing
 - No Staff
 - Illness (Seasonal Influenza)
 - Weather
 - Industrial Relations issues
- d) Evacuation of Kuwait ACC
 - Fire
 - Bomb threat

Effect on flights

In the event of Kuwait ACC being unable to provide ground/air communications for a sustained period of time ----- ATC Unit in coordination with adjacent FIR's could provide a limited communications facility to flights in the Kuwait FIR.

ATFM measures may be imposed as necessary.

6.5.2 Loss of ability to provide control services

Should Kuwait ACC be evacuated the potential would exist for a major disruption to Air Traffic Control (ATC) within the Kuwait FIR.

In the event that Kuwait ACC is evacuated, the unit evacuation procedures will be activated, and time permitting, controllers will make an emergency evacuation transmission on the radio frequency in use providing pilots with alternate means of communication. The procedures to be adopted are detailed in the Kuwait Contingency plan.

As soon as possible after evacuation a contingency message will be sent to all adjacent ANSP's and operators as, detailed in the Kuwait Contingency Procedures. In turn they are expected to advise the affected traffic.

Other ATSUs will provide guidance as far as possible in the circumstances.

Contact information that may be used in the event of an emergency evacuation is provided in ATM Contingency Contact Detail List.

6.6 FLIGHT CREW AND OPERATOR PROCEDURES

6.6.1 For flights within the Kuwait FIR – General

The procedures outlined below are to be used as guidance for pilots in the immediate aftermath of a sudden withdrawal of the ATC service as described above.

On receipt of the contingency message pilots are requested to broadcast to other flights on 121.5 and 123.45. A listening watch on these frequencies must be maintained.

6.6.2 For flights within the Kuwait FIR – Westbound

----- ACC's will endeavour to provide an ATC service throughout the Kuwait FIR as soon as evacuation commences. These procedures are detailed at Kuwait Contingency Procedures in **Paragraph 6.7.2.**

Flights should establish communication with the next agency at the earliest opportunity stating current position, cleared flight level, next position and estimate and subsequent position.

Any flights involved in level changes should complete the manoeuvre as soon as possible in accordance with the clearance.

UNIT	TEL. No	FAX No	EMAIL	AFTN
Baghdad FIR				
Bahrain FIR				
Jeddah FIR				
Tehran FIR				

ICAO MID	0020 2 2267 4845/46/41	0020 2 2267 4843	
IATA	OO962 6 569 8728	OO962 6 560 4548	saidh@iata.org

Flights may request their flight dispatch offices to forward position reports, if sending position reports to multiple ATS Units or if otherwise unable to forward position reports.

6.6.3 For flights within the Kuwait FIR – Eastbound

----- ACC's will endeavour to provide an ATC service throughout the Kuwait FIR as soon as evacuation commences. These procedures are detailed at Kuwait Contingency Procedures in **Paragraph 6.7.2**.

Flights operating with a received and acknowledged ATC clearance will be expected to continue in accordance with the last clearance issued unless otherwise advised by ATC.

Communications with the next ATSU should be established at the earliest opportunity.

6.6.4 For flights approaching the Kuwait FIR when the contingency is activated.

Not in Receipt of an ATC Clearance

In the event that Kuwait ACC must be evacuated, only aircraft with received and acknowledged ATC clearances shall be permitted to transit Kuwait FIR.

If unable to obtain or acknowledge an ATC clearance, flights should plan to re-route around the Kuwait FIR or to land at an appropriate airfield.

In receipt of an acknowledged ATC Clearance outside Kuwait FIR

Aircraft operating with a received and acknowledged ATC clearance can, at pilot's discretion, continue, but must expect a limited ATC service or no service within the Kuwait FIR.

However, due to the uncertainty surrounding the contingency situation pilots are strongly advised to comply with the procedures detailed above for flights not in receipt of an ATC clearance even if they are in receipt of an acknowledged ATC clearance.

6.7 KUWAIT FIR – CONTINGENCY ROUTE STRUCTURE

6.7.1 For activation within Kuwait FIR

In a **limited service** contingency situation Kuwait ACC may promulgate additional contingency tracks in addition to the published ATS Routes. Any contingency track design within the Kuwait FIR will be effected at the time of the event and be dependent on the nature of the service limitation. Promulgation will be via AFTN

6.7.2 For activation within adjacent FIR

Unless instructed otherwise, flights entering the Kuwait FIR should use the following contingency routes:

Communications with the next ATSU should be established at the earliest opportunity.

6.8 LONG TERM CONTINGENCY ARRANGEMENTS

In the event that Kuwait loses the ability to provide an ATC service in the FIR for an extended period, and contingency plans are in place to provide the service from an alternate location.

The facility will be or is established at another location but will take some time to put in place as equipment and communication links have to be brought into operation and staff relocated. The nature of the loss of the Kuwait facility may influence the time required to bring the contingency facility into service, but it is expected that under most circumstances an ATC service will be available in the Kuwait FIR within 48 hours. In the interim period no ATC service will be available and all flights will be required to route clear of the Baghdad FIR.

When established, the contingency facility will comprise a slightly reduced complement of control and support workstations, but with the existing range of communication facilities for clearance delivery.

Operators can expect that ATFM regulations will be in place throughout the period of the transition, with a gradual build up to near normal operating levels.

SAMPLE NOTAMS

a) Avoidance of airspace

NOTAM.....DUE TO DISRUPTION OF ATS IN THE KUWAIT FIR ALL ACFT ARE ADVISED TO AVOID THE FIR.

b) Airspace available with limited ATS

NOTAM DUE TO ANTICIPATED DISRUPTION OF ATS IN THE KUWAIT FIR ALL ACFT ARE ADVISED THAT THERE WILL BE LIMITED ATS. PILOTS MAY EXPERIENCE DLA AND OVERFLIGHTS MAY CONSIDER AVOIDING THE AIRSPACE.

c) Contingency plan activated

NOTAM DUE TO DISRUPTION OF ATS IN KUWAIT FIR ALL ACFT ARE ADVISED THAT THE Kuwait FIR INTERNATIONAL CONTINGENCY PLAN FOR ACFT INTENDING TO OVERFLY THE FIR IS IN EFFECT. FLIGHT PLANNING MUST BE IN ACCORDANCE WITH THE ROUTES LISTED AND FL ASSIGNMENT. PILOTS MUST STRICTLY ADHERE TO THE CONTINGENCY PROCEDURES. ONLY APPROVED INTERNATIONAL FLIGHTS ARE PERMITTED TO OVERFLY KUWAIT AIRSPACE.

d) Non adherence to the Contingency Plan

NOTAM OPERATORS NOT ABLE TO ADHERE TO THE CONTINGENCY PLAN SHALL AVOID THE KUWAIT FIR

CHAPTER 7: DETAILED PROCEDURES – BEIRUT FIR

7.1 FIR FOR WHICH THE CONTINGENCY PLAN APPLIES

Beirut FIR

7.2 FIRs WITH SUPPORTING PROCEDURES

Damascus FIR
Nicosia FIR

7.3 NOTIFICATION PROCEDURES

In a limited service situation notification of any service limitations and traffic management measures will be promulgated to operators and adjacent ANSPs via AFTN.

In a no service situation the ACC is likely to have been evacuated. As soon as possible after evacuation a contingency message will be sent to all adjacent ANSP's and operators. An evacuation message will be broadcast on appropriate frequencies and operators in receipt of the contingency message are asked to forward this information to affected flights wherever possible.

7.4 LIMITED SERVICE – PROCEDURES

7.4.1 Disruption of ground/air communication capability

A limited communication service will be maintained with the assistance of adjacent Aerodromes. VHF services on the Beirut frequency normally provided by Beirut Control will be delegated as appropriate to the other ATS units namely ----- . Appropriate frequencies will be advised by Beirut and the assisting ATS units.

Situations which could result in a Limited Service are:

Equipment Failure

- a) Transmitters (Loss of a number of Transmitters)
- b) Receivers (Loss of a number of Receivers)
- c) Aerials (Loss of a number of Aerials)
- d) Data Lines (Loss of data lines between Beirut Communications center and Beirut ACC)

Propagation

Radio Propagation resulting in partial fade-out can be affected by many factors including Solar Flares and Geomagnetic Storms.

Staffing

Reduced Staffing
Illness
Weather (Severe Weather i.e. Storm, Snow, Flooding)

Security Threat

Depending on the level of the Security threat and if essential staff are allowed to remain on Station

In the event that the operation is degraded substantially, ATFM measures may be imposed as necessary.

7.4.2 Disruption of ability to provide control services

Beirut ACC shall determine, co-ordinate and promulgate any necessary restrictions to meet the service limitation. Traffic in possession of a valid ATC clearance shall have priority over any other traffic. En-route re-clearance of such traffic shall not be permitted except in emergency.

Traffic without a valid clearance may be subject to tactical traffic management measurements to meet the requirements of the service limitation.

Separation standards

Beirut ACC will be responsible for ensuring the co-ordination and implementation of any additional separation requirements.

Contingency tracks

Dependant on the nature of the service limitation, Beirut may promulgate and activate contingency tracks for use in addition to the normal ATS Routes available.

Air Traffic Flow Management

Beirut ACC shall co-ordinate any necessary traffic management measures where necessary. Such measures may include, but are not limited to, temporary capacity restrictions and tactical rerouting measures.

Beirut ACC shall co-ordinate these restrictions where necessary with adjacent ANSPs where they may affect the flow of traffic through these units airspace.

Responsibilities of adjacent ANSPs

The action required of adjacent ANSPs will vary dependant on the nature of the service limitation. Where such action is not contained within the inter-centre Letters of Agreement (LOAs) the requirement will be promulgated within the initial failure and restrictions message.

7.5 NO SERVICE – PROCEDURES

7.5.1 Loss of ground/air communication capability

In the event of Beirut ACC being unable to provide ground/air communications for Beirut FIR ----- ATC Unit will coordinate with adjacent FIR's to provide ground/communications to the best of their ability.

Situations which could result in No Service being provided are:

- a) Equipment Failure;
 - Transmitters (Loss of all Transmitters)
 - Receivers (Loss of all Receivers)
 - Aerials (Loss of all Aerials)
 - Data Lines (Loss of data lines)
- b) Propagation;
 - Radio Propagation resulting in total fade-out which can be caused by many factors including Solar Flares and Geomagnetic Storms.
- c) Staffing
 - No Staff
 - Illness (Seasonal Influenza)
 - Weather
 - Industrial Relations issues
- d) Evacuation of Beirut ACC
 - Fire
 - Bomb threat

Effect on flights

In the event of Beirut ACC being unable to provide ground/air communications for a sustained period of time ----- ATC Unit in coordination with adjacent FIR's could provide a limited communications facility to flights in the Beirut FIR.

ATFM measures may be imposed as necessary.

7.5.2 Loss of ability to provide control services

Should Beirut ACC be evacuated the potential would exist for a major disruption to Air Traffic Control (ATC) within the Beirut FIR.

In the event that Beirut ACC is evacuated, the unit evacuation procedures will be activated, and time permitting, controllers will make an emergency evacuation transmission on the radio frequency in use providing pilots with alternate means of communication. The procedures to be adopted are detailed in the Beirut Contingency plan.

As soon as possible after evacuation a contingency message will be sent to all adjacent ANSP's and operators as, detailed in the Beirut Contingency Procedures. In turn they are expected to advise the affected traffic.

Other ATSUs will provide guidance as far as possible in the circumstances.

Contact information that may be used in the event of an emergency evacuation is provided in ATM Contingency Contact Detail List.

7.6 FLIGHT CREW AND OPERATOR PROCEDURES

7.6.1 For flights within the Beirut FIR – General

The procedures outlined below are to be used as guidance for pilots in the immediate aftermath of a sudden withdrawal of the ATC service as described above.

On receipt of the contingency message pilots are requested to broadcast to other flights on 121.5 and 123.45. A listening watch on these frequencies must be maintained.

7.6.2 For flights within the Beirut FIR – Westbound

----- ACC's will endeavour to provide an ATC service throughout the Beirut FIR as soon as evacuation commences. These procedures are detailed at Beirut Contingency Procedures in **Paragraph 7.7.2.**

Flights should establish communication with the next agency at the earliest opportunity stating current position, cleared flight level, next position and estimate and subsequent position.

Any flights involved in level changes should complete the manoeuvre as soon as possible in accordance with the clearance.

UNIT	TEL. No	FAX No	EMAIL	AFTN
Damascus FIR				
Nicosia FIR				

ICAO MID	0020 2 2267 4845/46/41	0020 2 2267 4843	
IATA	OO962 6 569 8728	OO962 6 560 4548	saidh@iata.org

Flights may request their flight dispatch offices to forward position reports, if sending position reports to multiple ATS Units or if otherwise unable to forward position reports.

7.6.3 For flights within the Beirut FIR – Eastbound

----- ACC's will endeavour to provide an ATC service throughout the Beirut FIR as soon as evacuation commences. These procedures are detailed at Beirut Contingency Procedures in **Paragraph 7.7.2.**

Flights operating with a received and acknowledged ATC clearance will be expected to continue in accordance with the last clearance issued unless otherwise advised by ATC.

Communications with the next ATSU should be established at the earliest opportunity.

7.6.4 For flights approaching the Beirut FIR when the contingency is activated.

Not in Receipt of an ATC Clearance

In the event that Beirut ACC must be evacuated, only aircraft with received and acknowledged ATC clearances shall be permitted to transit Beirut FIR.

If unable to obtain or acknowledge an ATC clearance, flights should plan to re-route around the Beirut FIR or to land at an appropriate airfield.

In receipt of an acknowledged ATC Clearance outside Beirut FIR

Aircraft operating with a received and acknowledged ATC clearance can, at pilot's discretion, continue, but must expect a limited ATC service or no service within the Beirut FIR.

However, due to the uncertainty surrounding the contingency situation pilots are strongly advised to comply with the procedures detailed above for flights not in receipt of an ATC clearance even if they are in receipt of an acknowledged ATC clearance.

7.7 BEIRUT FIR – CONTINGENCY ROUTE STRUCTURE

7.7.1 For activation within Beirut FIR

In a **limited service** contingency situation Beirut ACC may promulgate additional contingency tracks in addition to the published ATS Routes. Any contingency track design within the Beirut FIR will be effected at the time of the event and be dependent on the nature of the service limitation. Promulgation will be via AFTN

7.7.2 For activation within adjacent FIR

Unless instructed otherwise, flights entering the Beirut FIR should use the following contingency routes:

Communications with the next ATSU should be established at the earliest opportunity.

7.8 LONG TERM CONTINGENCY ARRANGEMENTS

In the event that Beirut loses the ability to provide an ATC service in the FIR for an extended period, and contingency plans are in place to provide the service from an alternate location.

The facility will be or is established at another location but will take some time to put in place as equipment and communication links have to be brought into operation and staff relocated. The nature of the loss of the Beirut facility may influence the time required to bring the contingency facility into service, but it is expected that under most circumstances an ATC service will be available in the Beirut FIR within 48 hours. In the interim period no ATC service will be available and all flights will be required to route clear of the Beirut FIR.

When established, the contingency facility will comprise a slightly reduced complement of control and support workstations, but with the existing range of communication facilities for clearance delivery.

Operators can expect that ATFM regulations will be in place throughout the period of the transition, with a gradual build up to near normal operating levels.

SAMPLE NOTAMS

a) Avoidance of airspace

NOTAM.....DUE TO DISRUPTION OF ATS IN THE BEIRUT FIR ALL ACFT ARE ADVISED TO AVOID THE FIR.

b) Airspace available with limited ATS

NOTAM DUE TO ANTICIPATED DISRUPTION OF ATS IN THE BEIRUT FIR ALL ACFT ARE ADVISED THAT THERE WILL BE LIMITED ATS. PILOTS MAY EXPERIENCE DLA AND OVERFLIGHTS MAY CONSIDER AVOIDING THE AIRSPACE.

c) Contingency plan activated

NOTAM DUE TO DISRUPTION OF ATS IN BEIRUT FIR ALL ACFT ARE ADVISED THAT THE Beirut FIR INTERNATIONAL CONTINGENCY PLAN FOR ACFT INTENDING TO OVERFLY THE FIR IS IN EFFECT. FLIGHT PLANNING MUST BE IN ACCORDANCE WITH THE ROUTES LISTED AND FL ASSIGNMENT. PILOTS MUST STRICTLY ADHERE TO THE CONTINGENCY PROCEDURES. ONLY APPROVED INTERNATIONAL FLIGHTS ARE PERMITTED TO OVERFLY BEIRUT AIRSPACE.

d) Non adherence to the Contingency Plan

NOTAM OPERATORS NOT ABLE TO ADHERE TO THE CONTINGENCY PLAN SHALL AVOID THE BEIRUT FIR

CHAPTER 8: DETAILED PROCEDURES – TRIPOLI FIR

8.1 FIR FOR WHICH THE CONTINGENCY PLAN APPLIES

Tripoli FIR

8.2 FIRs WITH SUPPORTING PROCEDURES

Algiers FIR
Cairo FIR
Khartoum FIR
Malta FIR
N'Djamena FIR
Niamey UIR
Nicosia FIR
Tunis FIR

8.3 NOTIFICATION PROCEDURES

In a limited service situation notification of any service limitations and traffic management measures will be promulgated to operators and adjacent ANSPs via AFTN.

In a no service situation the ACC is likely to have been evacuated. As soon as possible after evacuation a contingency message will be sent to all adjacent ANSP's and operators. An evacuation message will be broadcast on appropriate frequencies and operators in receipt of the contingency message are asked to forward this information to affected flights wherever possible.

8.4 LIMITED SERVICE – PROCEDURES

8.4.1 Disruption of ground/air communication capability

A limited communication service will be maintained with the assistance of adjacent Aerodromes. VHF services on the Tripoli frequency normally provided by Tripoli Control will be delegated as appropriate to the other ATS units namely ----- . Appropriate frequencies will be advised by Tripoli and the assisting ATS units.

Situations which could result in a Limited Service are:

Equipment Failure

- a) Transmitters (Loss of a number of Transmitters)
- b) Receivers (Loss of a number of Receivers)
- c) Aerials (Loss of a number of Aerials)
- d) Data Lines (Loss of data lines between Tripoli Communications center and Tripoli ACC)

Propagation

Radio Propagation resulting in partial fade-out can be affected by many factors including Solar Flares and Geomagnetic Storms.

Staffing

Reduced Staffing
Illness
Weather (Severe Weather i.e. Storm, Snow, Flooding)

Security Threat

Depending on the level of the Security threat and if essential staff are allowed to remain on Station

In the event that the operation is degraded substantially, ATFM measures may be imposed as necessary.

8.4.2 Disruption of ability to provide control services

Tripoli ACC shall determine, co-ordinate and promulgate any necessary restrictions to meet the service limitation. Traffic in possession of a valid ATC clearance shall have priority over any other traffic. En-route re-clearance of such traffic shall not be permitted except in emergency.

Traffic without a valid clearance may be subject to tactical traffic management measurements to meet the requirements of the service limitation.

Separation standards

Tripoli ACC will be responsible for ensuring the co-ordination and implementation of any additional separation requirements.

Contingency tracks

Dependant on the nature of the service limitation, Tripoli may promulgate and activate contingency tracks for use in addition to the normal ATS Routes available.

Air Traffic Flow Management

Tripoli ACC shall co-ordinate any necessary traffic management measures where necessary. Such measures may include, but are not limited to, temporary capacity restrictions and tactical rerouting measures.

Tripoli ACC shall co-ordinate these restrictions where necessary with adjacent ANSPs where they may affect the flow of traffic through these units airspace.

Responsibilities of adjacent ANSPs

The action required of adjacent ANSPs will vary dependant on the nature of the service limitation. Where such action is not contained within the inter-centre Letters of Agreement (LOAs) the requirement will be promulgated within the initial failure and restrictions message.

8.5 NO SERVICE – PROCEDURES

8.5.1 Loss of ground/air communication capability

In the event of Tripoli ACC being unable to provide ground/air communications for Tripoli FIR ----- ATC Unit will coordinate with adjacent FIR's to provide ground/communications to the best of their ability.

Situations which could result in No Service being provided are:

- a) Equipment Failure;
 - Transmitters (Loss of all Transmitters)
 - Receivers (Loss of all Receivers)
 - Aerials (Loss of all Aerials)
 - Data Lines (Loss of data lines)
- b) Propagation;
 - Radio Propagation resulting in total fade-out which can be caused by many factors including Solar Flares and Geomagnetic Storms.
- c) Staffing
 - No Staff
 - Illness (Seasonal Influenza)
 - Weather
 - Industrial Relations issues
- d) Evacuation of Tripoli ACC
 - Fire
 - Bomb threat

Effect on flights

In the event of Tripoli ACC being unable to provide ground/air communications for a sustained period of time ----- ATC Unit in coordination with adjacent FIR's could provide a limited communications facility to flights in the Tripoli FIR.

ATFM measures may be imposed as necessary.

8.5.2 Loss of ability to provide control services

Should Tripoli ACC be evacuated the potential would exist for a major disruption to Air Traffic Control (ATC) within the Tripoli FIR.

In the event that Tripoli ACC is evacuated, the unit evacuation procedures will be activated, and time permitting, controllers will make an emergency evacuation transmission on the radio frequency in use providing pilots with alternate means of communication. The procedures to be adopted are detailed in the Tripoli Contingency plan.

As soon as possible after evacuation a contingency message will be sent to all adjacent ANSP's and operators as, detailed in the Tripoli Contingency Procedures . In turn they are expected to advise the affected traffic.

Other ATSUs will provide guidance as far as possible in the circumstances.

Contact information that may be used in the event of an emergency evacuation is provided in ATM Contingency Contact Detail List.

8.6 FLIGHT CREW AND OPERATOR PROCEDURES

8.6.1 For flights within the Tripoli FIR – General

The procedures outlined below are to be used as guidance for pilots in the immediate aftermath of a sudden withdrawal of the ATC service as described above.

On receipt of the contingency message pilots are requested to broadcast to other flights on 121.5 and 123.45. A listening watch on these frequencies must be maintained.

8.6.2 For flights within the Tripoli FIR – Westbound

----- ACC's will endeavour to provide an ATC service throughout the Tripoli FIR as soon as evacuation commences. These procedures are detailed at Tripoli Contingency Procedures in **Paragraph 8.7.2.**

Flights should establish communication with the next agency at the earliest opportunity stating current position, cleared flight level, next position and estimate and subsequent position.

Any flights involved in level changes should complete the manoeuvre as soon as possible in accordance with the clearance.

UNIT	TEL. No	FAX No	EMAIL	AFTN
Algiers FIR				
Cairo FIR				
Khartoum FIR				
Malta FIR				
N'Djamena FIR				
Niamey UIR				

Nicosia FIR				
Tunis FIR				

ICAO MID	0020 2 2267 4845/46/41	0020 2 2267 4843	
IATA	OO962 6 569 8728	OO962 6 560 4548	saidh@iata.org

Flights may request their flight dispatch offices to forward position reports, if sending position reports to multiple ATS Units or if otherwise unable to forward position reports.

8.6.3 For flights within the Tripoli FIR – Eastbound

----- ACC's will endeavour to provide an ATC service throughout the Tripoli FIR as soon as evacuation commences. These procedures are detailed at Tripoli Contingency Procedures in **Paragraph 8.7.2**.

Flights operating with a received and acknowledged ATC clearance will be expected to continue in accordance with the last clearance issued unless otherwise advised by ATC.

Communications with the next ATSU should be established at the earliest opportunity.

8.6.4 For flights approaching the Tripoli FIR when the contingency is activated.

Not in Receipt of an ATC Clearance

In the event that Tripoli ACC must be evacuated, only aircraft with received and acknowledged ATC clearances shall be permitted to transit Tripoli FIR.

If unable to obtain or acknowledge an ATC clearance, flights should plan to re-route around the Tripoli FIR or to land at an appropriate airfield.

In receipt of an acknowledged ATC Clearance outside Tripoli FIR

Aircraft operating with a received and acknowledged ATC clearance can, at pilot's discretion, continue, but must expect a limited ATC service or no service within the Tripoli FIR.

However, due to the uncertainty surrounding the contingency situation pilots are strongly advised to comply with the procedures detailed above for flights not in receipt of an ATC clearance even if they are in receipt of an acknowledged ATC clearance.

8.7 TRIPOLI FIR – CONTINGENCY ROUTE STRUCTURE

8.7.1 For activation within Tripoli FIR

In a **limited service** contingency situation Tripoli ACC may promulgate additional contingency tracks in addition to the published ATS Routes. Any contingency track design within the Tripoli FIR will be effected at the time of the event and be dependent on the nature of the service limitation. Promulgation will be via AFTN

8.7.2 For activation within adjacent FIR

Unless instructed otherwise, flights entering the Tripoli FIR should use the following contingency routes:

Communications with the next ATSU should be established at the earliest opportunity.

8.8 LONG TERM CONTINGENCY ARRANGEMENTS

In the event that Tripoli loses the ability to provide an ATC service in the FIR for an extended period, and contingency plans are in place to provide the service from an alternate location.

The facility will be or is established at another location but will take some time to put in place as equipment and communication links have to be brought into operation and staff relocated. The nature of the loss of the Tripoli facility may influence the time required to bring the contingency facility into service, but it is expected that under most circumstances an ATC service will be available in the Tripoli FIR within 48 hours. In the interim period no ATC service will be available and all flights will be required to route clear of the Tripoli FIR.

When established, the contingency facility will comprise a slightly reduced complement of control and support workstations, but with the existing range of communication facilities for clearance delivery.

Operators can expect that ATFM regulations will be in place throughout the period of the transition, with a gradual build up to near normal operating levels.

SAMPLE NOTAMS

a) Avoidance of airspace

NOTAM.....DUE TO DISRUPTION OF ATS IN THE TRIPOLI FIR ALL ACFT ARE ADVISED TO AVOID THE FIR.

b) Airspace available with limited ATS

NOTAM DUE TO ANTICIPATED DISRUPTION OF ATS IN THE TRIPOLI FIR ALL ACFT ARE ADVISED THAT THERE WILL BE LIMITED ATS. PILOTS MAY EXPERIENCE DLA AND OVERFLIGHTS MAY CONSIDER AVOIDING THE AIRSPACE.

c) Contingency plan activated

NOTAM DUE TO DISRUPTION OF ATS IN TRIPOLI FIR ALL ACFT ARE ADVISED THAT THE Tripoli FIR INTERNATIONAL CONTINGENCY PLAN FOR ACFT INTENDING TO OVERFLY THE FIR IS IN EFFECT. FLIGHT PLANNING MUST BE IN ACCORDANCE WITH THE ROUTES LISTED AND FL ASSIGNMENT. PILOTS MUST STRICTLY ADHERE TO THE CONTINGENCY PROCEDURES. ONLY APPROVED INTERNATIONAL FLIGHTS ARE PERMITTED TO OVERFLY TRIPOLI AIRSPACE.

d) Non adherence to the Contingency Plan

NOTAM OPERATORS NOT ABLE TO ADHERE TO THE CONTINGENCY PLAN SHALL AVOID THE TRIPOLI FIR

CHAPTER 9: DETAILED PROCEDURES – MUSCAT FIR

9.1 FIR FOR WHICH THE CONTINGENCY PLAN APPLIES

Muscat FIR

9.2 FIRs WITH SUPPORTING PROCEDURES

Bahrain FIR
Emirates FIR
Jeddah FIR
Karachi FIR
Mumbai FIR
Tehran FIR
Sana'a FIR

9.3 NOTIFICATION PROCEDURES

In a limited service situation notification of any service limitations and traffic management measures will be promulgated to operators and adjacent ANSPs via AFTN.

In a no service situation the ACC is likely to have been evacuated. As soon as possible after evacuation a contingency message will be sent to all adjacent ANSP's and operators. An evacuation message will be broadcast on appropriate frequencies and operators in receipt of the contingency message are asked to forward this information to affected flights wherever possible.

9.4 LIMITED SERVICE – PROCEDURES

9.4.1 Disruption of ground/air communication capability

A limited communication service will be maintained with the assistance of adjacent Aerodromes. VHF services on the Muscat frequency normally provided by Muscat Control will be delegated as appropriate to the other ATS units namely ----- . Appropriate frequencies will be advised by Muscat and the assisting stations.

Situations which could result in a Limited Service are:

Equipment Failure

- a) Transmitters (Loss of a number of Transmitters)
- b) Receivers (Loss of a number of Receivers)
- c) Aerials (Loss of a number of Aerials)
- d) Data Lines (Loss of data lines between Muscat Communications center and Muscat ACC)

Propagation

Radio Propagation resulting in partial fade-out can be affected by many factors including Solar Flares and Geomagnetic Storms.

Staffing

Reduced Staffing
Illness
Weather (Severe Weather i.e. Storm, Snow, Flooding)

Security Threat

Depending on the level of the Security threat and if essential staff are allowed to remain on Station

In the event that the operation is degraded substantially, ATFM measures may be imposed as necessary.

9.4.2 Disruption of ability to provide control services

Muscat ACC shall determine, co-ordinate and promulgate any necessary restrictions to meet the service limitation. Traffic in possession of a valid ATC clearance shall have priority over any other traffic. En-route re-clearance of such traffic shall not be permitted except in emergency.

Traffic without a valid clearance may be subject to tactical traffic management measurements to meet the requirements of the service limitation.

Separation standards

Muscat ACC will be responsible for ensuring the co-ordination and implementation of any additional separation requirements.

Contingency tracks

Dependant on the nature of the service limitation, Muscat may promulgate and activate contingency tracks for use in addition to the normal ATS Routes available.

Air Traffic Flow Management

Muscat ACC shall co-ordinate any necessary traffic management measures where necessary. Such measures may include, but are not limited to, temporary capacity restrictions and tactical rerouting measures.

Muscat ACC shall co-ordinate these restrictions where necessary with adjacent ANSPs where they may affect the flow of traffic through these units airspace.

Responsibilities of adjacent ANSPs

The action required of adjacent ANSPs will vary dependant on the nature of the service limitation. Where such action is not contained within the inter-centre Letters of Agreement (LOAs) the requirement will be promulgated within the initial failure and restrictions message.

9.5 NO SERVICE – PROCEDURES

9.5.1 Loss of ground/air communication capability

In the event of Muscat ACC being unable to provide ground/air communications for Muscat FIR ----- ATC Unit will coordinate with adjacent FIR's to provide ground/communications to the best of their ability.

Situations which could result in No Service being provided are:

- a) Equipment Failure;
 - Transmitters (Loss of all Transmitters)
 - Receivers (Loss of all Receivers)
 - Aerials (Loss of all Aerials)
 - Data Lines (Loss of data lines)
- b) Propagation;
 - Radio Propagation resulting in total fade-out which can be caused by many factors including Solar Flares and Geomagnetic Storms.
- c) Staffing
 - No Staff
 - Illness (Seasonal Influenza)
 - Weather
 - Industrial Relations issues
- d) Evacuation of Muscat ACC
 - Fire
 - Bomb threat

Effect on flights

In the event of Muscat ACC being unable to provide ground/air communications for a sustained period of time ----- ATC Unit in coordination with adjacent FIR's could provide a limited communications facility to flights in the Muscat FIR.

ATFM measures may be imposed as necessary.

9.5.2 Loss of ability to provide control services

Should Muscat ACC be evacuated the potential would exist for a major disruption to Air Traffic Control (ATC) within the Muscat FIR.

In the event that Muscat ACC is evacuated, the unit evacuation procedures will be activated, and time permitting, controllers will make an emergency evacuation transmission on the radio frequency in use providing pilots with alternate means of communication. The procedures to be adopted are detailed in the Oman Contingency Plan.

The Plan will be activated by promulgation of a NOTAM issued by the Sultanate of Oman International NOTAM Office (NOF) as far in advance as is practicable. However, when such prior notification is impracticable for any reason, the Plan will be put into effect on notification by the designated authority, as authorized by the DGMAN. It is expected that the civil aviation authorities concerned, and the airline operators will fully cooperate to implement the Plan as soon as possible.

As soon as possible after evacuation a contingency message will be sent to all adjacent ANSP's and operators as, detailed in the Muscat Contingency Procedures. In turn they are expected to advise the affected traffic.

Other ATSU's will provide guidance as far as possible in the circumstances.

Contact information that may be used in the event of an emergency evacuation is provided in ATM Contingency Contact Detail List.

9.6 FLIGHT CREW AND OPERATOR PROCEDURES

9.6.1 For flights within the Muscat FIR – General

The procedures outlined below are to be used as guidance for pilots in the immediate aftermath of a sudden withdrawal of the ATC service as described above.

On receipt of the contingency message pilots are requested to broadcast to other flights on 121.5 and 123.45. A listening watch on these frequencies must be maintained.

9.6.2 For flights within the Muscat FIR – Westbound

Mumbai ACC, Karachi ACC, Sana'a ACC and Tehran ACC will endeavour to provide an ATC service throughout the Muscat FIR as soon as evacuation commences. These procedures are detailed at Muscat Contingency Procedures in **Paragraph 9.7.2.**

Flights should establish communication with the next agency at the earliest opportunity stating current position, cleared flight level, next position and estimate and subsequent position.

Any flights involved in level changes should complete the manoeuvre as soon as possible in accordance with the clearance.

UNIT	TEL. No	FAX No	EMAIL	AFTN
Tehran ACC	0098 21 44544116 or 44554060	0098 21 44544117	maj.alireza@yahoo.com alireza.majzoubi@gmail.com	OIIIZGZX

	44544133 (Sector Controller)			
Karachi ACC	0092 21 9248 756	0092 21 9248 758	gmats@cyber.net.pk	OPKCZQZX OPKCZQZA
Mumbai ACC	0091 22 26828088	0091 22 26828066	WSOMUM@AAI.AERO	VABFZQZX VABFZQZA
Sana'a ACC	00967 1345402/3	00967 1344047	atccns@gmail.com	OYSNZQZX OYSNZQZA
Bahrain ACC	00973 1732 1080/1081	00973 1732 1029	bahatc@caa.gov.bh	OBBBZQZX OBBBZQZA
Emirates ACC	0097125996969	0097125996850 0097125996852	atc@szc.gcaa.ae mdolbey@szc.gcaa.ae	OMAEZQZX OMAEYAYH
Jeddah ACC				

ICAO MID	0020 2 2267 4845/46/41	0020 2 2267 4843	
IATA	OO962 6 569 8728	OO962 6 560 4548	saidh@iata.org

Flights may request their flight dispatch offices to forward position reports, if sending position reports to multiple ATS Units or if otherwise unable to forward position reports.

9.6.3 For flights within the Muscat FIR – Eastbound

Bahrain ACC, Emirates ACC and Sana'a ACC will endeavour to provide an ATC service throughout the Muscat FIR as soon as evacuation commences. These procedures are detailed at Bahrain Contingency Procedures in **Paragraph 9.7.2**.

Flights operating with a received and acknowledged ATC clearance will be expected to continue in accordance with the last clearance issued unless otherwise advised by ATC.

Communications with the next ATSU should be established at the earliest opportunity.

9.6.4 For flights approaching the Muscat FIR when the contingency is activated.

Not in Receipt of an ATC Clearance

In the event that Cairo ACC must be evacuated, only aircraft with received and acknowledged ATC clearances shall be permitted to transit Muscat FIR.

If unable to obtain or acknowledge an ATC clearance, flights should plan to re-route around the Muscat FIR or to land at an appropriate airfield.

In receipt of an acknowledged ATC Clearance outside Muscat FIR

Aircraft operating with a received and acknowledged ATC clearance can, at pilot's discretion, continue, but must expect a limited ATC service or no service within the Muscat FIR.

However, due to the uncertainty surrounding the contingency situation pilots are strongly advised to comply with the procedures detailed above for flights not in receipt of an ATC clearance even if they are in receipt of an acknowledged ATC clearance.

9.7 MUSCAT FIR – CONTINGENCY ROUTE STRUCTURE

9.7.1 For activation within Muscat FIR

In a **limited service** contingency situation Muscat ACC may promulgate additional contingency tracks in addition to the published ATS Routes. Any contingency track design within the Muscat FIR will be effected at the time of the event and be dependent on the nature of the service limitation. Promulgation will be via AFTN

9.7.2 For activation within adjacent FIR

Unless instructed otherwise, flights entering the Muscat FIR should use the following contingency routes:

CONTINGENCY ROUTE STRUCTURE FOR MUSCAT FIR

ATS WAYPOINT	DIRECTION	FL ASSIGNMENT	NEXT ACC	COM
RASKI/PARAR	WESTBOUND	240 (Muscat arrivals only) 300 and 380	UAE	
TOTOX REXOD LOTAV KITAL	WESTBOUND	220 (Muscat arrivals only) 320 and 400	UAE	
TAPDO	WESTBOUND	200 (Muscat arrivals only) 260 and 340	UAE	
DENDA	WESTBOUND	180 (Muscat arrivals only) 280 and 360	UAE	
IMLOT	WESTBOUND (NOT FOR UAE ARRIVALS)	ALL LEVELS	UAE	
SOUTHBOUND TRAFFIC TO HAI VOR (ONLY FROM LABRI P304)	WESTBOUND	180 AND 280	SANA'A	
NORTHBOUND TRAFFIC TO MUSAP/SODEX	WESTBOUND	160/260	UAE	
DEPARTURES FROM MUSCAT VIA B400	WESTBOUND	240 and 300 cross 20nm south of IZXI 200 or below and to be level 20nm before KEBAS	SALALAH APP OR SANA'A	
ASPUX	WESTBOUND	340 AND ABOVE	BAHRAIN	

Communications with the next ATSU should be established at the earliest opportunity.

CONTINGENCY FREQUENCIES FOR CONTROL AND/OR FLIGHT MONITORING SERVICES

ATS WAYPOINT	DIRECTION	FL ASSIGNMENT	NEXT ACC	COM
RASKI/PARAR	EASTBOUND		MUMBAI	
TOTOX REXOD LOTAV KITAL	EASTBOUND		MUMBAI	
ALPOR	EASTBOUND	330 AND 370	KARACHI	128.3, 123.7
DENDA	EASTBOUND		TEHRAN	
IMLOT	EASTBOUND		TEHRAN	
ASPUX	EASTBOUND		MUMBAI	

9.8 LONG TERM CONTINGENCY ARRANGEMENTS

In the event that Muscat loses the ability to provide an ATC service in the Muscat FIR for an extended period, and contingency plans are in place to provide the service from an alternate location.

The facility will be or is established at another location but will take some time to put in place as equipment and communication links have to be brought into operation and staff relocated. The nature of the loss of the Muscat facility may influence the time required to bring the contingency facility into service, but it is expected that under most circumstances an ATC service will be available in the Muscat FIR within 48 hours. In the interim period no ATC service will be available and all flights will be required to route clear of the Muscat FIR.

When established, the contingency facility will comprise a slightly reduced complement of control and support workstations, but with the existing range of communication facilities for clearance delivery.

Operators can expect that ATFM regulations will be in place throughout the period of the transition, with a gradual build up to near normal operating levels.

SAMPLE NOTAMS

a) Avoidance of airspace

NOTAM.....DUE TO DISRUPTION OF ATS IN THE MUSCAT FIR ALL ACFT ARE ADVISED TO AVOID THE FIR.

b) Airspace available with limited ATS

NOTAM DUE TO ANTICIPATED DISRUPTION OF ATS IN THE MUSCAT FIR ALL ACFT ARE ADVISED THAT THERE WILL BE LIMITED ATS. PILOTS MAY EXPERIENCE DLA AND OVERFLIGHTS MAY CONSIDER AVOIDING THE AIRSPACE.

c) Contingency plan activated

NOTAM DUE TO DISRUPTION OF ATS IN MUSCAT FIR ALL ACFT ARE ADVISED THAT THE Cairo FIR INTERNATIONAL CONTINGENCY PLAN FOR ACFT INTENDING TO OVERFLY THE FIR IS IN EFFECT. FLIGHT PLANNING MUST BE IN ACCORDANCE WITH THE ROUTES LISTED AND FL ASSIGNMENT. PILOTS MUST STRICTLY ADHERE TO THE CONTINGENCY PROCEDURES. ONLY APPROVED INTERNATIONAL FLIGHTS ARE PERMITTED TO OVERFLY MUSCAT AIRSPACE.

d) Non adherence to the Contingency Plan

NOTAM OPERATORS NOT ABLE TO ADHERE TO THE CONTINGENCY PLAN SHALL AVOID THE MUSCAT FIR.

CHAPTER 10: DETAILED PROCEDURES – JEDDAH FIR

10.1 FIR FOR WHICH THE CONTINGENCY PLAN APPLIES

Jeddah FIR

10.2 FIRs WITH SUPPORTING PROCEDURES

Amman FIR
Asmara FIR
Bahrain FIR
Baghdad FIR
Cairo FIR
Khartoum FIR
Kuwait FIR
Sana'a FIR

10.3 NOTIFICATION PROCEDURES

In a limited service situation notification of any service limitations and traffic management measures will be promulgated to operators and adjacent ANSPs via AFTN.

In a no service situation the ACC is likely to have been evacuated. As soon as possible after evacuation a contingency message will be sent to all adjacent ANSP's and operators. An evacuation message will be broadcast on appropriate frequencies and operators in receipt of the contingency message are asked to forward this information to affected flights wherever possible.

10.4 LIMITED SERVICE – PROCEDURES

10.4.1 Disruption of ground/air communication capability

A limited communication service will be maintained with the assistance of adjacent Aerodromes. VHF services on the Jeddah frequency normally provided by Jeddah Control will be delegated as appropriate to the other ATS units namely ----- . Appropriate frequencies will be advised by Jeddah and the assisting ATS units.

Situations which could result in a Limited Service are:

Equipment Failure

- a) Transmitters (Loss of a number of Transmitters)
- b) Receivers (Loss of a number of Receivers)
- c) Aerials (Loss of a number of Aerials)
- d) Data Lines (Loss of data lines between Jeddah Communications center and Jeddah ACC)

Propagation

Radio Propagation resulting in partial fade-out can be affected by many factors including Solar Flares and Geomagnetic Storms.

Staffing

Reduced Staffing
Illness
Weather (Severe Weather i.e. Storm, Snow, Flooding)

Security Threat

Depending on the level of the Security threat and if essential staff are allowed to remain on Station

In the event that the operation is degraded substantially, ATFM measures may be imposed as necessary.

10.4.2 Disruption of ability to provide control services

Jeddah ACC shall determine, co-ordinate and promulgate any necessary restrictions to meet the service limitation. Traffic in possession of a valid ATC clearance shall have priority over any other traffic. En-route re-clearance of such traffic shall not be permitted except in emergency.

Traffic without a valid clearance may be subject to tactical traffic management measurements to meet the requirements of the service limitation.

Separation standards

Jeddah ACC will be responsible for ensuring the co-ordination and implementation of any additional separation requirements.

Contingency tracks

Dependant on the nature of the service limitation, Jeddah may promulgate and activate contingency tracks for use in addition to the normal ATS Routes available.

Air Traffic Flow Management

Jeddah ACC shall co-ordinate any necessary traffic management measures where necessary. Such measures may include, but are not limited to, temporary capacity restrictions and tactical rerouting measures.

Jeddah ACC shall co-ordinate these restrictions where necessary with adjacent ANSPs where they may affect the flow of traffic through these units airspace.

Responsibilities of adjacent ANSPs

The action required of adjacent ANSPs will vary dependant on the nature of the service limitation. Where such action is not contained within the inter-centre Letters of Agreement (LOAs) the requirement will be promulgated within the initial failure and restrictions message.

10.5 NO SERVICE – PROCEDURES

10.5.1 Loss of ground/air communication capability

In the event of Tripoli ACC being unable to provide ground/air communications for Jeddah FIR ----- ATC Unit will coordinate with adjacent FIR's to provide ground/communications to the best of their ability.

Situations which could result in No Service being provided are:

- a) Equipment Failure;
 - Transmitters (Loss of all Transmitters)
 - Receivers (Loss of all Receivers)
 - Aerials (Loss of all Aerials)
 - Data Lines (Loss of data lines)
- b) Propagation;
 - Radio Propagation resulting in total fade-out which can be caused by many factors including Solar Flares and Geomagnetic Storms.
- c) Staffing
 - No Staff
 - Illness (Seasonal Influenza)
 - Weather
 - Industrial Relations issues
- d) Evacuation of Jeddah ACC
 - Fire
 - Bomb threat

Effect on flights

In the event of Jeddah ACC being unable to provide ground/air communications for a sustained period of time ----- ATC Unit in coordination with adjacent FIR's could provide a limited communications facility to flights in the Jeddah FIR.

ATFM measures may be imposed as necessary.

10.5.2 Loss of ability to provide control services

Should Jeddah ACC be evacuated the potential would exist for a major disruption to Air Traffic Control (ATC) within the Jeddah FIR.

In the event that Jeddah ACC are evacuated, the unit evacuation procedures will be activated, and time permitting, controllers will make an emergency evacuation transmission on the radio frequency in use providing pilots with alternate means of communication. The procedures to be adopted are detailed in the Jeddah Contingency plan.

As soon as possible after evacuation a contingency message will be sent to all adjacent ANSP's and operators as, detailed in the Jeddah Contingency Procedures. In turn they are expected to advise the affected traffic.

Other ATSUs will provide guidance as far as possible in the circumstances.

Contact information that may be used in the event of an emergency evacuation is provided in ATM Contingency Contact Detail List.

10.6 FLIGHT CREW AND OPERATOR PROCEDURES

10.6.1 For flights within the Jeddah FIR – General

The procedures outlined below are to be used as guidance for pilots in the immediate aftermath of a sudden withdrawal of the ATC service as described above.

On receipt of the contingency message pilots are requested to broadcast to other flights on 121.5 and 123.45. A listening watch on these frequencies must be maintained.

10.6.2 For flights within the Jeddah FIR – Westbound

----- ACC's will endeavour to provide an ATC service throughout the Jeddah FIR as soon as evacuation commences. These procedures are detailed at Jeddah Contingency Procedures in **Paragraph 10.7.2.**

Flights should establish communication with the next agency at the earliest opportunity stating current position, cleared flight level, next position and estimate and subsequent position.

Any flights involved in level changes should complete the manoeuvre as soon as possible in accordance with the clearance.

UNIT	TEL. No	FAX No	EMAIL	AFTN
Amman FIR				
Asmara FIR				
Bahrain FIR				
Baghdad FIR				
Cairo FIR				
Khartoum FIR				
Kuwait FIR				
Sana'a FIR				

ICAO MID	0020 2 2267 4845/46/41	0020 2 2267 4843	
IATA	OO962 6 569 8728	OO962 6 560 4548	saidh@iata.org

Flights may request their flight dispatch offices to forward position reports, if sending position reports to multiple ATS Units or if otherwise unable to forward position reports.

10.6.3 For flights within the Jeddah FIR – Eastbound

----- ACC's will endeavour to provide an ATC service throughout the Jeddah FIR as soon as evacuation commences. These procedures are detailed at Jeddah Contingency Procedures in **Paragraph 10.7.2**.

Flights operating with a received and acknowledged ATC clearance will be expected to continue in accordance with the last clearance issued unless otherwise advised by ATC.

Communications with the next ATSU should be established at the earliest opportunity.

10.6.4 For flights approaching the Jeddah FIR when the contingency is activated.

Not in Receipt of an ATC Clearance

In the event that Jeddah ACC must be evacuated, only aircraft with received and acknowledged ATC clearances shall be permitted to transit Jeddah FIR.

If unable to obtain or acknowledge an ATC clearance, flights should plan to re-route around the Jeddah FIR or to land at an appropriate airfield.

In receipt of an acknowledged ATC Clearance outside Jeddah FIR

Aircraft operating with a received and acknowledged ATC clearance can, at pilot's discretion, continue, but must expect a limited ATC service or no service within the Jeddah FIR.

However, due to the uncertainty surrounding the contingency situation pilots are strongly advised to comply with the procedures detailed above for flights not in receipt of an ATC clearance even if they are in receipt of an acknowledged ATC clearance.

10.7 JEDDAH FIR – CONTINGENCY ROUTE STRUCTURE

10.7.1 For activation within Jeddah FIR

In a **limited service** contingency situation Jeddah ACC may promulgate additional contingency tracks in addition to the published ATS Routes. Any contingency track design within the Jeddah FIR will be effected at the time of the event and be dependent on the nature of the service limitation. Promulgation will be via AFTN

10.7.2 For activation within adjacent FIR

Unless instructed otherwise, flights entering the Jeddah FIR should use the following contingency routes:

Communications with the next ATSU should be established at the earliest opportunity.

10.8 LONG TERM CONTINGENCY ARRANGEMENTS

In the event that Jeddah loses the ability to provide an ATC service in the FIR for an extended period, and contingency plans are in place to provide the service from an alternate location.

The facility will be or is established at another location but will take some time to put in place as equipment and communication links have to be brought into operation and staff relocated. The nature of the loss of the Jeddah facility may influence the time required to bring the contingency facility into service, but it is expected that under most circumstances an ATC service will be available in the Jeddah FIR within 48 hours. In the interim period no ATC service will be available and all flights will be required to route clear of the Jeddah FIR.

When established, the contingency facility will comprise a slightly reduced complement of control and support workstations, but with the existing range of communication facilities for clearance delivery.

Operators can expect that ATFM regulations will be in place throughout the period of the transition, with a gradual build up to near normal operating levels.

SAMPLE NOTAMS

a) Avoidance of airspace

NOTAM.....DUE TO DISRUPTION OF ATS IN THE JEDDAH FIR ALL ACFT ARE ADVISED TO AVOID THE FIR.

b) Airspace available with limited ATS

NOTAM DUE TO ANTICIPATED DISRUPTION OF ATS IN THE JEDDAH FIR ALL ACFT ARE ADVISED THAT THERE WILL BE LIMITED ATS. PILOTS MAY EXPERIENCE DLA AND OVERFLIGHTS MAY CONSIDER AVOIDING THE AIRSPACE.

c) Contingency plan activated

NOTAM DUE TO DISRUPTION OF ATS IN JEDDAH FIR ALL ACFT ARE ADVISED THAT THE Tripoli FIR INTERNATIONAL CONTINGENCY PLAN FOR ACFT INTENDING TO OVERFLY THE FIR IS IN EFFECT. FLIGHT PLANNING MUST BE IN ACCORDANCE WITH THE ROUTES LISTED AND FL ASSIGNMENT. PILOTS MUST STRICTLY ADHERE TO THE CONTINGENCY PROCEDURES. ONLY APPROVED INTERNATIONAL FLIGHTS ARE PERMITTED TO OVERFLY JEDDAH AIRSPACE.

d) Non adherence to the Contingency Plan

NOTAM OPERATORS NOT ABLE TO ADHERE TO THE CONTINGENCY PLAN SHALL AVOID THE JEDDAH FIR

CHAPTER 11: DETAILED PROCEDURES – KHARTOUM FIR

11.1 FIR FOR WHICH THE CONTINGENCY PLAN APPLIES

Khartoum FIR

11.2 FIRs WITH SUPPORTING PROCEDURES

Cairo FIR
Jeddah FIR
Ndjamena FIR
Tripoli FIR
Asmara FIR
Addis Ababa FIR
Nairobi FIR
Entebbe FIR
Kinshasa FIR
Brazzaville ACC

11.3 NOTIFICATION PROCEDURES

In a limited service situation notification of any service limitations and traffic management measures will be promulgated to operators and adjacent ANSPs via AFTN.

In a no service situation the ACC is likely to have been evacuated. As soon as possible after evacuation a contingency message will be sent to all adjacent ANSP's and operators. An evacuation message will be broadcast on appropriate frequencies and operators in receipt of the contingency message are asked to forward this information to affected flights wherever possible.

11.4 LIMITED SERVICE – PROCEDURES

11.4.1 Disruption of ground/air communication capability

A limited communication service will be maintained with the assistance of adjacent Aerodromes. VHF services on the Khartoum frequency normally provided by Khartoum Control will be delegated as appropriate to the other ATS units namely ----- . Appropriate frequencies will be advised by Cairo and the assisting stations.

Situations which could result in a Limited Service are:

Equipment Failure

- a) Transmitters (Loss of a number of Transmitters)
- b) Receivers (Loss of a number of Receivers)
- c) Aerials (Loss of a number of Aerials)
- d) Data Lines (Loss of data lines between Khartoum Communications center and Khartoum ACC)

Propagation

Radio Propagation resulting in partial fade-out can be affected by many factors including Solar Flares and Geomagnetic Storms.

Staffing

Reduced Staffing
Illness
Weather (Severe Weather i.e. Storm, Snow, Flooding)

Security Threat

Depending on the level of the Security threat and if essential staff are allowed to remain on Station

In the event that the operation is degraded substantially, ATFM measures may be imposed as necessary.

11.4.2 Disruption of ability to provide control services

Khartoum ACC shall determine, co-ordinate and promulgate any necessary restrictions to meet the service limitation. Traffic in possession of a valid ATC clearance shall have priority over any other traffic. En-route re-clearance of such traffic shall not be permitted except in emergency.

Traffic without a valid clearance may be subject to tactical traffic management measurements to meet the requirements of the service limitation.

Separation standards

Khartoum ACC will be responsible for ensuring the co-ordination and implementation of any additional separation requirements.

Contingency tracks

Dependant on the nature of the service limitation, Khartoum may promulgate and activate contingency tracks for use in addition to the normal ATS Routes available.

Air Traffic Flow Management

Khartoum ACC shall co-ordinate any necessary traffic management measures where necessary. Such measures may include, but are not limited to, temporary capacity restrictions and tactical rerouting measures.

Khartoum ACC shall co-ordinate these restrictions where necessary with adjacent ANSPs where they may affect the flow of traffic through these units airspace.

Responsibilities of adjacent ANSPs

The action required of adjacent ANSPs will vary dependant on the nature of the service limitation. Where such action is not contained within the inter-centre Letters of Agreement (LOAs) the requirement will be promulgated within the initial failure and restrictions message.

11.5 NO SERVICE – PROCEDURES

11.5.1 Loss of ground/air communication capability

In the event of Khartoum ACC being unable to provide ground/air communications for Khartoum FIR ----- ATC Unit will coordinate with adjacent FIR's to provide ground/communications to the best of their ability.

Situations which could result in No Service being provided are:

- a) Equipment Failure;
 - Transmitters (Loss of all Transmitters)
 - Receivers (Loss of all Receivers)
 - Aerials (Loss of all Aerials)
 - Data Lines (Loss of data lines)
- b) Propagation;
 - Radio Propagation resulting in total fade-out which can be caused by many factors including Solar Flares and Geomagnetic Storms.
- c) Staffing
 - No Staff
 - Illness (Seasonal Influenza)
 - Weather
 - Industrial Relations issues
- d) Evacuation of Khartoum ACC
 - Fire
 - Bomb threat

Effect on flights

In the event of Khartoum ACC being unable to provide ground/air communications for a sustained period of time ----- ATC Unit in coordination with adjacent FIR's could provide a limited communications facility to flights in the Cairo FIR.

ATFM measures may be imposed as necessary.

11.5.2 Loss of ability to provide control services

Should Khartoum ACC be evacuated the potential would exist for a major disruption to Air Traffic Control (ATC) within the Khartoum FIR.

In the event that Khartoum ACC is evacuated, the unit evacuation procedures will be activated, and time permitting, controllers will make an emergency evacuation transmission on the radio frequency in use providing pilots with alternate means of communication. The procedures to be adopted are detailed in the Sudan Contingency Plan.

The Plan will be activated by promulgation of a NOTAM issued by the Sudanese International NOTAM Office (NOF) as far in advance as is practicable. However, when such prior notification is impracticable for any reason, the Plan will be put into effect on notification by the designated authority, as authorized by the DGCA. It is expected that the civil aviation authorities concerned, and the airline operators will fully cooperate to implement the Plan as soon as possible.

As soon as possible after evacuation a contingency message will be sent to all adjacent ANSP's and operators as, detailed in the Khartoum Contingency Procedures. In turn they are expected to advise the affected traffic.

Other ATSUs will provide guidance as far as possible in the circumstances.

Contact information that may be used in the event of an emergency evacuation is provided in ATM Contingency Contact Detail List.

11.6 FLIGHT CREW AND OPERATOR PROCEDURES

11.6.1 For flights within the Khartoum FIR – General

The procedures outlined below are to be used as guidance for pilots in the immediate aftermath of a sudden withdrawal of the ATC service as described above.

On receipt of the contingency message pilots are requested to broadcast to other flights on 121.5 and 123.45. A listening watch on these frequencies must be maintained.

11.6.2 For flights within the Khartoum FIR – Westbound

Jeddah ACC, Asmara ACC, Addis Ababa ACC, Nairobi ACC and Entebbe ACC will endeavour to provide an ATC service throughout the Khartoum FIR as soon as evacuation commences. These procedures are detailed at Cairo Contingency Procedures in **Paragraph 11.7.2**

Flights should establish communication with the next agency at the earliest opportunity stating current position, cleared flight level, next position and estimate and subsequent position.

Any flights involved in level changes should complete the manoeuvre as soon as possible in accordance with the clearance.

UNIT	TEL. No	FAX No	EMAIL	AFTN
Cairo ACC	TBN	Fax: (20) 2-2665435	E-mail: egoca@idsc.gov.eg	HECAYAYX
Tripoli ACC	TBN	Fax: (218) 37454	TBN	HLLTYAYX
Jeddah ACC	TBN	Fax: (966) 2-6401477	TBN	OEJDYAYX
Ndjamena ACC	+253522520830	+253522526231	TBN	TBN
Asmara ACC	(291) 1-124334	Fax: (291) 1-181255	TBN	HHAAYAYX
Addis Ababa ACC	TBN	Fax: (251) 1-612533	E-mail: civil-aviation@telecom.net.et	HAAAYAYX
Nairobi ACC	TBN	Fax: (254) 20-822300	E-mail: info@kcaa.or.ke	HKNCYAYD
Entebbe ACC				
Kinshasa ACC				
Brazzaville ACC	+242055478182	+242069920433	TBN	FCCCZRZX

ICAO MID	0020 2 2267 4845/46/41	0020 2 2267 4843	
IATA	OO962 6 569 8728	OO962 6 560 4548	saidh@iata.org

Flights may request their flight dispatch offices to forward position reports, if sending position reports to multiple ATS Units or if otherwise unable to forward position reports.

11.6.3 For flights within the Khartoum FIR – Eastbound

Tripoli ACC, Ndjamena ACC, Kinshasa and Brazzaville ACC will endeavour to provide an ATC service throughout the Khartoum FIR as soon as evacuation commences. These procedures are detailed at Bahrain Contingency Procedures in **Paragraph 11.7.2**.

Flights operating with a received and acknowledged ATC clearance will be expected to continue in accordance with the last clearance issued unless otherwise advised by ATC.

Communications with the next ATSU should be established at the earliest opportunity.

11.6.4 For flights approaching the Khartoum FIR when the contingency is activated.

Not in Receipt of an ATC Clearance

In the event that Khartoum ACC must be evacuated, only aircraft with received and acknowledged ATC clearances shall be permitted to transit Cairo FIR.

If unable to obtain or acknowledge an ATC clearance, flights should plan to re-route around the Khartoum FIR or to land at an appropriate airfield.

In receipt of an acknowledged ATC Clearance outside Khartoum FIR

Aircraft operating with a received and acknowledged ATC clearance can, at pilot's discretion, continue, but must expect a limited ATC service or no service within the Khartoum FIR.

However, due to the uncertainty surrounding the contingency situation pilots are strongly advised to comply with the procedures detailed above for flights not in receipt of an ATC clearance even if they are in receipt of an acknowledged ATC clearance.

11.7 Khartoum FIR – CONTINGENCY ROUTE STRUCTURE**11.7.1 For activation within Khartoum FIR**

In a **limited service** contingency situation Khartoum ACC may promulgate additional contingency tracks in addition to the published ATS Routes. Any contingency track design within the Khartoum FIR will be effected at the time of the event and be dependent on the nature of the service limitation. Promulgation will be via AFTN

11.7.2 For activation within adjacent FIR

Unless instructed otherwise, flights entering the Khartoum FIR should use the following contingency routes:

INTERNATIONAL ROUTE STRUCTURE AND COMMUNICATIONS FOR TRANSIT OF THE KHARTOUM FIR WHEN NO ATS AVAILABLE IN SUDAN AIRSPACE

Contingency Routes Khartoum (CRK)	ATS Route	Direction	FL Assignment (FLAS)	ACCs	COM (Frequency Details in Appendix X)
CRK	UR611	N/S One way	Odd F370 ,F350 ,F330	CAIRO	HF, VHF
CRK	UB612	N/S Two ways	Odd F330 ,F350 Even F320,F360	CAIRO	HF, VHF
CRK	UA451	N/S Two ways	Odd F370 ,F350 ,F330 Even F300	CAIRO	HF, VHF
CRK	UG660	E/W Two ways	Even F400 ,F340 ,F280 Odd F290,F310	CAIRO	HF, VHF
CRK	UB736	E/W Two ways	Even F340 ,F260 Odd F390,F410	NIROBI	HF, VHF
CRK	UB527	N/S Two ways	Odd F370 Even F380	NIROBI	HF, VHF

CRK	UT267	E/W One way	Even F400,F340,F280	CAIRO	HF, VHF
CRK	UT124	E/W One way	Even F320, F360	NIROBI	HF, VHF

Communications with the next ATSU should be established at the earliest opportunity.

CONTINGENCY FREQUENCIES FOR CONTROL AND/OR FLIGHT MONITORING SERVICES

CONTINGENCY ROUTE KHARTOUM (CRK)	ATS ROUTE	ACC	COM
CRK	UR611	CAIRO	HF, VHF HF 11300, VHF: Primary 129.4 MHz Secondary 130.9 MHz
CRK	UB612	CAIRO	HF, VHF HF 11300, VHF: Primary 129.4 MHz Secondary 130.9 MHz
CRK	UB612 SOUTH SECTOR	NAIROBI	HF, VHF HF 11300, VHF: Primary 121.3 MHz
CRK	UB736	NAIROBI	HF, VHF HF 11300, VHF: Primary 129.4 MHz Secondary 130.9 MHz,
CRK	UA451	CAIRO	HF, VHF HF 11300, VHF: Primary 129.4 MHz Secondary 130.9 MHz,
CRK	UG660	CAIRO	HF, VHF HF 11300, VHF: Primary 129.4 MHz/ Secondary 130.9 MHz
CRK	UB736	NAIROBI	HF, VHF HF 11300, VHF: Primary 121.3 MHz
CRK	UB527	NAIROBI	HF, VHF HF 11300, VHF: Primary 121.3 MHz

CRK	UT124	CAIRO	HF, VHF HF 11300, VHF: Primary 121.3 MHz/ Secondary 130.9 MHz
CRK	UM863	CAIRO	HF, VHF HF 11300, VHF: Primary 121.3 MHz Secondary 130.9 MHz

11.8 LONG TERM CONTINGENCY ARRANGEMENTS

In the event that Sudan loses the ability to provide an ATC service in the Khartoum FIR for an extended period, and contingency plans are in place to provide the service from an alternate location.

The facility will be or is established at another location but will take some time to put in place as equipment and communication links have to be brought into operation and staff relocated. The nature of the loss of the Khartoum facility may influence the time required to bring the contingency facility into service, but it is expected that under most circumstances an ATC service will be available in the Khartoum FIR within 48 hours. In the interim period no ATC service will be available and all flights will be required to route clear of the Cairo FIR.

When established, the contingency facility will comprise a slightly reduced complement of control and support workstations, but with the existing range of communication facilities for clearance delivery.

Operators can expect that ATFM regulations will be in place throughout the period of the transition, with a gradual build up to near normal operating levels.

SAMPLE NOTAMS

a) Avoidance of airspace

NOTAM.....DUE TO DISRUPTION OF ATS IN THE KHARTOUM FIR ALL ACFT ARE ADVISED TO AVOID THE FIR.

b) Airspace available with limited ATS

NOTAM DUE TO ANTICIPATED DISRUPTION OF ATS IN THE KHARTOUM FIR ALL ACFT ARE ADVISED THAT THERE WILL BE LIMITED ATS. PILOTS MAY EXPERIENCE DLA AND OVERFLIGHTS MAY CONSIDER AVOIDING THE AIRSPACE.

c) Contingency plan activated

NOTAM DUE TO DISRUPTION OF ATS IN KHARTOUM FIR ALL ACFT ARE ADVISED THAT THE SUDANESE INTERNATIONAL CONTINGENCY PLAN FOR ACFT INTENDING TO OVERFLY THE FIR IS IN EFFECT. FLIGHT PLANNING MUST BE IN ACCORDANCE WITH THE ROUTES LISTED AND FL ASSIGNMENT. PILOTS MUST STRICTLY ADHERE TO THE CONTINGENCY PROCEDURES. ONLY APPROVED INTERNATIONAL FLIGHTS ARE PERMITTED TO OVERFLY SUDANESE AIRSPACE.

d) Non adherence to the Contingency Plan

NOTAM OPERATORS NOT ABLE TO ADHERE TO THE CONTINGENCY PLAN SHALL AVOID THE KHARTOUM FIR

CHAPTER 12: DETAILED PROCEDURES – DAMASCUS FIR

12.1 FIR FOR WHICH THE CONTINGENCY PLAN APPLIES

Damascus FIR

12.2 FIRs WITH SUPPORTING PROCEDURES

Amman FIR
Ankara FIR
Baghdad FIR
Beirut FIR
Nicosia FIR

12.3 NOTIFICATION PROCEDURES

In a limited service situation notification of any service limitations and traffic management measures will be promulgated to operators and adjacent ANSPs via AFTN.

In a no service situation the ACC is likely to have been evacuated. As soon as possible after evacuation a contingency message will be sent to all adjacent ANSP's and operators. An evacuation message will be broadcast on appropriate frequencies and operators in receipt of the contingency message are asked to forward this information to affected flights wherever possible.

12.4 LIMITED SERVICE – PROCEDURES

12.4.1 Disruption of ground/air communication capability

A limited communication service will be maintained with the assistance of adjacent Aerodromes. VHF services on the Damascus frequency normally provided by Damascus Control will be delegated as appropriate to the other ATS units namely -----, Appropriate frequencies will be advised by Damascus and the assisting ATS units.

Situations which could result in a Limited Service are:

Equipment Failure

- a) Transmitters (Loss of a number of Transmitters)
- b) Receivers (Loss of a number of Receivers)
- c) Aerials (Loss of a number of Aerials)
- d) Data Lines (Loss of data lines between Damascus Communications center and Damascus ACC)

Propagation

Radio Propagation resulting in partial fade-out can be affected by many factors including Solar Flares and Geomagnetic Storms.

Staffing

Reduced Staffing
Illness
Weather (Severe Weather i.e. Storm, Snow, Flooding)

Security Threat

Depending on the level of the Security threat and if essential staff are allowed to remain on Station

In the event that the operation is degraded substantially, ATFM measures may be imposed as necessary.

12.4.2 Disruption of ability to provide control services

Damascus ACC shall determine, co-ordinate and promulgate any necessary restrictions to meet the service limitation. Traffic in possession of a valid ATC clearance shall have priority over any other traffic. Enroute reclearance of such traffic shall not be permitted except in emergency.

Traffic without a valid clearance may be subject to tactical traffic management measurements to meet the requirements of the service limitation.

Separation standards

Damascus ACC will be responsible for ensuring the co-ordination and implementation of any additional separation requirements.

Contingency tracks

Dependant on the nature of the service limitation, Damascus may promulgate and activate contingency tracks for use in addition to the normal ATS Routes available.

Air Traffic Flow Management

Damascus ACC shall co-ordinate any necessary traffic management measures where necessary. Such measures may include, but are not limited to, temporary capacity restrictions and tactical rerouting measures.

Damascus ACC shall co-ordinate these restrictions where necessary with adjacent ANSPs where they may affect the flow of traffic through these units airspace.

Responsibilities of adjacent ANSPs

The action required of adjacent ANSPs will vary dependant on the nature of the service limitation. Where such action is not contained within the inter-centre Letters of Agreement (LOAs) the requirement will be promulgated within the initial failure and restrictions message.

12.5 NO SERVICE – PROCEDURES

12.5.1 Loss of ground/air communication capability

In the event of Damascus ACC being unable to provide ground/air communications for Damascus FIR ----- ATC Unit will coordinate with adjacent FIR's to provide ground/communications to the best of their ability.

Situations which could result in No Service being provided are:

- a) Equipment Failure;
 - Transmitters (Loss of all Transmitters)
 - Receivers (Loss of all Receivers)
 - Aerials (Loss of all Aerials)
 - Data Lines (Loss of data lines)
- b) Propagation;
 - Radio Propagation resulting in total fade-out which can be caused by many factors including Solar Flares and Geomagnetic Storms.
- c) Staffing
 - No Staff
 - Illness (Seasonal Influenza)
 - Weather
 - Industrial Relations issues
- d) Evacuation of Damascus ACC
 - Fire
 - Bomb threat

Effect on flights

In the event of Damascus ACC being unable to provide ground/air communications for a sustained period of time ----- ATC Unit in coordination with adjacent FIR's could provide a limited communications facility to flights in the Damascus FIR.

ATFM measures may be imposed as necessary.

12.5.2 Loss of ability to provide control services

Should Damascus ACC be evacuated the potential would exist for a major disruption to Air Traffic Control (ATC) within the Damascus FIR.

In the event that Damascus ACC is evacuated, the unit evacuation procedures will be activated, and time permitting, controllers will make an emergency evacuation transmission on the radio frequency in use providing pilots with alternate means of communication. The procedures to be adopted are detailed in the Damascus Contingency plan.

As soon as possible after evacuation a contingency message will be sent to all adjacent ANSP's and operators as, detailed in the Damascus Contingency Procedures. In turn they are expected to advise the affected traffic.

Other ATSUs will provide guidance as far as possible in the circumstances.

Contact information that may be used in the event of an emergency evacuation is provided in ATM Contingency Contact Detail List.

12.6 FLIGHT CREW AND OPERATOR PROCEDURES

12.6.1 For flights within the Damascus FIR – General

The procedures outlined below are to be used as guidance for pilots in the immediate aftermath of a sudden withdrawal of the ATC service as described above.

On receipt of the contingency message pilots are requested to broadcast to other flights on 121.5 and 123.45. A listening watch on these frequencies must be maintained.

12.6.2 For flights within the Damascus FIR – Westbound

----- ACC's will endeavour to provide an ATC service throughout the Damascus FIR as soon as evacuation commences. These procedures are detailed at Damascus Contingency Procedures in **Paragraph 12.7.2.**

Flights should establish communication with the next agency at the earliest opportunity stating current position, cleared flight level, next position and estimate and subsequent position.

Any flights involved in level changes should complete the manoeuvre as soon as possible in accordance with the clearance.

UNIT	TEL. No	FAX No	EMAIL	AFTN
Amman FIR				
Ankara FIR				
Baghdad FIR				
Beirut FIR				
Nicosia FIR				

ICAO MID	0020 2 2267 4845/46/41	0020 2 2267 4843	
IATA	OO962 6 569 8728	OO962 6 560 4548	saidh@iata.org

Flights may request their flight dispatch offices to forward position reports, if sending position reports to multiple ATS Units or if otherwise unable to forward position reports.

12.6.3 For flights within the Damascus FIR – Eastbound

----- ACC's will endeavour to provide an ATC service throughout the Damascus FIR as soon as evacuation commences. These procedures are detailed at Damascus Contingency Procedures in **Paragraph 12.7.2**.

Flights operating with a received and acknowledged ATC clearance will be expected to continue in accordance with the last clearance issued unless otherwise advised by ATC.

Communications with the next ATSU should be established at the earliest opportunity.

12.6.4 For flights approaching the Damascus FIR when the contingency is activated.

Not in Receipt of an ATC Clearance

In the event that Damascus ACC must be evacuated, only aircraft with received and acknowledged ATC clearances shall be permitted to transit Damascus FIR.

If unable to obtain or acknowledge an ATC clearance, flights should plan to re-route around the Damascus FIR or to land at an appropriate airfield.

In receipt of an acknowledged ATC Clearance outside Damascus FIR

Aircraft operating with a received and acknowledged ATC clearance can, at pilot's discretion, continue, but must expect a limited ATC service or no service within the Damascus FIR.

However, due to the uncertainty surrounding the contingency situation pilots are strongly advised to comply with the procedures detailed above for flights not in receipt of an ATC clearance even if they are in receipt of an acknowledged ATC clearance.

12.7 DAMASCUS FIR – CONTINGENCY ROUTE STRUCTURE

12.7.1 For activation within Damascus FIR

In a **limited service** contingency situation Damascus ACC may promulgate additional contingency tracks in addition to the published ATS Routes. Any contingency track design within the Damascus FIR will be effected at the time of the event and be dependent on the nature of the service limitation. Promulgation will be via AFTN

12.7.2 For activation within adjacent FIR

Unless instructed otherwise, flights entering the Damascus FIR should use the following contingency routes:

Communications with the next ATSU should be established at the earliest opportunity.

12.8 LONG TERM CONTINGENCY ARRANGEMENTS

In the event that Damascus loses the ability to provide an ATC service in the FIR for an extended period, and contingency plans are in place to provide the service from an alternate location.

The facility will be or is established at another location but will take some time to put in place as equipment and communication links have to be brought into operation and staff relocated. The nature of the loss of the Damascus facility may influence the time required to bring the contingency facility into service, but it is expected that under most circumstances an ATC service will be available in the Damascus FIR within 48 hours. In the interim period no ATC service will be available and all flights will be required to route clear of the Damascus FIR.

When established, the contingency facility will comprise a slightly reduced complement of control and support workstations, but with the existing range of communication facilities for clearance delivery.

Operators can expect that ATFM regulations will be in place throughout the period of the transition, with a gradual build up to near normal operating levels.

SAMPLE NOTAMS

a) Avoidance of airspace

NOTAM.....DUE TO DISRUPTION OF ATS IN THE DAMASCUS FIR ALL ACFT ARE ADVISED TO AVOID THE FIR.

b) Airspace available with limited ATS

NOTAM DUE TO ANTICIPATED DISRUPTION OF ATS IN THE DAMASCUS FIR ALL ACFT ARE ADVISED THAT THERE WILL BE LIMITED ATS. PILOTS MAY EXPERIENCE DLA AND OVERFLIGHTS MAY CONSIDER AVOIDING THE AIRSPACE.

c) Contingency plan activated

NOTAM DUE TO DISRUPTION OF ATS IN DAMASCUS FIR ALL ACFT ARE ADVISED THAT THE Damascus FIR INTERNATIONAL CONTINGENCY PLAN FOR ACFT INTENDING TO OVERFLY THE FIR IS IN EFFECT. FLIGHT PLANNING MUST BE IN ACCORDANCE WITH THE ROUTES LISTED AND FL ASSIGNMENT. PILOTS MUST STRICTLY ADHERE TO THE CONTINGENCY PROCEDURES. ONLY APPROVED INTERNATIONAL FLIGHTS ARE PERMITTED TO OVERFLY DAMASCUS AIRSPACE.

d) Non adherence to the Contingency Plan

NOTAM OPERATORS NOT ABLE TO ADHERE TO THE CONTINGENCY PLAN SHALL AVOID THE DAMASCUS FIR

CHAPTER 13: DETAILED PROCEDURES – EMIRATES FIR

13.1 FIR FOR WHICH THE CONTINGENCY PLAN APPLIES

Emirates FIR

13.2 FIRs WITH SUPPORTING PROCEDURES

Bahrain FIR
Muscat FIR
Qatar TMA
Tehran FIR

13.3 NOTIFICATION PROCEDURES

In a limited service situation notification of any service limitations and traffic management measures will be promulgated to operators and adjacent ANSPs via AFTN.

In a no service situation the Emirates ACC is likely to have been evacuated. As soon as possible after evacuation a contingency message will be sent to all adjacent ANSP's and operators. An evacuation message will be broadcast on appropriate frequencies and operators in receipt of the contingency message are asked to forward this information to affected flights wherever possible.

13.4 LIMITED SERVICE – PROCEDURES

13.4.1 Disruption of ground/air communication capability

A limited communication service will be maintained with the assistance of adjacent Aerodromes. VHF services on the Emirates frequency normally provided by Emirates Control will be delegated as appropriate to Muscat ACC and Bahrain ACC. The Appropriate frequencies will be advised by Emirates ACC and the assisting ATSUs.

Situations which could result in a Limited Service are:

Equipment Failure

- a) Transmitters (Loss of a number of Transmitters)
- b) Receivers (Loss of a number of Receivers)
- c) Aerials (Loss of a number of Aerials)
- d) Data Lines (Loss of data lines between Emirates Communications center and Emirates ACC)

Propagation

Radio Propagation resulting in partial fade-out can be affected by many factors including Solar Flares and Geomagnetic Storms.

Staffing

Reduced Staffing
Illness
Weather (Severe Weather i.e. Storm, Snow, Flooding)

Security Threat

Depending on the level of the Security threat and if essential staff are allowed to remain on Station

In the event that the operation is degraded substantially, ATFM measures may be imposed as necessary.

13.4.2 Disruption of the ability to provide control services

Emirates ACC shall determine, co-ordinate and promulgate any necessary restrictions to meet the service limitation. Traffic in possession of a valid ATC clearance shall have priority over any other traffic. En-route re-clearance of such traffic shall not be permitted except in an emergency.

Traffic without a valid clearance may be subject to tactical traffic management measures to meet the requirements of the service limitation.

Separation standards

Emirates ACC will be responsible for ensuring the co-ordination and implementation of any additional separation requirements.

Contingency tracks

Dependant on the nature of the service limitation, Emirates ACC may promulgate and activate contingency tracks for use in addition to the normal ATS Routes available..

Air Traffic Flow Management

Emirates ACC shall co-ordinate any necessary traffic management measures where necessary. Such measures may include, but are not limited to, temporary capacity restrictions and tactical rerouting measures.

Emirates ACC shall co-ordinate these restrictions where necessary with adjacent ANSPs where they may affect the flow of traffic through these units' airspace.

Responsibilities of adjacent ANSPs

The action required of adjacent ANSPs will vary dependant on the nature of the service limitation. Where such action is not contained within the inter-centre Letters of Agreement (LOAs) the requirement will be promulgated within the initial failure and restrictions message.

13.5 NO SERVICE – PROCEDURES

13.5.1 Loss of ground/air communication capability

In the event of Emirates ACC being unable to provide ground/air communications for the Emirates FIR, Emirates ACC will coordinate with adjacent FIR's to provide ground/communications to the best of their ability.

Situations which could result in No Service being provided are:

- a) Equipment Failure;
 - Transmitters (Loss of all Transmitters)
 - Receivers (Loss of all Receivers)
 - Aerials (Loss of all Aerials)
 - Data Lines (Loss of data lines)
- b) Propagation;
 - Radio Propagation resulting in total fade-out which can be caused by many factors including Solar Flares and Geomagnetic Storms.
- c) Staffing
 - No Staff
 - Illness (Seasonal Influenza)
 - Weather
 - Industrial Relations issues
- d) Evacuation of Emirates ACC
 - Fire
 - Bomb threat

Effect on flights

In the event of Emirates ACC being unable to provide ground/air communications for a sustained period of time, Muscat ACC and Bahrain ACC, in coordination with adjacent FIR's, could provide a limited communications facility to flights in the Emirates FIR.

ATFM measures may be imposed as necessary.

13.5.2 Loss of ability to provide control services

Should Emirates ACC be evacuated, the potential would exist for a major disruption to Air Traffic Control (ATC) within the Emirates FIR.

In the event of Emirates ACC being evacuated, the unit evacuation procedures will be activated, and time permitting, controllers will make an emergency evacuation transmission on the radio frequency in use providing pilots with an alternate means of communication. The procedures to be adopted are detailed in the Emirates Contingency plan.

As soon as possible after evacuation a contingency message will be sent to all adjacent ANSP's and operators as detailed in the Emirates Contingency Procedures – Muscat ACC and Bahrain ACC. In turn they are expected to advise the affected traffic.

Other ATSUs will provide guidance as far as possible in the circumstances.

Contact information that may be used in the event of an emergency evacuation is provided in ATM Contingency Contact Detail List.

13.6 FLIGHT CREW AND OPERATOR PROCEDURES

13.6.1 For flights within the Emirates FIR – General

The procedures outlined below are to be used as guidance for pilots in the immediate aftermath of a sudden withdrawal of the ATC service as described above.

On receipt of the contingency message pilots are requested to broadcast to other flights on 121.5 and 123.45. A listening watch on these frequencies must be maintained.

13.6.1.1 For flights within the Emirates FIR – Westbound

Muscat ACC will endeavour to provide an ATC service throughout the Emirates FIR as soon as evacuation commences. These procedures are detailed at Emirates Contingency Procedures in **Paragraph 13.7.2.**

Flights should establish communication with the next agency at the earliest opportunity stating current position, cleared flight level, next position and estimate and subsequent position.

Any flights involved in level changes should complete the manoeuvre as soon as possible in accordance with the clearance.

ADJACENT ATSU CONTACT DETAILS:

UNIT	TEL. No	FAX No	EMAIL	AFTN
Bahrain FIR	9731 7321080 9731 7321081	9731 7321029	bahatc@caa.gov.bh catco@caa.gov.bh	OBBBZQZX OBBBZQZA
Muscat FIR	9682 4519550 96824519507	9682 4519932	n.almazroui@caa.gov.om	OOMMZQZX
Qatar TMA	9744 4622515 9744 4656561 9744 4656562	9744 4621765	doha.ais@caa.gov.qa ahmed@caa.gov.qa	OTBDZTZX
Tehran FIR	9821 44544116 9821 44544060	9821 44544117	Maj.alireza@yahoo.com	OIIIZGZX OIIIZQZX

ICAO MID	0020 2 2267 4845/46/41	0020 2 2267 4843	
IATA	OO962 6 569 8728	OO962 6 560 4548	saidh@iata.org

Flights may request their flight dispatch offices to forward position reports, if sending position reports to multiple ATS Units or if otherwise unable to forward position reports.

13.6.2 For flights within the Emirates FIR – Eastbound

Bahrain ACC will endeavour to provide an ATC service throughout the Emirates FIR as soon as evacuation commences. These procedures are detailed at Emirates Contingency Procedures in **Paragraph 13.7.2.**

Flights operating with a received and acknowledged ATC clearance will be expected to continue in accordance with the last clearance issued unless otherwise advised by ATC.

Communications with the next ATSU should be established at the earliest opportunity.

13.6.3 For flights approaching the Emirates FIR when the contingency is activated.

Not in Receipt of an ATC Clearance

In the event that Emirates ACC must be evacuated, only aircraft with received and acknowledged ATC clearances shall be permitted to transit Emirates FIR.

If unable to obtain or acknowledge an ATC clearance, flights should plan to re-route around the Emirates FIR or to land at an appropriate airfield.

In receipt of an acknowledged ATC Clearance outside Emirates FIR

Aircraft operating with a received and acknowledged ATC clearance can, at pilot's discretion, continue, but must expect a limited ATC service or no service within the Emirates FIR.

However, due to the uncertainty surrounding the contingency situation pilots are strongly advised to comply with the procedures detailed above for flights not in receipt of an ATC clearance even if they are in receipt of an acknowledged ATC clearance.

13.7 EMIRATES FIR – CONTINGENCY ROUTE STRUCTURE

13.7.1 For activation within Emirates FIR

In a **limited service** contingency situation Emirates ACC may promulgate additional contingency tracks in addition to the published ATS Routes. Any contingency track design within the Emirates FIR will be effected at the time of the event and be dependent on the nature of the service limitation. Promulgation will be via AFTN.

13.7.2 For activation within an adjacent FIR

Unless instructed otherwise, flights entering the Emirates FIR should use the following contingency routes:

- All routes which are not mentioned will be not available;
- Ten minutes longitudinal separation from OBBB, OIII, OOMM and OTDB;
- All traffic transiting UAE FIR shall be maintaining flight level:

WESTBOUND OVERFLYING AND LANDING TRAFFIC

ATS Waypoint	ATS Route	ATSU Frequency	Transfer Waypoint	Available Flight Level	EXIT ATS Waypoint	NEXT ATSU Frequency	REMARKS
MENSA	N571	MUSCAT ACC 119.8	ATBOR	FL320, FL340, FL380 and Above	BALUS	BAHRAIN 132.125	
MENSA	N571	MUSCAT ACC 119.8	ATBOR	FL 260, FL300	TONSA	BAHRAIN 132.125	
SODEX	N563	MUSCAT ACC 124.7	ADV	FL280, FL360	BALUS	BAHRAIN 132.125	
	Z994	MUSCAT ACC 124.7	MISOD	FL300, FL320,	MEKMA	BAHRAIN 132.125	Available only for Traffic Landing Doha
TAPRA	M762	MUSCAT ACC 119.8	TAPRA	FL180	TAPRA	DUBAI APP 124.9	Available only for Traffic Landing within Dubai CTA
ITRAX	P899	MUSCAT ACC 124.7	ITRAX	FL160		ABU DHABI APP 124.4	Available only for Traffic Landing within Abu Dhabi CTA
LUDID	M628	MUSCAT ACC 124.7	LUDID	FL340 and Above		BAHRAIN ACC 2992 8918 5667 (HF)	-----

EASTBOUND

ATS Waypoint	ATS Route	ATSU Frequency	Transfer Waypoint	Available Flight Level	EXIT ATS Waypoint	NEXT ATSU Frequency	REMARKS
NADAM	A791	BAHRAIN 132.125	SHJ	FL390	LALDO	MUSCAT ACC 119.8	
			SHJ	FL250, FL290, FL330, FL370	TONVO	MUSCAT ACC 119.8	
SIR	L223	TEHRAN/ 133.4	RAGOL	FL350	TARDI	MUSCAT ACC/124.7	
LABTA	Y505	BAHRAIN /132,125	80NM FROM SHJ	FL190/FL170	-----	DUBAI APP/124.9	Available only for Traffic Landing Northern Emirates
ORSAR	G666/ B416	THRAN/13 3.4	80NM FROM SHJ	A090/FL210	-----	DUBAI APP/124.9	Available only for Traffic Landing Northern Emirates
GITEX	N685	BAHRAIN 132.125	ADV	FL270, FL310, FL390	LABRI	MUSCAT ACC 124.7	-----
			60NM FROM ADV	FL190	-----	ABU DHABI APP/124.4	Available only for Traffic Landing Southern Emirates

DEPARTING TRAFFIC WESTBOUND:

ATS Route	ATSU Frequency	Transfer Waypoint	Available Flight Level	NEXT ATSU Frequency	REMARKS
N571	DUBAI APP/124.9	60NM FROM SHJ	FL200	BAHRAIN 132.125	Dubai APP Shall Climb Traffic to FL180 then to be Transferred to Bahrain ACC
G462	ABU DHABI APP/124.4	60NM FROM ADV	FL180	BAHRAIN 132.125	Abu-Dhabi Shall Climb Traffic to FL160 then to be Transferred to Bahrain ACC
Z994	ABU DHABI APP/124.4	60NM FROM ADV	FL200	BAHRAIN 132.125	Available for Traffic Landing Doha Traffic Departing Dubai CTA Shall be transferred Locally by Dubai APP to Abu-Dhabi APP then to be Routed via TAS Route Z994

EASTBOUND

ATS Route	ATSU Frequency	Transfer Waypoint	Available Flight Level	NEXT ATSU Frequency	REMARKS
A791	DUBAI APP 124.9	LALDO	FL230	MUSCAT ACC 119.8	Dubai APP Shall Climb Traffic to FL230 then to be Transferred to Muscat ACC
L223	DUBAI APP 124.9	TARDI	FL210	MUSCAT ACC 124.7	Abu-Dhabi Shall Climb Traffic to FL210 then to be Transferred to MUSCAT ACC
N318	ABU DHABI APP 124.4	LABRI	FL230	MUSCAT ACC 124.7	Abu-Dhabi Shall Climb Traffic to FL230 then to be Transferred to MUSCAT ACC

Communications with the next ATSU should be established at the earliest opportunity.

13.8 LONG TERM CONTINGENCY ARRANGEMENTS

In the event that Emirates ACC loses the ability to provide an ATC service in the Emirates FIR for an extended period, and contingency plans are in place to provide the service from an alternate location.

The facility will be or is established at another location but will take some time to put in place as equipment and communication links have to be brought into operation and staff relocated. The nature of the loss of the main facility may influence the time required to bring the contingency facility into service, but it is expected that under most circumstances an ATC service will be available in the Emirates FIR within 48 hours. In the interim period no ATC service will be available and all flights will be required to route clear of the Emirates FIR.

When established, the contingency facility will comprise a slightly reduced complement of control and support workstations, but with the existing range of communication facilities for clearance delivery.

Operators can expect that ATFM regulations will be in place throughout the period of the transition, with a gradual build up to near normal operating levels.

SAMPLE NOTAMS

a) Avoidance of airspace

NOTAM.....DUE TO DISRUPTION OF ATS IN THE EMIRATES FIR ALL ACFT ARE ADVISED TO AVOID THE FIR.

b) Airspace available with limited ATS

NOTAM DUE TO ANTICIPATED DISRUPTION OF ATS IN THE EMIRATES FIR ALL ACFT ARE ADVISED THAT THERE WILL BE LIMITED ATS. PILOTS MAY EXPERIENCE DLA AND OVERFLIGHTS MAY CONSIDER AVOIDING THE AIRSPACE.

c) Contingency plan activated

NOTAM DUE TO DISRUPTION OF ATS IN EMIRATES FIR ALL ACFT ARE ADVISED THAT THE Emirates FIR INTERNATIONAL CONTINGENCY PLAN FOR ACFT INTENDING TO OVERFLY THE FIR IS IN EFFECT. FLIGHT PLANNING MUST BE IN ACCORDANCE WITH THE ROUTES LISTED AND FL ASSIGNMENT. PILOTS MUST STRICTLY ADHERE TO THE CONTINGENCY PROCEDURES. ONLY APPROVED INTERNATIONAL FLIGHTS ARE PERMITTED TO OVERFLY EMIRATES AIRSPACE.

d) Non adherence to the Contingency Plan

NOTAM OPERATORS NOT ABLE TO ADHERE TO THE CONTINGENCY PLAN SHALL AVOID THE EMIRATES FIR

CHAPTER 14: DETAILED PROCEDURES – SANA’A FIR

14.1 FIR FOR WHICH THE CONTINGENCY PLAN APPLIES

Sana’a FIR

14.2 FIRs WITH SUPPORTING PROCEDURES

Addis Ababa FIR
Asmara FIR
Bahrain FIR
Jeddah FIR
Mogadishu FIR
Mumbai FIR
Muscat FIR

14.3 NOTIFICATION PROCEDURES

In a limited service situation notification of any service limitations and traffic management measures will be promulgated to operators and adjacent ANSPs via AFTN.

In a no service situation the ACC is likely to have been evacuated. As soon as possible after evacuation a contingency message will be sent to all adjacent ANSP’s and operators. An evacuation message will be broadcast on appropriate frequencies and operators in receipt of the contingency message are asked to forward this information to affected flights wherever possible.

14.4 LIMITED SERVICE – PROCEDURES

14.4.1 Disruption of ground/air communication capability

A limited communication service will be maintained with the assistance of adjacent Aerodromes. VHF services on the Sana’a frequency normally provided by Sana’a Control will be delegated as appropriate to the other ATS units namely ----- . Appropriate frequencies will be advised by Sana’a and the assisting ATS units.

Situations which could result in a Limited Service are:

Equipment Failure

- a) Transmitters (Loss of a number of Transmitters)
- b) Receivers (Loss of a number of Receivers)
- c) Aerials (Loss of a number of Aerials)
- d) Data Lines (Loss of data lines between Sana’a Communications center and Sana’a ACC)

Propagation

Radio Propagation resulting in partial fade-out can be affected by many factors including Solar Flares and Geomagnetic Storms.

Staffing

Reduced Staffing
Illness
Weather (Severe Weather i.e. Storm, Snow, Flooding)

Security Threat

Depending on the level of the Security threat and if essential staff are allowed to remain on Station

In the event that the operation is degraded substantially, ATFM measures may be imposed as necessary.

14.4.2 Disruption of ability to provide control services

Sana'a ACC shall determine, co-ordinate and promulgate any necessary restrictions to meet the service limitation. Traffic in possession of a valid ATC clearance shall have priority over any other traffic. En-route re-clearance of such traffic shall not be permitted except in emergency.

Traffic without a valid clearance may be subject to tactical traffic management measurements to meet the requirements of the service limitation.

Separation standards

Sana'a ACC will be responsible for ensuring the co-ordination and implementation of any additional separation requirements.

Contingency tracks

Dependant on the nature of the service limitation, Sana'a may promulgate and activate contingency tracks for use in addition to the normal ATS Routes available.

Air Traffic Flow Management

Sana'a ACC shall co-ordinate any necessary traffic management measures where necessary. Such measures may include, but are not limited to, temporary capacity restrictions and tactical rerouting measures.

Sana'a ACC shall co-ordinate these restrictions where necessary with adjacent ANSPs where they may affect the flow of traffic through these units airspace.

Responsibilities of adjacent ANSPs

The action required of adjacent ANSPs will vary dependant on the nature of the service limitation. Where such action is not contained within the inter-centre Letters of Agreement (LOAs) the requirement will be promulgated within the initial failure and restrictions message.

14.5 NO SERVICE – PROCEDURES

14.5.1 Loss of ground/air communication capability

In the event of Sana’a ACC being unable to provide ground/air communications for Sana’a FIR ----- ATC Unit will coordinate with adjacent FIR’s to provide ground/communications to the best of their ability.

Situations which could result in No Service being provided are:

- a) Equipment Failure;
 - Transmitters (Loss of all Transmitters)
 - Receivers (Loss of all Receivers)
 - Aerials (Loss of all Aerials)
 - Data Lines (Loss of data lines)
- b) Propagation;
 - Radio Propagation resulting in total fade-out which can be caused by many factors including Solar Flares and Geomagnetic Storms.
- c) Staffing
 - No Staff
 - Illness (Seasonal Influenza)
 - Weather
 - Industrial Relations issues
- d) Evacuation of Sana’a ACC
 - Fire
 - Bomb threat

Effect on flights

In the event of Sana’a ACC being unable to provide ground/air communications for a sustained period of time ----- ATC Unit in coordination with adjacent FIR’s could provide a limited communications facility to flights in the Sana’a FIR.

ATFM measures may be imposed as necessary.

14.5.2 Loss of ability to provide control services

Should Sana’a ACC be evacuated the potential would exist for a major disruption to Air Traffic Control (ATC) within the Sana’a FIR.

In the event that Sana'a ACC is evacuated, the unit evacuation procedures will be activated, and time permitting, controllers will make an emergency evacuation transmission on the radio frequency in use providing pilots with alternate means of communication. The procedures to be adopted are detailed in the Sana'a Contingency plan.

As soon as possible after evacuation a contingency message will be sent to all adjacent ANSP's and operators as, detailed in the Sana'a Contingency Procedures. In turn they are expected to advise the affected traffic.

Other ATSUs will provide guidance as far as possible in the circumstances.

Contact information that may be used in the event of an emergency evacuation is provided in ATM Contingency Contact Detail List.

14.6 FLIGHT CREW AND OPERATOR PROCEDURES

14.6.1 For flights within the Sana'a FIR – General

The procedures outlined below are to be used as guidance for pilots in the immediate aftermath of a sudden withdrawal of the ATC service as described above.

On receipt of the contingency message pilots are requested to broadcast to other flights on 121.5 and 123.45. A listening watch on these frequencies must be maintained.

14.6.2 For flights within the Sana'a FIR – Westbound

----- ACC's will endeavour to provide an ATC service throughout the Sana'a FIR as soon as evacuation commences. These procedures are detailed at Sana'a Contingency Procedures in **Paragraph 14.7.2.**

Flights should establish communication with the next agency at the earliest opportunity stating current position, cleared flight level, next position and estimate and subsequent position.

Any flights involved in level changes should complete the manoeuvre as soon as possible in accordance with the clearance.

UNIT	TEL. No	FAX No	EMAIL	AFTN
Addis Ababa FIR				
Asmara FIR				
Bahrain FIR				
Jeddah FIR				
Mogadishu FIR				
Mumbai FIR				
Muscat FIR				

ICAO MID	0020 2 2267 4845/46/41	0020 2 2267 4843	
IATA	OO962 6 569 8728	OO962 6 560 4548	saidh@iata.org

Flights may request their flight dispatch offices to forward position reports, if sending position reports to multiple ATS Units or if otherwise unable to forward position reports.

14.6.3 For flights within the Sana'a FIR – Eastbound

----- ACC's will endeavour to provide an ATC service throughout the Sana'a FIR as soon as evacuation commences. These procedures are detailed at Sana'a Contingency Procedures in **Paragraph 14.7.2**

Flights operating with a received and acknowledged ATC clearance will be expected to continue in accordance with the last clearance issued unless otherwise advised by ATC.

Communications with the next ATSU should be established at the earliest opportunity.

14.6.4 For flights approaching the Sana'a FIR when the contingency is activated.

Not in Receipt of an ATC Clearance

In the event that Sana'a ACC must be evacuated, only aircraft with received and acknowledged ATC clearances shall be permitted to transit Sana'a FIR.

If unable to obtain or acknowledge an ATC clearance, flights should plan to re-route around the Sana'a FIR or to land at an appropriate airfield.

In receipt of an acknowledged ATC Clearance outside Sana'a FIR

Aircraft operating with a received and acknowledged ATC clearance can, at pilot's discretion, continue, but must expect a limited ATC service or no service within the Sana'a FIR.

However, due to the uncertainty surrounding the contingency situation pilots are strongly advised to comply with the procedures detailed above for flights not in receipt of an ATC clearance even if they are in receipt of an acknowledged ATC clearance.

14.7 SANA'A FIR – CONTINGENCY ROUTE STRUCTURE

14.7.1 For activation within Sana'a FIR

In a **limited service** contingency situation Sana'a ACC may promulgate additional contingency tracks in addition to the published ATS Routes. Any contingency track design within the Sana'a FIR will be effected at the time of the event and be dependent on the nature of the service limitation. Promulgation will be via AFTN



CONTINGENCY ROUTING SCHEME FOR ASIA/MIDDLE EAST/EUROPE – 2003 (CRAME-03)

Version II

Approved by the President on behalf of the ICAO Council

Introduction

The Contingency Routing Scheme for Asia/Middle East/Europe – 2003 (CRAME-03) has the objectives of ensuring continued safety of air navigation within FIRs affected by airspace closures and minimising effects on international civil air transportation in the event of military action occurring in the Middle East area. The procedures contained in this document supplements or details, where so required, those actions and procedures prescribed in State specific contingency plans.

The contingency routing scheme is designed to provide alternative routes to/from Asia, Middle East, and Europe, which will allow aircraft operators to avoid airspace in the Middle East, as necessary, with a minimum of disruption to flight operations.

It is not possible to predict with certainty what airspace will remain open or closed to civil aviation and for what period of time. Experience from operating similar contingency plans under similar conditions shows that a flexible approach to airspace management is required. Frequent changes in military objectives and concentrations of military activities will affect the airspace available for civil operations. In this regard, the contingency routing scheme takes into account that States may need to modify the extent to which they can support the contingency arrangements. Accordingly, this contingency scheme has been designed to contain a variety of options, which can be used for varying scenarios.

It is recognized that operators may incur economic penalties during application of the contingency scenarios. Therefore, air traffic flow control measures will be implemented as required.

Airspace Definition

The contingency routing scenarios are designed for air traffic operating through the following flight information regions (FIRs) south and north of the Himalayas (see charts in **Appendix B**): Addis Ababa, Alma Ata, Asmara, Bahrain, Bangkok, Cairo, Colombo, Delhi, Emirates, Frunze, Jeddah, Kabul, Karachi, Khartoum, Kunming, Lahore, Lanzhou, Madras, Male, Mogadishu, Mumbai, Muscat, Sana'a, Semipalatinsk, Seychelles, Tehran, Ulaan Baatar, Urumqi and Vientiane.

Contingency Situation

These procedures have been developed to provide alternative routings for various scenarios in the event that military activity in the Middle East closes airspace to international civil aviation or where operators wish to avoid airspace due to a perceived risk to the safety of flight.

Responsibilities

Elements of this contingency scheme may be activated by NOTAM or Aeronautical Information Publication (AIP) Supplement as required and issued by the air traffic services (ATS) authorities responsible for the FIRs concerned. ATS authorities will notify by NOTAM any closures of ATS routes and airspace that become potentially hazardous to air traffic. The NOTAM should give information on any degradation of communications, navigation and surveillance services. The affected ATS unit should activate its contingency scheme by the most direct means possible (direct speech, AFTN (SS priority) or any other means of priority message) to the following:

- a) all airborne aircraft potentially affected by such closures or degradation of services
 - b) adjacent FIRs and air traffic control (ATC) Centres;
 - c) to the following ICAO Regional Offices:
 - 1) Bangkok (AFTN: VTBBICOX);
 - 2) Cairo (SITA: CAICAYA);
 - 3) Nairobi (SITA: NBOCAYA.); and
 - 4) Paris (SITA: PAREUYA); and
 - d) and to the following IATA Regional Offices:
 - 1) Singapore (WSSSIATA);
 - 2) Amman;
 - 3) Nairobi; and
 - 4) Brussels.
-

ICAO Approval

Approval

By agreement of States and international organizations through the ICAO Regional Offices of Asia/Pacific, Middle East and European and North Atlantic, this contingency scheme is approved by the President on behalf of the ICAO Council.

Coordination

The appropriate ICAO Regional Office will distribute this contingency scheme to all relevant States and international organisations within their regions.

Amendment and Review

This contingency scheme should be reviewed regularly and amended as appropriate. In addition, States should periodically review their own national contingency plan and coordinate any amendments with neighbouring States and ICAO.

Revision Conditions

Amendments and revisions are to be coordinated with affected States, organisations and ICAO. Proposed amendments to the contingency scheme should be forwarded to the relevant ICAO Regional Office for action.

Contact Names and Telephone Numbers

To be provided by State ATS Providers and international organizations to the relevant ICAO Regional Office for distribution. A list of contact details is contained in **Appendix A**.

Contingency Scenarios

Description

This contingency scheme provides a series of options for alternative routings where ATS routes and airspace are closed or operators choose to avoid airspace, which could pose a risk to the safety of flight.

Airspace and Routes

Contingency routing scheme

This contingency scheme has been developed based on existing ATS routes and making use of appropriate contingency routes in the Contingency Routing Plan for Asia/Middle East/Europe (CRAME). Priority has been given to safety considerations and to ensuring that as far as possible, ATC operations are not complicated. Temporary routes are also established where necessary.

The contingency routings are designed to take into consideration that disruptions to normal traffic flows have the potential to create an additional burden and complexity to ATC. Therefore, temporary contingency routes have been designed to be safe and instantly manageable by ATC. This may require additional track miles to be flown by the aircraft operator.

The contingency schemes were given CRAME designators based on various scenarios that may take place, which are:

Scenario 1 (Yellow routes): Flights planning to operate on existing routes to and from Gulf States aerodromes that are open to civil flights, and overflights are permitted over portions of the Arabian Peninsular.

Scenario 2 (Pink routes): Flights planning to avoid the Gulf Area by operating on existing routes through Pakistan and Iran via the Arabian Sea.

Scenario 3 (Blue routes): Flights planning to avoid the Gulf Area by operating through Pakistan, Iran and Turkey.

Scenario 4 (Orange routes): Flights planning to avoid the Gulf Area, Iran and Turkey by operating through Afghanistan and India.

Scenario 5 (Red routes): Flights planning to avoid the Gulf Area, Iran, Turkey and Afghanistan by operating across the Arabian Sea and Indian Ocean.

Scenario 6 (Green routes): Flights planning to avoid the Middle East entirely by operating north of the Himalayas or east and north of Afghanistan (Kabul FIR).

The scenarios above are further delineated in terms of alternative routes that are available to meet each scenario's stated objective. This will normally be in the form of a contingency route designator (e.g. *CS Green 6.4*) or an existing code where the route is already specified as a part of CRAME or the ATS route designator for established ATS routes. Details of these alternative routes that apply to each scenario are contained in the charts at **Appendix B**. Except for Scenarios 5 and 6, which are limited to existing route structures, the route details and procedures associated with each contingency route is at **Appendix C**.

Special Note:

Under Scenarios 1 to 5 above, airline company policy may dictate that their aircraft avoid the Middle East area completely as well as operations over Afghanistan, which may require them to plan via China, North of the Himalayas in accordance with Scenario 6.

Air Traffic Management

ATS Responsibilities

Normal communications, navigation and surveillance (CNS) and air traffic management (ATM) are expected to be provided for the FIRs concerned.

It should be noted that tactical air traffic control considerations during periods of over-loading may require re-assignment of routes or portions thereof. Where possible, the designated alternative routes have been designed to maximize the use of existing ATS route structures and communication services.

The State ATS provider should issue NOTAMs detailing the services and facilities not available, including where known, an expected date of restoration, and giving information on the arrangements for the provision of alternative services where appropriate. In addition, if a disruption to service is anticipated, the State ATS provider should publish a NOTAM that alerts the operator to the possible disruption and what actions are expected to take place. This will allow both operators and affected State ATS providers to prepare in advance of any such occurrence.

Separation

Separation criteria will be applied in accordance with the *Procedures for Air Navigation Services—Air Traffic Management* (PANS-ATM, Doc 4444) and the Regional Supplementary Procedures (Doc 7030).

**Level Restrictions:
Regional Route
Structure**

Wherever possible, aircraft on long-haul international flights shall be given priority and cleared to optimum cruising levels, i.e. at FL 280 and above.

Air Traffic Flow Management

Air traffic flow management (ATFM) measures will be introduced as required to ensure an optimum flow of air traffic to and through areas during times when demand exceeds or is expected to exceed the available capacity. ATFM also should ensure that safety is not compromised by the development of unacceptable levels of traffic congestion. During the implementation of this contingency scheme there could be periods of traffic build up that would require implementation of ATFM.

ATS providers with responsibility for contingency routes should coordinate in advance appropriate ATFM arrangements that include setting acceptable traffic flow rates for the various routing scenarios. An example of traffic flow rates based on applying 10 minute and 15 minute longitudinal separation is provided in **Appendix F**. Flow rates would need to be established for each contingency route by States concerned.

In order to regulate and maximise the airspace capacity and make use of available flight levels, it may be necessary to impose speed restrictions/requirements on some routes for specific time periods.

Tactical flow management measures which monitor the progress of individual aircraft will intervene when required to meet ATM constraints.

States should review the airport traffic movement curfew hours, with a view to providing leniency during the critical period when the contingency routes are activated so as to allow for late arrivals or departures as a result of flow control measures.

Transition to contingency scheme the event of airspace closure

During times of uncertainty when airspace closures seem possible, aircraft operators should be prepared for a possible change in routing while en-route. This would require familiarization of the alternative routes outlined in this contingency scheme as well as what may be promulgated by a State via NOTAM or AIP.

In the event of an airspace closure that has not been promulgated, ATC should if possible broadcast to all aircraft in their airspace what airspace is being closed and to stand by for further ATC instructions.

ATS providers should recognize that when closure of airspace or airports are promulgated, individual airlines may have different company requirements as to their alternative routings. ATC should be alert to respond to any request by aircraft and react commensurate with safety.

Transfer of Control and Co-ordination

Transfer of Control The transfer of control and communication should be at the common FIR boundary unless there is mutual agreement between the adjacent ATS units. State ATS providers should also review current co-ordination requirements in light of contingency operations or short notice airspace closures.

Communications

Flight Monitoring In areas where a control service is not available, a flight monitoring and broadcast procedure should be used. The ICAO Traffic Information Broadcast by Aircraft (TIBA) procedure as shown in **Appendix D** should be used for flights in the Asia Pacific and Middle East Regions on VHF 128.95 MHz and the IATA In-flight Broadcast Procedure (IFBP) is used for flights in African/Indian Ocean FIRs as specified in **Appendix E**, Paragraph 6.1 on VHF 126.9 MHz.

Pilot and Operator Procedures

Intercept Operations

Pilots need to be aware that a contingency situation involving military activity carries the possibility of being intercepted by military aircraft. Aircraft operators must therefore be familiar with international intercept procedures contained in Annex 2 to the Chicago Convention, paragraph 3.8 and Appendix 2, Sections 2 and 3 as shown in **Appendix G**, as well as specific intercept procedures that may be contained in a State AIP.

Pilots need to continuously guard the VHF emergency frequency 121.5 MHz and should operate their transponder at all times during flight, regardless of whether the aircraft is within or outside airspace where secondary surveillance radar (SSR) is used for ATS purposes. Transponders should be set on a discrete code assigned by ATC or select code 2000 if ATC has not assigned a code.

If an aircraft is intercepted by another aircraft, the pilot shall immediately:

- a) follow the instructions given by the intercepting aircraft, interpreting and responding to visual signals in accordance with international procedures;
- b) notify, if possible, the appropriate air traffic services unit;
- c) attempt to establish radio communication with the intercepting aircraft by making a general call on the emergency frequency

121.5 MHz and 243 MHz if equipped; and

- d) set transponder to Code 7700, unless otherwise instructed by the appropriate ATS unit.

If any instructions received by radio from any sources conflict with those given by the intercepting aircraft, the intercepted aircraft shall request immediate clarification while continuing to comply with the instructions given by the intercepting aircraft.

Over flight Approval

Over flight approval requirements

Aircraft operators are to obtain over flight approval from States for flights operating through their FIRs, where required. In a contingency situation, flights may be rerouted at short notice and it may not be possible for operators to give the required notice to obtain approval. This would be a particular problem when airspace is closed at short notice. States responsible for the FIRs in which contingency routes are established should consider making special arrangements to expedite flight approvals in these contingency situations.

States should facilitate the entry/over flight of humanitarian flights within their territorial airspace/FIRs in case be requested by Humanitarian Agencies.

Appendices

Appendix A

List of contact persons and details

Appendix B

Chart(s) of Contingency routes

Appendix C

Matrix containing details of contingency routes

Appendix D

ICAO Contingency TIBA Procedures

Appendix E

IATA In-flight Broadcasting Procedures

Appendix F

ATFM air traffic flow rates

Appendix G

ICAO Interception Procedures

DRAFT

Appendix A

List of Contacts

DRAFT

Appendix B

Contingency Routes

DRAFT

CONTINGENCY SCHEME ROUTE DETAILS

1. INTRODUCTION

1.1 The following scenarios provide aircraft operators with alternative routings to their normal routes that may be affected by airspace closures.

ROUTES — DESCRIPTION

Scenario 1 (Yellow routes): Flights planning to operate on existing routes to and from Gulf State aerodromes that are open to civil flights, and overflights are permitted over portions of the Arabian Peninsular

Scenario 2 (Pink routes): Flights planning to avoid the Gulf area on existing routes through Pakistan and Iran via the Arabian Sea

Scenario 3 (Blue routes): Flights planned to avoid the Gulf area by operating through Pakistan, Iran and Turkey

3.1	TIGER/G452	TIGER–G452–RK–ZAHEDAN
3.2	P628/ZAHEDAN	P628–ASOPO–A791–BHOPAL–‘PRA’ VOR–A791/R462–CHOR–B210–NAWABSHAH–PG–G208–ZAHEDAN
3.3	AAE/ZAHEDAN	AAE–N895W–SASRO–G208(W)–CHOR–KC–PARET–PG–ZAH
3.4	ZAHEDAN/AAE	ZAH–G208–PG–P318 (S)–DOSTI–M638–KC–G208(E)–AAE
3.5	KC/JI	KC–A791 L308 (W)–PARET–JI
3.6	JI/KC	JI–A791(E)–LATEM–KC

Appendix C

Contingency Scheme Route Details

Scenario 4 (Orange routes): Flights planned to avoid the Gulf area, Iran and Turkey by operating through India, Pakistan and Afghanistan

4.1	G500	DELHI–A466–LAHORE–A466–JHANG ISMAIL-KHAN (DI)–P500–PADDY–FIRUZ–P500/G500 <i>Note:— Contingency levels FL310-FL390 within Kabul FIR.</i>
4.2	M881	DELHI–A466–LAHORE–A466–JHANG ISMAIL KHAN (DI)–P500–ADINA M881–LAJAK EGPAN <i>Note 1:— Contingency levels FL280-FL290 within Kabul FIR.</i> <i>Note 2:— M881 conflicts laterally with ATS route P500.</i>
4.3	A466	DELHIA–466–LAHORE–A466–DI–AMDAR–TERMEZ <i>Note:— Contingency flight levels FL290–FL390.</i>
4.4	N644	JHANG ISMAIL KHAN (DI)–N644–PAVLO–LEMOD <i>Note:— Contingency levels FL310-FL390.</i> <i>RNP 10 approved aircraft only</i>
4.5	L750	TIGER–G202N–ZHOB–L750–ROSIE–RANAH <i>Note:— Contingency levels FL310-FL390</i> <i>RNP 10 approved aircraft only</i>
4.6	B466/N636/P628/G792	NAWABSHAH–B466/N636–KANDAHAR–N636/P628–CHARN–G792–MASHHAD–GIRUN or MASHHAD–G775–ASHGABAT <i>Note:— Contingency levels FL310-FL350.</i> <i>RNP 10 approved aircraft only</i>
4.7	P628/B466/	P628–ASOPO–A791–BHOPAL–‘PRA’ VOR–A791W–CHOR–B210–NAWABSHAH–B466–KANDAHAR–V390–CHARN–G792–MASHHAD–GIRUN or MASHHAD–G775–ASHGABAT <i>Note 1:— Contingency levels FL310-FL350 within Kabul FIR.</i> <i>Note 2:— Within Tehran FIR G792 minimum enroute altitude FL310.</i>

Appendix C

Contingency Scheme Route Details

Scenario 5 (Red routes): **Flights planned to avoid the Gulf Area, Iran, Turkey, and Afghanistan by operating across the Arabian Sea and the Indian Ocean**

CRAME 3A and 2C — as amended	Mumbai (BBB)–P751–BOLUR (1700.7N 063 07.4E)–ASPUX (1744.1N 06000.1E)–UN315–Haima (HAI)–LOTOS (N22 00.0 E050 39.2) <i>Note 1:— CRAME 3A is identical to CRAME 2C.</i> <i>Note 2:— Traffic may route beyond LOTOS (N22:00.0 E050:39.2) via:</i> i) LOTOS–N569 ALRIK (N2206.5 E04825.6) L883 PMA YEN UL300–Luxor (LXR)–A727–Cairo (CVO). <i>Westbound routing only;</i> ii) LOTOS– N569/L883 PMA YEN –Yenbo (YEN)–A411–WEJ–A411–Sharm el Sheikh (SHM)–A411–Cairo (CVO). <i>Westbound routing only;</i> iii) Cairo (CVO)–A727–SEMRU (N28:02.0 E032:03.1)–B418–WEJH (WEJ)–UL573–Dafinah (DFN)–M628 UMRAN (N2315.1 E04520.4) L883 ALRIK (N2206.5 E04825.6) –LOTOS (N22 12.7 E045 48.0). <i>Eastbound routing only;</i> iv) LOTOS–N569 ALRIK L883 – UMRAN (N2315.1 E04520.4) M628 Dafinah (DFN)–G782–Jeddah (JDW). Or N569 RABTO (N2216.1 E04003.4) G782 JDW <i>Westbound routing only;</i> v) Jeddah (JDW)–B417–BONUM (N2212.9 E03938.1)–N569 RABTO (N2216.1 E04003.4) N569–LOTOS. <i>Eastbound routing only;</i> and vi) LOTOS–Y100–KFA for flights to/from Bahrain, Dammam and Doha airports (consult local NOTAMs).
CRAME 3B	Katunayake (KAT)–P570–TVM– UL425–ASPUX (1744.1N 06000.1E)–UN315–HAI–LOTOS (N22 00.0 E050 39.2) then flight plan route to destination (consult local NOTAMs). <i>Note:— This is the most northerly route available. Traffic may route beyond LOTOS (N22:00.0 E050:39.2) via:</i> i) LOTOS–N569 ALRIK (N2206.5 E04825.6) L883 PMA YEN UL300–Luxor (LXR)–A727–Cairo (CVO). <i>Westbound routing only;</i> ii) LOTOS– N569/L883 PMA YEN –Yenbo (YEN)–A411–WEJ–A411–Sharm el Sheikh (SHM)–A411–Cairo (CVO). <i>Westbound routing only;</i> iii) Cairo (CVO)–A727–SEMRU (N28:02.0 E032:03.1)–B418–WEJH (WEJ)–UL573–Dafinah (DFN)–M628 UMRAN (N2315.1 E04520.4) L883 ALRIK (N2206.5 E04825.6) –LOTOS (N22 12.7 E045 48.0). <i>Eastbound routing only;</i>

Appendix C

Contingency Scheme Route Details

	iv) LOTOS–N569 ALRIK L883 – UMRAN (N2315.1 E04520.4) M628 Dafinah (DFN)–G782–Jeddah (JDW). Or N569 RABTO (N2216.1 E04003.4) G782 JDW. <i>Westbound routing only;</i> v) Jeddah (JDW)–B417–BONUM (N2212.9 E03938.1)–N569 RABTO (N2216.1 E04003.4) N569–LOTOS. <i>Eastbound routing only; and</i> vi) LOTOS–Y100–KFA for flights to/from Doha (consult local NOTAMs).
CRAME 4A	Mumbai (BBB)–P751–RIGAM (N14:39.5 E05304.2)–B526–RIYAN (RIN)–M559 ITOLI (N1528.4 E04509.4) M301 SAA–UR777–DANAK–UB413/R776–Port Sudan then flight plan route to destination (consult local NOTAMs). <i>Note:— CRAME 4A assumes that the Sanaa and Jeddah FIRs are available. Traffic may also route beyond ODAKA (N14:40.6 E052:34.0) as follows:</i> - RIGAM–P751–Aden (KRA)–B413– DANAK–B413/R776–Port Sudan then flight plan route to destination (consult local NOTAMs).
CRAME 4 B	Katunayake (KAT)–P570–Trivandrum (TVM) –UL425–DONSA (N14:35.2 E065:11.6)–UP323– GIDAS DCT–SOC (N1238.3 E05354.4) (Socotra) – N764 –RIN– M559 ITOLI (N1528.4 E04509.4) M301 –SAA–UR777–DANAK–UB413/R776–Port Sudan then flight plan route to destination (consult local NOTAMs). <i>Note: — CRAME 4B assumes the Sanaa and Jeddah FIRs are open. Traffic may also route beyond RASEM (N14:11.5 E0050:28.6) as follows:</i> - ORBAT (N1406.6 E05039.4)– P751–Aden (KRA) – B413/R776–Port Sudan then flight plan route to destination (consult local NOTAMs).
Flights departing/arriving/overflying from/to Hong Kong, Thailand and northern India.	
CRAME 5A	Mumbai (BBB)–G450–ORLID (N11 17.1 E060 00.1)–UT382–AVEDA (N0913.5 E04911.4) – DAROT (N0911.4 E04721.2)–Hargeisa (HARGA) then flight plan route to destination (consult local NOTAMs).
CRAME 5B	Male (MLE)–DCT–MAGUG (N05 20.7 E006 00.) UT384 DAROT (N0911.4 E04721.2)–Hargeisa (HARGA) then flight plan route to destination (consult local NOTAMs).

Appendix C

Contingency Scheme Route Details

	<i>Note:— Traffic may route beyond Hargeisa via—DCT—Dire—Dawa (DWA) – W886—Addis Ababa (ADS)—UR2—TIKAT (N12:24.3 E035:38.2) then flight plan route to destination (consult local NOTAMs).</i>

DRAFT

Appendix C

Contingency Scheme Route Details

Scenario 6 (Green routes): Flights planned to avoid the Middle East entirely by flying north of the Himalayas or east and north of Afghanistan (Kabul FIR)

6.1	L888/A360	BANGKOK (BKK)–B346–LUANG PRABANG (LPB)–B218–SAGAG–A581–BIDRU–L888–KUQA–A460–RULAD (N4330 E08044) G270 BERTO (N4332 E07948.4)–A360
6.2	B330/A368	BANGKOK (BKK)–B346–LUANG PRABANG (LPB)–B218–SAGAG–BIDRU–A581–KUNMING (KMG)–G212–JINTANG–B330–YABRAI–B215–FUKANG–A368–SARIN
6.3	B330	BANGKOK (BKK)–B346–LUANG PRABANG (LPB)–B218–SAGAG–BIDRU–A581–KUNMING (KMG)–G212–JINTANG–B330–YABRAI–MORIT
6.4	B215/A364	DELHI–A466–LAHORE–J121–BATAL–J131–GILGIT–G325–PURPA–B215–SACHE–A364–KASHI (KHG) KURUM–R/UR356
6.5	B215/A360	DELHI–A466–LAHORE–J121–BATAL–J131–GILGIT–G325–PURPA–B215–KUQA–A460–RULAD (N4330 E08044) G270 BERTO (N4332 E07948.4)–A360
6.6	B215/A368	DELHI–A466–LAHORE–J121–BATAL–J131–GILGIT–G325–PURPA–B215–FUKANG–A368–SARIN
6.7	B215/B206	DELHI–A466–LAHORE–J121–BATAL–J131–GILGIT–G325–PURPA–B215–FUKANG–B206–ALTAY

**TRAFFIC INFORMATION BROADCASTS BY
AIRCRAFT (TIBA) AND RELATED OPERATING PROCEDURES**

(See Annex 11, Chapter 4, 4.2.2, Note 2)

**1. Introduction and applicability
of broadcasts**

1.1 Traffic information broadcasts by aircraft are intended to permit reports and relevant supplementary information of an advisory nature to be transmitted by pilots on a designated VHF radiotelephone (RTF) frequency for the information of pilots of other aircraft in the vicinity.

1.2 TIBAs should be introduced only when necessary and as a temporary measure.

1.3 The broadcast procedures should be applied in designated airspace where:

- a) there is a need to supplement collision hazard information provided by air traffic services outside controlled airspace; or
- b) there is a temporary disruption of normal air traffic services.

1.4 Such airspaces should be identified by the States responsible for provision of air traffic services within these airspaces, if necessary with the assistance of the appropriate ICAO Regional Office(s), and duly promulgated in aero-nautical information publications or NOTAM, together with the VHF RTF frequency, the message formats and the procedures to be used. Where, in the case of 1.3 a), more than one State is involved, the airspace should be designated on the basis of regional air navigation agreements and promulgated in Doc 7030.

1.5 When establishing a designated airspace, dates for the review of its applicability at intervals not exceeding 12 months should be agreed by the appropriate ATS authority(ies).

2. Details of broadcasts

2.1 VHF RTF frequency to be used

2.1.1 The VHF RTF frequency to be used should be determined and promulgated on a regional basis. However, in the case of temporary disruption occurring in controlled airspace, the States responsible may promulgate, as the VHF RTF frequency to be used within the limits of that airspace, a frequency used normally for the provision of air traffic control service within that airspace. (For the purpose of this contingency scheme, broadcasts shall be made on 128.95 MHz).

2.1.2 Where VHF is used for air-ground communications with ATS and an aircraft has only two serviceable VHF sets, one should be tuned to the appropriate ATS frequency and the other to the TIBA frequency.

2.2 Listening watch

A listening watch should be maintained on the TIBA frequency 10 minutes before entering the designated airspace until leaving this airspace. For an aircraft taking off from an aerodrome located within the lateral limits of the designated airspace listening watch should start as soon as appropriate after take-off and be maintained until leaving the airspace.

2.3 Time of broadcasts

2.3.1 A broadcast should be made:

- a) 10 minutes before entering the designated airspace or, for a pilot taking off from an aerodrome located within the lateral limits of the designated airspace, as soon as appropriate after take-off;
- b) 10 minutes prior to crossing a reporting point;
- c) 10 minutes prior to crossing or joining an ATS route;
- d) at 20-minute intervals between distant reporting points;
- e) 2 to 5 minutes, where possible, before a change in flight level;
- f) at the time of a change in flight level; and
- g) at any other time considered necessary by the pilot.

2.4 Forms of broadcast

2.4.1 The broadcasts other than those indicating changes in flight level, i.e. the broadcasts referred to in 2.3 a), b), c), d) and g), should be in the following form:

ALL STATIONS (necessary to identify a traffic information broadcast)

(call sign)

FLIGHT LEVEL (number) (or CLIMBING* TO FLIGHT LEVEL (number))

(direction)

(ATS route) (or DIRECT FROM (position) TO (position))

POSITION (position**) AT (time)

ESTIMATING (next reporting point, or the point of crossing or joining a designated ATS route) AT (time)

Appendix D

ICAO Traffic Information Broadcasts by Aircraft

(call sign)

FLIGHT LEVEL (number)

(direction)

DRAFT

Fictitious example:

“ALL STATIONS WINDAR 671 FLIGHT LEVEL 350 NORTHWEST BOUND DIRECT FROM PUNTA SAGA TO PAMPA POSITION 5040 SOUTH 2010 EAST AT 2358 ESTIMATING CROSSING ROUTE LIMA THREE ONE AT 4930 SOUTH 1920 EAST AT 0012 WINDAR 671 FLIGHT LEVEL 350 NORTHWEST BOUND OUT”

2.4.2 Before a change in flight level, the broadcast (referred to in 2.3 e)) should be in the following form:

ALL STATIONS

(call sign)

(direction)

(ATS route) (or DIRECT FROM (position) TO (position))

LEAVING FLIGHT LEVEL (number) FOR FLIGHT LEVEL (number) AT (position and time)

2.4.3 Except as provided in 2.4.4, the broadcast at the time of a change in flight level (referred to in 2.3 f)) should be in the following form:

ALL STATIONS

(call sign)

(direction)

(ATS route) (or DIRECT FROM (position) TO (position))

LEAVING FLIGHT LEVEL (number) NOW FOR FLIGHT LEVEL (number)

followed by:

ALL STATIONS

(call sign)

MAINTAINING FLIGHT LEVEL (number)

2.4.4 Broadcasts reporting a temporary flight level change to avoid an imminent collision risk should be in the following form:

ALL STATIONS

(call sign)

LEAVING FLIGHT LEVEL (number) NOW FOR FLIGHT LEVEL (number)

followed as soon as practicable by:

ALL STATIONS

(call sign)

RETURNING TO FLIGHT LEVEL (number) NOW

2.5 Acknowledgement of the broadcasts

The broadcasts should not be acknowledged unless a potential collision risk is perceived.

3. Related operating procedures

3.1 Changes of cruising level

3.1.1 Cruising level changes should not be made within the designated airspace, unless considered necessary by pilots to avoid traffic conflicts, for weather avoidance or for other valid operational reasons.

3.1.2 When cruising level changes are unavoidable, all available aircraft lighting which would improve the visual detection of the aircraft should be displayed while changing levels.

3.2 Collision avoidance

If, on receipt of a traffic information broadcast from another aircraft, a pilot decides that immediate action is necessary to avoid an imminent collision risk, and this cannot be achieved in accordance with the right-of-way provisions of Annex 2, the pilot should:

- a) unless an alternative manoeuvre appears more appropriate, immediately descend 150 m (500 ft), or 300m (1 000 ft) if above FL 290 in an area where a vertical separation minimum of 600 m (2 000 ft) is applied;
- b) display all available aircraft lighting which would improve the visual detection of the aircraft;
- c) as soon as possible, reply to the broadcast advising action being taken;
- d) notify the action taken on the appropriate ATS frequency; and
- e) as soon as practicable, resume normal flight level, notifying the action on the appropriate ATS frequency.

3.3 Normal position reporting procedures

Normal position reporting procedures should be continued at all times, regardless of any action taken to initiate or acknowledge a traffic information broadcast.

IATA IN-FLIGHT BROADCAST PROCEDURE (IFBP) AFI REGION

1. LISTENING WATCH

1.1 A listening watch should be maintained on the designated frequency (126.9MHz in AFI Region), 10 minutes before entering the designated airspace until leaving this airspace. For an aircraft taking-off from an aerodrome located within the lateral limits of the designated airspace, listening watch should start as soon as appropriate and be maintained until leaving the airspace.

2. TIME OF BROADCAST

2.1 A broadcast should be made in English:

- a) 10 minutes before entering the designated airspace or, for a pilot taking-off from an aerodrome located within the lateral limits of the designated airspace, as soon as appropriate;
- b) 5 minutes prior to crossing a reporting point;
- c) 5 minutes prior to crossing or joining an ATS route;
- d) at 20 minute intervals between distant reporting points;
- e) 2 to 5 minutes, where possible, before a change in flight level;
- f) at the time of a change in flight level; and
- g) at any other time considered necessary by the pilot.

3. OPERATING PROCEDURES

3.1 Changes of Cruising Level

3.1.1 Cruising level change should not be made within the designated airspace unless considered necessary by pilots to avoid traffic conflicts, for weather avoidance, or for other valid operational reasons.

3.1.2 When cruising level changes are unavoidable, all available aircraft lighting which would improve the visual detection of the aircraft should be displayed while changing levels.

3.2 Collision Avoidance

3.2.1 If, on receipt a traffic information broadcast from another aircraft, a pilot decides that immediate action is necessary to avoid an imminent collision risk to his aircraft, and this cannot be achieved in accordance with the right-of-way provisions of Annex 2, he should:

- a) unless an alternative manoeuvre appears more appropriate descend immediately 1000 ft if above FL290 or 500 ft if at or below FL290;
- b) display all available aircraft lighting which would improve the visual detection of the aircraft;
- c) as soon as possible reply to the broadcast advising action being taken;
- d) notify the action taken on the appropriate ATS frequency; and
- e) as soon as situation has been rectified, resume normal flight level, notifying the action on the appropriate ATS frequency.

3.3 Normal Position Reporting Procedures

3.3.1 Normal position reporting procedures should be continued at all times, regardless of any action taken to initiate or acknowledge a traffic information broadcast.

3.4 Operation of Transponders

3.4.1 Pilots should ensure that transponder procedures as contained in ICAO PANS OPS Doc 8168 are complied with and in the absence of other directions from ATC, operate the transponder on Mode A and C Code 2000¹.

3.5 Use of TCAS

3.5.1 TCAS equipped aircraft should have TA/RA mode selected at maximum range.

4. **THE IFBP IN AFI**

4.1 In many FIRs in the AFI Region communications both fixed and mobile have either not been implemented or operate well below the required reliability. This has an impact on the proper provision of Air Traffic Services, especially flight information service. Consequently, the AFI Regional Technical Conference has decided that the IATA In-Flight Broadcast Procedure (IFBP) should be used within designated FIRs in the region as an interim measure until such time as communications facilities affecting the FIR in question have been improved.

5. **DESIGNATED FREQUENCY IN AFI**

5.1 In the AFI Region the designated frequency for the IFBP is 126.9 MHz.

¹ Pilots are advised to ensure operation of transponders even when outside radar coverage in order to enable TCAS equipped aircraft to identify conflicting traffic.

6. AREA OF APPLICATION

6.1 In the AFI Region the IFBP should be applied in the following FIRs and airspaces:

Accra	Beira	Entebbe	Lilongwe	N'Djamena
Addis Ababa	Brazzaville	Kano	Luanda	Nairobi
Alger	Bujumbura	Khartoum	Lusaka	Niamey
Antananarivo	Dakar	Kigali	Mauritius	Roberts
Asmara	Dar es Salaam	Kinshasa	Mogadishu	Tripoli

6.2 The In-Flight Broadcast Procedure need not be applied in the following FIRs:

Bloemfontein	Casablanca	Harare	Port Elizabeth	Tunis
Canaries	Dakar Oceanic	Johannesburg	Sal Oceanic	Windhoek
Cape Town	Durban			

7. ENFORCEMENT

7.1 All airlines operating in the AFI region are requested to:

- a) ensure that their air crews are fully briefed on the procedure and area of application described;
- b) ensure that their charts and flight documentation are fully amended to reflect the foregoing;

7.2 Any operator reported to IATA as not applying the procedure shall be contacted immediately, informed of the procedure, and requested to apply it.

7.3 Attention is drawn to the fact that during the Haj Pilgrimage period the number of east-west flights in the North-Central part of the AFI Region increases dramatically and with it the risk of ATS incidents and the importance of the In-Flight Broadcast Procedure.

8. REVIEW

8.1 The procedure and its area of applicability shall be reviewed by the AFI Regional Coordination Group from time to time and FIRs in which the procedure is to be applied may be added or excluded as necessary.

9. DISTRIBUTION

9.1 To assist in ensuring its widest possible applicability the procedure is distributed to all known operators in the AFI Region, as well as to the following agencies/organizations:

ATLAS	KSS (Chart department)	IBAA	Jeppesen
IAOPA	FAA	IACA	NATO

EXAMPLE OF A BROADCAST

- a) "ALL STATIONS" *given only once to attract attention*;
- b) "THIS IS AZ....." (*callsign*);
- c) "FL.....";
- d) "NORTHEASTBOUND LAGOS-ROME VIA UA400";
- e) "POSITION.....AT.....(UTC)";
- f) "ESTIMATING POSITION.....AT.....(UTC)";
- g) "AZ...." (*callsign*)
- h) "FL....."
- i) "NORTHEASTBOUND" (*direction of flight through the area*).

ICAO INTERCEPTION PROCEDURES

Article 3 bis*

- a) The contracting States recognize that every State must refrain from resorting to the use of weapons against civil aircraft in flight and that, in case of interception, the lives of persons on board and the safety of aircraft must not be endangered. This provision shall not be interpreted as modifying in any way the rights and obligations of States set forth in the Charter of the United Nations.

(Extract from ICAO Annex 2 — *Rules of the Air*)

3.8 Interception

Note.— The word “interception” in this context does not include intercept and escort service provided, on request, to an aircraft in distress, in accordance with Volumes II and III of the International Aeronautical and Maritime Search and Rescue Manual (Doc 9731).

3.8.1 Interception of civil aircraft shall be governed by appropriate regulations and administrative directives issued by Contracting States in compliance with the Convention on International Civil Aviation, and in particular Article 3(d) under which Contracting States undertake, when issuing regulations for their State aircraft, to have due regard for the safety of navigation of civil aircraft. Accordingly, in drafting appropriate regulations and administrative directives due regard shall be had to the provisions of Appendix 1, Section 2 and Appendix 2, Section 1.

Note.— Recognizing that it is essential for the safety of flight that any visual signals employed in the event of an interception which should be undertaken only as a last resort be correctly employed and understood by civil and military aircraft throughout the world, the Council of the International Civil Aviation Organization, when adopting the visual signals in Appendix 1 to this Annex, urged Contracting States to ensure that they be strictly adhered to by their State aircraft. As interceptions of civil aircraft are, in all cases, potentially hazardous, the Council has also formulated special recommendations which Contracting States are urged to apply in a uniform manner. These special recommendations are contained in Attachment A.

3.8.2 The pilot-in-command of a civil aircraft, when intercepted, shall comply with the Standards in Appendix 2, Sections 2 and 3, interpreting and responding to visual signals as specified in Appendix 1, Section 2.

Note.— See also 2.1.1 and 3.4.

* On 10 May 1984 the Assembly amended the Convention by adopting the Protocol introducing Article 3 bis. **Under Article 94 a) of the Convention, the amendment came into force on 1 October 1998 in respect of States which have ratified it.**

INTERCEPTION OF CIVIL AIRCRAFT

(Appendix 2 of ICAO Annex 2 — *Rules of the Air*)

(*Note.*— See Chapter 3, 3.8 of the Annex)

1. Principles to be observed by States

1.1 To achieve the uniformity in regulations which is necessary for the safety of navigation of civil aircraft due regard shall be had by Contracting States to the following principles when developing regulations and administrative directives:

- a) interception of civil aircraft will be undertaken only as a last resort;
- b) if undertaken, an interception will be limited to determining the identity of the aircraft, unless it is necessary to return the aircraft to its planned track, direct it beyond the boundaries of national airspace, guide it away from a prohibited, restricted or danger area or instruct it to effect a landing at a designated aerodrome;
- c) practice interception of civil aircraft will not be undertaken;
- d) navigational guidance and related information will be given to an intercepted aircraft by radiotelephony, whenever radio contact can be established; and
- e) in the case where an intercepted civil aircraft is required to land in the territory overflown, the aerodrome designated for the landing is to be suitable for the safe landing of the aircraft type concerned.

Note.— In the unanimous adoption by the 25th Session (Extraordinary) of the ICAO Assembly on 10 May 1984 of Article 3 bis to the Convention on International Civil Aviation, the Contracting States have recognized that “every State must refrain from resorting to the use of weapons against civil aircraft in flight.”

1.2 Contracting States shall publish a standard method that has been established for the manoeuvring of aircraft intercepting a civil aircraft. Such method shall be designed to avoid any hazard for the intercepted aircraft.

Note.— Special recommendations regarding a method for the manoeuvring are contained in Attachment A, Section 3.

1.3 Contracting States shall ensure that provision is made for the use of secondary surveillance radar, where available, to identify civil aircraft in areas where they may be subject to interception.

2. Action by intercepted aircraft

2.1 An aircraft which is intercepted by another aircraft shall immediately:

- a) follow the instructions given by the intercepting aircraft, interpreting and responding to visual signals in accordance with the specifications in Appendix 1;

Appendix F Traffic Acceptance Rates

- b) notify, if possible, the appropriate air traffic services unit;
- c) attempt to establish radio communication with the intercepting aircraft or with the appropriate intercept control unit, by making a general call on the emergency frequency 121.5 MHz, giving the identity of the intercepted aircraft and the nature of the flight; and if no contact has been established and if practicable, repeating this call on the emergency frequency 243 MHz; and
- d) if equipped with SSR transponder, select Mode A, Code 7700, unless otherwise instructed by the appropriate air traffic services unit.

2.2 If any instructions received by radio from any sources conflict with those given by the intercepting aircraft by visual signals, the intercepted aircraft shall request immediate clarification while continuing to comply with the visual instructions given by the intercepting aircraft.

2.3 If any instructions received by radio from any sources conflict with those given by the intercepting aircraft by radio, the intercepted aircraft shall request immediate clarification while continuing to comply with the radio instructions given by the intercepting aircraft.

3. Radio communication during interception

If radio contact is established during interception but communication in a common language is not possible, attempts shall be made to convey instructions, acknowledgement of instructions and essential information by using the phrases and pronunciations in Table 2.1 and transmitting each phrase twice:

Table 2.1

<i>Phrases for use by INTERCEPTING aircraft</i>			<i>Phrases for use by INTERCEPTED aircraft</i>		
<i>Phrase</i>	<i>Pronunciation¹</i>	<i>Meaning</i>	<i>Phrase</i>	<i>Pronunciation¹</i>	<i>Meaning</i>
CALL SIGN	<u>KOL</u> SA-IN	What is your call sign?	CALL SIGN (call sign) ²	<u>KOL</u> SA-IN (call sign)	My call sign is (call sign)
FOLLOW	<u>FOL</u> -LO	Follow me	WILCO	<u>VILL</u> -KO	Understood Will comply
DESCEND	DEE- <u>SEND</u>	Descend for landing	CAN NOT	<u>KANN</u> NOTT	Unable to comply
YOU LAND	<u>YOU</u> <u>LAAND</u>	Land at this aerodrome	REPEAT	REE- <u>PEET</u>	Repeat your instruction
PROCEED	PRO- <u>SEED</u>	You may proceed	AM LOST	<u>AM</u> <u>LOSST</u>	Position unknown
			MAYDAY	<u>MAYDAY</u>	I am in distress
			HIJACK ³	<u>HI</u> - <u>JACK</u>	I have been hijacked
			LAND (place name)	LAAND (place name)	I request to land at (place name)
			DESCEND	DEE- <u>SEND</u>	I require descent

.In the second column, syllables to be emphasized are underlined.

2.The call sign required to be given is that used in radiotelephony communications with air traffic services units and corresponding to the aircraft identification in the flight plan.

3.Circumstances may not always permit, nor make desirable, the use of the phrase "HIJACK".

DRAFT

MIDANPIRG/13
Appendix 4.2G to the Report on Agenda Item 4.2

CONTINGENCY AGREEMENT STATUS

STATE	CORRESPONDING STATES	STATUS	SOFT COPIES SENT TO ICAO
BAHRAIN	IRAN KUWAIT OMAN QATAR SAUDI ARABIA UAE	Signed Signed Signed Signed Signed Signed	Sent
EGYPT	GREECE JORDAN LYBIA CYPRUS SAUDI ARABIA SUDAN	Signed Signed Signed	Sent
IRAN	ARMENIA AZERBAIJAN TURKMANISTAN AFGHANISTAN BAHRAIN IRAQ KUWAIT OMAN PAKISTAN TURKEY UAE	Signed Signed Signed Signed	Sent
IRAQ	IRAN JORDAN KUWAIT SAUDI ARABIA SYRIA		Sent

STATE	CORRESPONDING STATES	STATUS	SOFT COPIES SENT TO ICAO
	TURKEY		
JORDAN	EGYPT IRAQ ISRAEL SAUDI ARABIA SYRIA	Signed	Sent
KUWAIT	BAHRAIN IRAN IRAQ SAUDI ARABIA	Signed Signed	
LEBANON	CYPRUS SYRIA		
OMAN	BAHRAIN INDIA IRAN PAKISTAN UAE YEMEN	Signed Signed Signed Signed	Sent
QATAR	BAHRAIN SAUDI ARABIA UAE	Signed	
SAUDI ARABIA	BAHRAIN EGYPT ERITREA IRAQ JORDAN KUWAIT SUDAN YEMEN	Signed Signed Signed	
SYRIA	IRAQ JORDAN LEBANON		

4.2G-3

STATE	CORRESPONDING STATES	STATUS	SOFT COPIES SENT TO ICAO
	CYPRUS TURKEY		
UAE	BAHRAIN IRAN OMAN QATAR	Signed Signed	Sent
YEMEN	DJIBOUTI ERITREA ETHIOPIA INDIA OMAN SAUDI ARABIA SOMALIA	Signed	

MIDANPIRG/13
Appendix 4.2H to the Report on Agenda Item 4.2

SURVEY ON THE PROVISION OF SAR IN THE MID REGION

State	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9
Bahrain	YES	YES	YES Bahrain ACC Duty Supervisor	YES Please refer to Bahrain AIP GEN3.6-2(AIRAC 33) Dated 10 March 2011	YES Ref. : Bahrain - AIR NAVIGATION TECHNICAL REGULATIONS (ANTER) Regulation on ELT / ANTR OPS 1.820 Emergency Locator Transmitter	YES Bahrain ACC is acting as an alerting unit and not involved in the SAR missions	NO	YES SAR Agreements not signed yet.	YES SAR exercises are arranged /conducted between Bahrain Defense Force, Ministry of Interior and other friendly organizations based in the Kingdom of Bahrain
Egypt	YES	YES	YES	YES	YES	YES	YES	-----	----
Iran									
Iraq									
Jordan	YES The Hashemite Kingdom of Jordan is committed to the Chicago	YES High committee of SAR supervises the implementation of all plans to provide	YES CARC nominated Mr. Khalil Younis as point of contact for receipt of COSPAS-SARSAT distress data. Contact details	YES Mr. Khalil Younis as point of contact for SAR Contact details Office Tel: - 00962-6-4892282 ext 3354 Mobile	YES Jordan has taken an appropriate action to ensure that owners and operators of Emergency	YES Jordan Agencies mandated to make SAR services have the	YES The high committee for SAR has the authority to request	YES For the purpose of coordination regarding SAR operations between	YES Higher Committee for SAR ensures that SAR personnel organize

State	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9
	convention. Civil Aviation Regulatory Commission (CARC) has been delegated the provision of Search and Rescue services for a number of Governmental entities with competence and efficiency within Jordan territory to all flights in need or to persons in distress on a 24 – hour basis	SAR services. Agencies mandated to provide SAR services have the ability, capacity and efficiency and well trained for the provision of SAR services.	Office Tel: - 00962-6-4892282 ext 3354 Mobile 00962777715125 Email: pnas_ops@carc.gov.jo SAR@carc.gov.jo	00962777715125 Email: pnas_ops@carc.gov.jo SAR@carc.gov.jo	Locator Transmitters (ELT) have upgraded to the 406MHz ELT's (Jordan Civil Aviation Regulations (JCAR-OPS.171). SAR/JORDAN will take appropriate action by issuing a special regulation to ensure all operators/owners of ELT are registered with international beacon registration database (IBIRD) 7 SAR data base too.	capacity and efficiency and well trained for the provision of SAR. SAR unit elements are suitably located and equipped fo SAR operation up to the required standard	all the capabilities of government agencies available to and put at the disposal of SAR operations.	Jordan and neighboring countries, the Government of Jordan held three memorandums of understanding (MOU) with each of Syria, Egypt and Saudi Arabia. Regarding the other two neighboring countries (Israel and Iraq), SAR agreements are still in the stage of preparation where there is coordination with these countries to meet the required	exercises regularly to make sure the goals of readiness and preparedness to all members; communication exercises included as well as airports annual emergency drills.

4.2H-3

State	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9
								needs of SAR operations.	
Kuwait	Yes H24	YES	NO Still no contact with CO	Yes	NO	NO	NO	NO	YES
Lebanon									
Oman	Yes Search and Rescue (SAR) services are provided on a 24-hour basis within the Muscat FIR by the Royal Air Force of Oman as stipulated in the CAA and Royal Air Force of Oman Letter of Agreement	Yes The SAR service system is operated by the Royal Air Force of Oman and includes a responsible authority, organized available resources and a workforce skilled in coordination and operational functions	Yes it is documented in the Oman AIP – GEN 3.6 SEARCH AND RESCUE	Yes it is documented in the Oman AIP – GEN 3.6 SEARCH AND RESCUE	Yes it is stipulated in the Oman Civil Aviation Regulation CAR-OPS 1.820	Yes As stipulated in the CAA and Royal Air Force of Oman Letter of Agreement	YES as stipulated in the CAA and Royal Air Force of Oman Letter of Agreement	Yes as stipulated in the CAA and Royal Air Force of Oman Letter of Agreement. SAR agreements have been coordinated with UAE, Bahrain, Saudi Arabia and Kuwait. Coordination is pending with India,	YES as stipulated in the CAA and Royal Air Force of Oman Letter of Agreement

State	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9
								Pakistan, Iran and Yemen	
Qatar									
Saudi Arabia	YES	YES	YES	YES	YES	YES	-----	-----	-----
Syria									
UAE	YES	YES	YES Mission control centre SAR RCC at Al Bateen in Abu Dhabi	YES	YES upgraded since FEB 2009 and Data base is available	YES	YES	NO	YES
Yemen									

- Q1- *Has your State established an entity which provides, on a 24 hour basis, Search and Rescue (SAR) services within its territory to ensure that assistance is rendered to persons in distress?*
- Q2- *Does the SAR services system include a responsible authority, organized available resources and a workforce skilled in coordination and operational functions?*
- Q3 *Has your State designated a SAR Point of Contact (SPOC) for the receipt of COSPAS-SARSAT distress data?*
- Q4- *Has your State designated a SAR point of contact? If yes, provide details.*
- Q5- *Has your State taken appropriate action to ensure that all owners/operators of Emergency Locator Transmitters (ELT) have upgraded to the 406 MHz ELTs and registered them with the International Beacon Registration Database (IBRD) and established your own database?*
- Q6- *Has your State designated, as SAR units, elements of public or private services suitably located and equipped for SAR operations?*
- Q7- *Can 7- Has your Rescue Coordination Centre (RCC) prepared detailed plans of operation for the conduct of SAR operations within its Search and Rescue Region (SRR)?*
If Yes, as part of your National SAR Plan, are arrangements made for all aircraft, vessels and facilities, which do not form part of SAR organization to cooperate fully with the latter in SAR to extend any possible assistance to the survivors of aircraft accidents?
- Q8- *Does your State coordinate its SAR organization with those of neighbouring States?*
If Yes, what is the status of SAR agreements with your neighboring States?
- Q9- *Does your State ensure that SAR personnel are regularly trained and that appropriate SAR exercises are arranged?*

MIDANPIRG/13
Appendix 4.2I to the Report on Agenda Item 4.2

SAR POINT OF CONTACT

STATE	NAME	TITLE	ADDRESS	EMAIL	FAX	TEL	MOBILE
Bahrain	ACC Duty Supervisor	ACC Duty Supervisor	Bahrain CAA P.O.Box – 586 Kingdom Of Bahrain	bahatc@caa.gov.bh	+973 17321029	+97317321081 +97317321080	
Egypt	Mr. Ibrahim Khalifa Mahmoud	General Director of Operations Centers & Crisis Management	Ministry of Civil Aviation Cairo - EGYPT	crisar@civilaviation.gov.eg	202 2268 1371	202 2267 8548	20124469052
Iran							
Iraq							
Jordan	Mr. Khalaf Al-Shawabka	Chief Amman TACC and SAR	Queen Alia Airport	kshowbki@yahoo.co.nz	+962 445132	+ 962 4451672	962 77790 4724
Kuwait	Mr. Ahdy Ali Al-Duaij	Cheef Of Search And Rescue	Directorate General of Civil Aviation Air Navigation Department P. O. Box 17 - S Afat, 13001 –Safat - Kuwait	sar@dgca.gov.kw	+965 24346221	+965 24710268	+965 90071646
Lebanon							
Libya							

STATE	NAME	TITLE	ADDRESS	EMAIL	FAX	TEL	MOBILE
Oman	Rescue Coordination Centre (RCC) HQ RAFO		P.O.Box 722 Muscat P.C. 111 Sultanate Of Oman AFS:- OOMSYCYX	Hq.rafo.@rafo.gov.om	+968 24334776	+968 24334211 +968 24334212	
Qatar							
Saudi Arabia	Mr. Ahmad B. Altunisi	Manager SAR Head of SAMCC	General Authority of Civil Aviation	jaf-2010@hotmail.com	966-2 671 9041	966-2 671 7717/1840	966-50 460 1445
Sudan							
Syria	Mr. Monif Abdulla	Head of S.A.R. Department Syrian Civil Aviation Authority	Damascus Airport	monif77@hotmail.com	963-11 540 0312	963-11 540 0312	963 932 710351
UAE	Mohammed Al Dossari	Acting Director Air Navigation & Aerodromes Department UAE General Civil Aviation Authority	PO Box 6558 Abu Dhabi United Arab Emirates	aldossari@gcaa.gov.ae http://www.cospas-sarsat.org/en/component/cospasfrontend/SAR%20Points%20of%20Contact%20(SPOCs)/showSPOCDetails/178/s poc/283		+ 971 2 4054395	97150 442 6979
Yemen							

MIDANPIRG/13
Appendix 4.2J to the Report on Agenda Item 4.2

ACTION PLAN FOR THE NORMALIZATION OF THE BAGHDAD FIR

ID	ACTION	RESPONSIBLE	TARGET DATE	STATUS	Remarks
1	Nomination of RVSM Focal Point	Iraq	8 Feb. 2012	Completed	Mr. Ali Mohsin Hashim is the RVSM Focal Point. Mr Najah Ali Rahim is the Alternate
2	Nomination of Baghdad FIR RVSM Programme Manager	Iraq	8 Feb. 2012	Completed	Mr. Ali Mohsin Hashim is the Baghdad FIR RVSM Programme Manager
3	To provide an update on the promulgation of national regulations related to RVSM implementation	Iraq	15 Mar. 2012	Open	The Iraqi Civil Aviation Law was expected to be amended (before RVSM implementation) to include provisions related to RVSM implementation. An AIC has been published as advance notification to airspace users on 15 Oct 2010. Until the Iraqi Civil Aviation Law is amended, the AIP is to be used as the regulatory document. Iraq will provide the ICAO MID Office before 15 Mar 2012 an update on the progress achieved so far for the amendment of the Civil Aviation Law and the status of the aeronautical information publications related to RVSM (AIP ENR Section and the AIC).
4	Provide the MIDRMA with traffic data for the month of October 2012 for the development of the RVSM SMR 2013	Iraq	31 Dec. 2012	Open	After the implementation of RVSM within Baghdad FIR on 10 March 2011, the RVSM SMR 2013, which will be presented to MIDANPIRG/14, will cover the Baghdad FIR.

MIDANPIRG/13- REPORT

APPENDIX 4.2J

4.2J-2

ID	ACTION	RESPONSIBLE	TARGET DATE	STATUS	Remarks
5	Submit RVSM approvals to the MIDRMA for all Iraqi registered aircraft or any airline operators certified by Iraq and to continue updating these approvals as necessary	Iraq	On monthly basis	Ongoing	Last update provided to the MIDRMA is dated Aug. 2011.
6	Submit Large Height Deviation Reports (LHD) to the MIDRMA on a monthly basis	Iraq	On Monthly basis	Ongoing	Last Altitude Deviation Report (ADR)/Coordination Failure Report (CFR) submitted to the MIDRMA is dated Dec. 2010. In accordance with the MIDRMA Board/11 Draft Conclusion 11/4 the monthly submission of LHD has replaced the monthly submission of ADRs and CFRs.
7	Update of LOA between Baghdad ACC and Tehran ACC	Iraq, Iran	Apr. 2012	Open	The LOA should have been updated before the implementation of RVSM. A draft LOA is ready for signature. Ultimately, the LOA should include the agreed Contingency Procedures between the two ACCs.
8	Update of LOA between Baghdad ACC and Amman ACC	Iraq, Jordan	Apr. 2012	Open	The LOA should have been updated before the implementation of RVSM. The current LOA needs a complete review. Ultimately, the LOA should include the agreed Contingency Procedures between the two ACCs.
9	Update of LOA between Baghdad ACC and Jeddah ACC	Iraq, Saudi Arabia	Mar. 2012	Open	The LOA should have been updated before the implementation of RVSM. The updated LOA has been already signed by Saudi Arabia. Signature of Iraq is still pending. Ultimately, the LOA should include the agreed Contingency Procedures between the two ACCs.

4.2J-3

ID	ACTION	RESPONSIBLE	TARGET DATE	STATUS	Remarks
10	Finalize the RVSM post-implementation safety analysis	Iraq and MIDRMA	15 Mar 2012	Open	Draft Report on Safety of application of RVSM in the Baghdad FIR after 90 days of use was developed by the Iraqi Civil Aviation Authority (sent to ICAO on 26 September 2011). The comments made by the MIDRMA should be taken into consideration in the development of the final version of the Post-RVSM Implementation Safety Report, which would be presented to MIDANPIRG/13.
11	Iraq to take necessary actions for the elimination of the identified AIS deficiencies (AIRAC, QMS, WGS-84, etc)	Iraq	ASAP	Open	The need for the signature of Service Level Agreements with the data originators has been underlined.
12	To improve the efficiency and capacity of the Iraqi airspace, including the implementation of the reduced longitudinal radar separation, the ICAA to consider the implementation of an additional sector for the over-flights (FL 340 and above)	Iraq	ASAP	Open	Other operational improvements (procedure, technology) should be explored. IATA is willing to provide support.

MIDANPIRG/13- REPORT

APPENDIX 4.2J

4.2J-4

ID	ACTION	RESPONSIBLE	TARGET DATE	STATUS	Remarks
13	Longitudinal Separation: 1. Revert back to 40 NM longitudinal separation 2. Issue NOTAM with start date and end date (publication date should be at least 1 week prior to the effective date) 3. Issue an AIP SUP to replace the NOTAM and cover the whole period of implementation (restriction) of 40 NM long separation, if needed (i.e: if the use of 40 NM longitudinal separation will be used for more than 90 days) 4. Issue NOTAM for all traffic transition Kuwait FIR (exit point TASMI) to expect delay on low levels	1. Iraq 2. Iraq 3. Iraq 4. Bahrain/ Kuwait	20 Feb. 2012 TBD TBD	Open	Despite the agreement for the implementation of 20 NM longitudinal separation, in many cases, the situation imposed to revert back to 40NM longitudinal separation. Through NOTAM A0004/12, effective from 9 Jan. to 9 Apr. 2012, Iraq has imposed the use of 40 NM longitudinal separation for the South-bound traffic (over NINVA and SIDNA) with a maximum capacity of 20 ACFT per hour.
14	To expedite the implementation of SMS for ATS	Iraq	ASAP	Open	
15	Iraq to present a WP/IP to MIDANPIRG/13 providing an update on the normalization of the Iraqi airspace and the progress achieved to fulfill the ICAO requirements related to the ATM, AGA, AIS, CNS and MET fields.	Iraq	15 Mar. 2012	Open	

4.2J-5

ID	ACTION	RESPONSIBLE	TARGET DATE	STATUS	Remarks
16	Enhance the Integration of Basra and Kirkuk radars at Baghdad ACC	Iraq	Sep. 2012	Ongoing	The three radar heads (Baghdad, Basra and Kirkuk) which cover most of the Baghdad FIR except for the western part are operational. The repetitive radar failures of Basra and Kirkuk (integration of radar data into the Baghdad ACC RDPS) are due mainly to the use of old VSAT stations. Plan exists for replacing these VSATs. Iraq to consider ADS-B for surveillance improvement
17	Improve communication infrastructure	Iraq	Sep. 2012	Ongoing	Agreement signed for 14 new VSAT stations that will be supplied within 6 months and will be integrated with fiber optic.
18	Provide VHF coverage in the western part of the Baghdad FIR	Iraq	Mar. 2012	Ongoing	Work in progress at Rutba for the installation of the VHF station (the VSAT links are ready)
19	Improve the Ground-Ground (G-G) Communications with Kuwait	Iraq Kuwait	Sep. 2012	Ongoing	AFTN and Direct speech circuit operational with intermittent unavailability. A Plan for the replacement of the old VSAT with a new one to be installed in Kuwait is approved. Kuwait is to facilitate logistics.
20	Improve G-G Communications with Jordan using VSAT	Iraq Jordan	Sep. 2012	Ongoing	Dial-up speech circuit operational with intermittent unavailability. Jordan prepared the site for the installation of VSAT which will be installed in Sep 2012 Jordan to facilitate logistics

MIDANPIRG/13- REPORT

APPENDIX 4.2J

4.2J-6

ID	ACTION	RESPONSIBLE	TARGET DATE	STATUS	Remarks
21	Improve G-G Communications with Turkey	Iraq Turkey	Jun 2012	Open	Dial-up speech circuit operational with intermittent unavailability. Difficulties in obtaining approval for the installation of VSAT (Telecom Authority in Turkey). Iraq and Turkey to coordinate with their Telecom Authorities for the implementation of a direct speech circuit.
22	Improve G-G Communications with Iran	Iraq Iran	Sep 2012	Open	VSAT and Dial-up speech circuit are operational with intermittent unavailability. Iraq and Iran to coordinate for the replacement of the old VSAT with a new one.
23	Improve G-G Communications with Saudi Arabia by performing periodic test of the existing direct speech circuits	Iraq Saudi Arabia	On monthly basis	Open	
24	Iraq to take appropriate measures for the timely implementation of the ICAO New FPL (INFPL) provisions	Iraq	15 Nov. 2012	Open	Iraq is planning to implement a new message switching system which will be capable to accept INFPL. Iraq to attend the INFPL SG*/4 meeting (Cairo, 27-29 Feb. 2012) Iraq to provide update on the level of preparedness for the implementation of the INFPL on 15 Nov. 2012.

MIDANPIRG/13
Appendix 4.2K to the Report on Agenda Item 4.2

**TERMS OF REFERENCE (TOR) OF
AIR TRAFFIC MANAGEMENT/
AERONAUTICAL INFORMATION MANAGEMENT/
SEARCH AND RESCUE SUB-GROUP
(ATM/AIM/SAR SG)**

1. TERMS OF REFERENCE

1.1 The terms of reference of the ATM/AIM/SAR Sub-Group are:

- a) Support a performance based transition to the ATM system envisaged in the Global ATM Operational concept, in consideration of the regional performance objectives, supported by the Global Air Navigation Plan.
- b) Ensure that the planning and implementation of ATM, AIM and SAR in the region, is coherent and facilitates the objective of achieving seamlessness through interoperability and harmonization with other Regions.
- c) Identify, State by State, those specific deficiencies that constitute major obstacles to the provision of efficient air traffic management, aeronautical information services and search and rescue services and recommend specific measures to eliminate them.

1.2 In order to meet the Terms of Reference, the ATM/AIM/SAR Sub Group shall:

- a) Develop ATM and AIM performance objectives in the MID Region and identify achievable Milestones.
- b) Provide a platform for harmonization of developments and deployments in the ATM and AIM fields.
- c) Monitor and review technical and operational developments in the ATM and AIM fields and foster their implementation in the MID Region in a harmonized manner with a view to ensuring their smooth integration in the operational environment.
- d) Identify requirements and improvements for achieving and maintaining an efficient ATS route network in the MID Region.
- e) Monitor the RVSM operations and support the continued safe use of RVSM in the MID Region.
- f) Ensure the effectiveness of the SSR code allocation system in the MID Region.
- g) Assist States in the development and co-ordination of contingency plans and ensure that the Regional contingency plan is maintained up-to-date.
- h) Facilitate effective civil/military cooperation and joint use of airspace in the MID Region.
- i) Address ATM interface issues with other regions and make specific recommendations to achieve seamlessness and harmonization.

- j) Review the requirements and monitor the status of implementation of ATM, AIM and Search and Rescue (SAR) services.
- k) Analyse, review and monitor deficiencies in the ATM, SAR and AIM fields.
- l) Taking into account human factors studies and available guidance material, make operational recommendations related to ATM and AIM personnel in the changing technological environment.

2. COMPOSITION

2.1 The Sub-Group is composed of:

- a) MIDANPIRG Member States;
- b) concerned International and Regional Organizations as observers; and
- c) other representatives from provider States and Industry may be invited on ad hoc basis, as observers, when required.

MIDANPIRG/13
Report on Agenda Item 4.3

**REPORT ON AGENDA ITEM 4: REGIONAL AIR NAVIGATION PLANNING AND
IMPLEMENTATION ISSUES**

4.3 AIM

4.3.1 The meeting was informed about the latest developments related to AIM at the global level and reiterated the need for a strategic and harmonized transition from AIS to AIM. In this regard, the meeting was apprised of the outcome of the fifth meeting of the Aeronautical Information Services-Aeronautical Information Management Study Group (AIS-AIM SG/5) held in ICAO HQ, Montréal, from 7 to 11 November 2011. The meeting noted that the AIS-AIM SG/6 meeting will be held in Buenos Aires, Argentina, 21-25 May 2012 back-to-back with the IFAIMA Global AIM Conference (28-30 May 2012).

4.3.2 The meeting reviewed the outcome of the ATM/SAR/AIS SG/12 meeting pertaining to AIS/AIM matters, pursuant to the review of the report of the AIS/MAP TF/6 meeting held in Cairo, Egypt, 6 - 8 June 2011.

4.3.3 The meeting recalled that MIDANPIRG through Conclusion 12/34 urged MID States that have not yet done so, to develop national plans for the transition from AIS to AIM.

4.3.4 The meeting noted that further to the AIS/MAP TF/6 Draft Conclusion 6/1, Bahrain, Egypt, Iran, Kuwait, Lebanon, Oman, Qatar and UAE replied to the questionnaire related to National Plans for the transition from AIS to AIM (State Letter Ref.: AN 8/4 – 11/091 dated 14 April 2011). However, it was highlighted that some updates might be necessary.

4.3.5 The meeting, then, reviewed the progress made towards the implementation of the different phases and steps of the ICAO Roadmap for the transition from AIS to AIM in the MID Region:

Phase 1 — Consolidation

AIRAC Adherence Monitoring (P-03)

4.3.6 With respect to the status of implementation of AIRAC system, the meeting noted with concern that, frequently aeronautical information that should be published in accordance with the AIRAC system is published through normal AIP Amendments or even by NOTAM; and highlighted the safety implications of such proceedings. Furthermore, the meeting underlined that AIRAC adherence monitoring is a continuous task and accordingly, urged States, as part of their national performance monitoring process, to record and report all the cases of non-compliance with the AIRAC procedures, in order to take necessary preventive and corrective actions.

4.3.7 Based on the above, the meeting urged MID States to thoroughly plan all Aeronautical Information changes that fall under the AIRAC provisions, and publish them in compliance with the AIRAC procedures; in particular, when it comes to the planning of major changes for which a 56-day advanced notification is recommended. It was underlined that the planning process should involve all concerned parties. The meeting urged MID States also to avoid late postponements of aeronautical information published through AIRAC AIP Amendment or Supplement.

MIDANPIRG/13
Report on Agenda Item 4.3

4.3.8 The meeting noted that the system of AIRAC numbering differs from State to State and that many States are not complying with Annex 15 provisions related to NIL notification (para. 6.1.3). In this respect, it was underlined that, when information has not been submitted by the AIRAC date, a NIL notification shall be originated and distributed by NOTAM or other suitable means, not later than one cycle before the AIRAC effective date concerned. The meeting urged States also to comply with ICAO 8126 provisions related to the numbering of AIRAC AIP Amendments, using consecutive numbers from 01-13 in line with the AIRAC cycle, followed by a two digit number to denote the year of issue or validity, e.g. AIRAC AIP AMDT 05/11.

4.3.9 The meeting recalled that Annex 15 para. 6.1.3 states that: “*When information has not been submitted by the AIRAC date, a NIL notification **shall** be originated and distributed **by NOTAM or other suitable means**, not later than one cycle before the AIRAC effective date concerned*”. The meeting recognized that the inclusion of “other suitable means” in para 6.1.3 of Annex 15 is creating some confusion and questioned if the AIRAC NIL notifications should be disseminated only by NOTAM. The meeting agreed that this should be raised to the attention of ICAO HQ and the AIS-AIMSG for further review and possible amendment of this Annex 15 provision related to AIRAC NIL notification.

4.3.10 In the same vein the meeting recalled that Annex 15 para. 5.2.13.3 states that: “*A **monthly printed plain-language** list of valid NOTAM, including indications of the latest AIP Amendments, AIC issued and checklist of AIP Supplements, **shall** be prepared with a minimum of delay and forwarded by the **most expeditious means** to recipients of the Integrated Aeronautical Information Package*”. In accordance with the provisions of the ICAO Doc 9855 – “*Guidelines for the Use of Public Internet for Aeronautical applications*”, and with a view to save time, environment, cost and manpower, the meeting agreed to the discontinuation of the dissemination by post of the monthly printed plain-language list of valid NOTAM and to use the internet (emails and/or websites) for the dissemination of such an AIS product. Accordingly, the meeting agreed to the following Conclusion:

**CONCLUSION 13/12: MEANS OF DISSEMINATION OF THE LIST OF
VALID NOTAM**

That, States be encouraged to:

- a) use the internet (emails and/or websites) for the dissemination of the monthly printed plain-language list of valid NOTAM and discontinue its dissemination in hardcopy by post; and*
- b) make available on the web on a daily or at least on a weekly basis an updated list of valid NOTAM.*

4.3.11 The meeting recalled that Amendment No. 1 to the Fifteenth Edition of the Procedures for Air Navigation Services — Air Traffic Management (PANS-ATM, Doc 4444), which encompasses a substantial revision to the ICAO Flight Plan (FPL), will become applicable on 15 November 2012. Taking into consideration the worldwide impact of the ICAO New FPL format implementation, the meeting agreed that it is important to avoid concurrent significant changes to the aeronautical information publications on the same AIRAC date. Accordingly, the meeting agreed to the following Conclusion:

MIDANPIRG/13
Report on Agenda Item 4.3

**CONCLUSION 13/13: AVOIDANCE OF THE AIRAC DATE
15 NOVEMBER 2012**

That, taking into consideration the worldwide impact of the ICAO New FPL format implementation, States be invited to avoid the use of the AIRAC date of 15 November 2012 as an effective date for the introduction of significant changes to the aeronautical information publications.

WGS-84 implementation (P-05)

4.3.12 The meeting reviewed and updated the status of implementation of WGS-84 in the MID Region as at **Appendix 4.3A** to the Report on Agenda Item 4.3. In this respect, it was highlighted that WGS-84 has been fully implemented by eight (8) States; however, although, the remaining five (5) States have implemented the majority of WGS-84 requirements; some elements such as the geoid undulation, are yet to be implemented.

4.3.13 The meeting re-iterated that the implementation of WGS-84 is an important pre-requisite for the implementation of Performance Based Navigation (PBN); and agreed that although the status of implementation of WGS-84 in the MID Region has been improved, it's deemed necessary that States that have not yet fully implemented the system, take all necessary measures to expedite the completion of WGS-84 implementation.

Quality (P-17)

4.3.14 The meeting recalled that Amendment 36 to Annex 15, which became effective on 18 November 2010, introduced new and revised provisions related to Quality Management Systems (QMS). It was highlighted, in particular, that a new Recommended Practice was added stating that "*Quality management should be applicable to the whole aeronautical information data chain from data origination to distribution to the next intended user, taking into consideration the intended use of data*". In addition, the meeting noted that the collection and management of metadata became also a standard.

4.3.15 The meeting reviewed and updated the status of implementation of QMS in the MID Region as follows:

	Not started	Planning	Ongoing/ partially implemented	Implemented	Certified	Remarks
Bahrain					√	
Egypt					√	
Iran					√	
Iraq	√					
Jordan					√	
Kuwait		√				Dec 2013
Lebanon		√				
Oman			√			Dec 2012
Qatar					√	
Saudi Arabia					√	Certified Feb.2012

MIDANPIRG/13
Report on Agenda Item 4.3

	Not started	Planning	Ongoing/ partially implemented	Implemented	Certified	Remarks
Syria		√				
UAE					√	
Yemen			√			Dec 2013

4.3.16 The meeting agreed that the lack of automated processes and lack of an effective Quality Management System that covers the data chain from data origination to AIS are the two most critical contributors to insufficient data quality.

4.3.17 In connection with the above, the meeting recalled that the QMS Action Group (QMS AG) was established with a view to support the implementation of QMS within MID States' AISs. The meeting further noted that MIDANPIRG, through Conclusion 12/31, invited States to organize at the National level, awareness campaigns and training programmes with the support of ICAO and the QMS AG, to promote and expedite the process of implementation of QMS for AIS. However, the meeting noted that the activities of the Action Group were very limited and that the tasks assigned to it were not completed. Accordingly, the meeting agreed to dissolve the QMS AG and encouraged States to exchange information related to QMS implementation and to share their experiences in this particular endeavour.

4.3.18 Based on the above, the meeting agreed to the following Decision:

DECISION 13/14: DISSOLUTION OF THE QMS ACTION GROUP

That, recognizing that the activities of the QMS AG were very limited, the QMS AG is dissolved.

4.3.19 The meeting recalled that the implementation of QMS has been mandated by ICAO since 1997 and urged those States that have not yet done so, to take necessary measures to implement the required QMS in an expeditious manner. In this respect, the meeting agreed that as a regional performance target, all deficiencies related to the non-implementation of QMS should be eliminated by December 2014. Accordingly, the meeting agreed to the following Conclusion, which replaces and supersedes Conclusion 12/31:

CONCLUSION 13/15: QMS IMPLEMENTATION

That, in accordance with Annex 15 provisions, States, that have not yet done so, be urged to take necessary measures to:

- a) organize at the National level, awareness campaigns and training programmes to promote and expedite the process of implementation of QMS for AIS;*
- b) implement/complete the implementation of the required QMS in an expeditious manner;*
- c) arrange for an ISO 9001 certification by an accredited certification body; and*
- d) ensure that quality management is applicable to the whole aeronautical information data chain from data origination to distribution to the next intended user, taking into consideration the intended use of data.*

MIDANPIRG/13
Report on Agenda Item 4.3

4.3.20 Based on the review of the progress made towards the implementation of the ICAO Roadmap steps related to Phase 1 — Consolidation in the MID Region, the meeting recognized that deficiencies still exist with regard to the provision of AIS/MAP services in accordance with Annex 4 and Annex 15 requirements. In particular, it was highlighted that six (6) States in the MID Region have not yet fully complied with Annex 15 provisions related to the implementation of QMS.

4.3.21 In connection with the above, the meeting recalled that based on the analysis of the USOAP audit results in the different ANS fields, it was highlighted that the separation between the regulatory and service provisions functions and the non-establishment of an ANS safety oversight system represent the main reasons for the non-elimination of the identified deficiencies. In addition, the lack of national regulations is an important contributing factor in many States. Accordingly, it was reiterated that the most effective and transparent means of ensuring compliance with applicable specifications/regulatory provisions, is the availability of a separate safety oversight entity and a well-defined safety oversight mechanism with support of appropriate legislation/regulations.

4.3.22 The meeting noted that currently, the certification of the Air Navigation Services (ANS) is not yet mandated by ICAO. However, for the European Union (EU) member States it has been mandated through European Commission (EC) Regulations since December 2005.

4.3.23 The meeting noted that certification of ANS has been already mandated by Egypt since 2005 (Regulation Ref.: ECAR 173). It was also noted that UAE had developed Regulations related to certification of ANSPs providing safety critical services to aviation. The certification of AIS has been implemented since end of 2011. The meeting was apprised of actions carried out by Oman for the preparation of the certification of the ANS Services. In particular, it was noted that Oman has already promulgated Regulations for the certification of ANSPs. The Regulation CAR 175 of 1 April 2011 is related to the certification of the AIS Organisations. The meeting further noted that Jordan has promulgated Regulation JCARC 175 Sub Part G for the certification of AIS. Saudi Arabia is also in the process of developing new Regulations related to ANS certification. In this respect, the meeting recalled that the DGCA-MID/1 meeting invited MID States to work together with ICAO, within the framework of MIDANPIRG for the development of a MID Region Strategy for the certification of ANSPs, taking into consideration UAE experience.

4.3.24 Based on the above, the meeting agreed that the inclusion of a requirement for the certification of AIM Services in the national regulations will ensure that the AIM Service Providers meet their obligations in accordance with the terms and conditions of the AIM Certificate. It will also vest the regulatory authority with the necessary power to enforce compliance with the regulations. Accordingly, the meeting agreed to the following Conclusion:

CONCLUSION 13/16: CERTIFICATION OF THE AIM SERVICES

That, in order to improve the level of compliance with the Standards and Recommended Practices of Annex 4 and Annex 15 and pave the way for the transition from AIS to AIM, ICAO consider the inclusion of a requirement for the certification of AIM Services in Annex 15.

MIDANPIRG/13
Report on Agenda Item 4.3

Phase 2 — Going digital

4.3.25 The meeting recalled that during Phase 2 of the transition to AIM, the main focus will be on the establishment of data-driven processes for the production of the current products in all States. The emphasis is, therefore, on the introduction of highly structured databases and tools such as geographic information systems. The introduction of database-driven processes will improve the value of current products by improving their quality and availability for current users. This will concern mainly the creation of national or regional databases used to produce the existing products and services, but with better quality and availability.

4.3.26 In connection with the above, the meeting recalled that taking into consideration the limitations and drawbacks related to the current operational structure and provision of AIS/AIM services in the MID Region, and the experience of adjacent Regions in the implementation of Regional AIS databases, especially the European AIS Database (EAD), the DGCA-MID/1 meeting, through DGCA-MID/1 Conclusion 1/5, agreed that a study/business case be carried out in the MID Region pertaining to the establishment of a MID Region AIS Database (MIDAD). In this respect, the meeting noted with appreciation that Jordan and Bahrain took the lead in carrying out the study with the support of appropriate Consultant and in close coordination with ICAO.

4.3.27 The meeting was apprised of the outcome of the First Meeting of the MID Region AIS Database Study Group (MIDAD SG*/1) held in Cairo, Egypt, 20-22 February 2012. The meeting reviewed the Terms of Reference of the MIDAD Study Group at **Appendix 4.3B** to the Report on Agenda Item 4.3 and agreed to the following Decision:

**DECISION 13/17: ESTABLISHMENT OF THE MIDAD STUDY GROUP
(MIDAD STG)**

*That, the MID Region AIS Database (MIDAD) Study Group (MIDAD STG) is established with Terms of Reference as at **Appendix 4.3B** to the Report on Agenda Item 4.3.*

4.3.28 In connection with the above, the meeting noted with concern that the activities of the AIS Automation Group (AISA AG), were very limited and that the tasks assigned to it were not completed. Accordingly, the meeting agreed to the following Decision:

DECISION 13/18: DISSOLUTION OF THE AIS AUTOMATION ACTION GROUP

That, recognizing that the activities of the AIS Automation Action Group (AISA AG) were very limited, the AISA AG is dissolved.

4.3.29 The meeting re-iterated that the implementation of a Regional/Sub-Regional AIS Database in the MID Region would improve the quality, availability and timeliness of aeronautical information provided to users and pave the way for the transition from AIS to AIM, in accordance with the ICAO Roadmap.

4.3.30 The meeting noted that further to the AIS/MAP TF/6 meeting, a MIDAD Support Team (MIDAD ST) has been established in coordination between Bahrain, Jordan and the ICAO MID Regional Office, in order to carry out the missions to States and collect the necessary information. The MIDAD ST was composed of:

MIDANPIRG/13
Report on Agenda Item 4.3

- Mrs. Hanan, Qabartai from Jordan;
- Mr. Salah Al-Humood from Bahrain;
- Mr. Mohamed Smaoui, RO/ANS/AIM, ICAO MID Regional Office; and
- Mr. Peter Rudolph from Avitech AG, Germany (Consultant).

4.3.31 The meeting noted that the objective of the MIDAD Study, at its first step, was to collect data from States in order to get a realistic and sound picture of the situation in the AIS Offices in the Region in terms of organization, staffing, facilities and infrastructure, workload, automation, transition to AIM, and most importantly to identify the States' commitment, support and interest in MIDAD and its inclusion in the planning process for the transition to AIM.

4.3.32 In connection with the above, the meeting noted that Missions were conducted to Bahrain, Egypt, Iran, Jordan, Kuwait, Lebanon, Oman, Qatar, Saudi Arabia and Syria. The Missions to Iraq, UAE and Yemen could not be conducted; however, information has been provided by these States through emails.

4.3.33 The meeting noted that the MIDAD SG*/1 meeting reviewed and updated the Report related to the Initial MIDAD Study (First Phase), which is available on the ICAO MID Website. The meeting reviewed the analysis of the information gathered from States at **Appendix 4.3C** to the Report on Agenda Item 4.3 which provides a general analysis of the States' replies to the MIDAD Questionnaire. It was highlighted in this respect that the majority of States expect many advantages from MIDAD and would like to play an active role in the MIDAD Project. In particular, it was noted with appreciation that:

- a) 10 out of 13 States plan to include MIDAD into their national planning for AIS/AIM;
- b) 10 out of 13 States are committed to MIDAD;
- c) 10 out of 13 States believe that MIDAD has a realistic chance to be realized. The overall success probability of MIDAD is around 70%;
- d) 9 out of 13 States like to play an active role in the MIDAD project;
- e) 7 out of 13 States like to provide contributions to the MIDAD set-up;
- f) 8 out of 13 States like to participate in the operation of MIDAD;
- g) 9 to 10 States believe that MIDAD would improve safety and efficiency and bring environmental benefits; and
- h) currently, 7 States have no preferred method of funding of the MIDAD project, and no preferred legal framework/institutional scenario or option.

4.3.34 The meeting agreed that further analysis of the replies to the questionnaires provided by States might be conducted in the second phase of the MIDAD Study.

4.3.35 The meeting agreed that the first phase of the MIDAD Study is considered completed and has achieved the expected goals. Based on the Recommendations contained in the Initial MIDAD Study Report, the meeting agreed to move ahead with the Project.

4.3.36 The meeting acknowledged the challenges associated with the implementation of an important project such as MIDAD. In this respect, it was recognized that the legal, institutional and human resources (training) issues are the most challenging. With regard to human resources and training issues, it was highlighted that one of the main objectives of MIDAD would be to facilitate the transfer of

MIDANPIRG/13
Report on Agenda Item 4.3

know-how; and accordingly, it was emphasized that the training plan and requirements (skills and knowledge) need to be developed from the beginning of the project.

4.3.37 Based on the above, the meeting agreed that the commitment of States to the MIDAD Project should be officially recorded in a legal document. This would be part of the second phase of the Study. Accordingly, the meeting agreed to the following Conclusions:

CONCLUSION 13/19: MIDAD PROJECT SECOND PHASE

That, taking into consideration the results of the first phase of the MIDAD Study, States, Users and all concerned stakeholders be invited to provide all necessary support for the achievement of the second phase of the MIDAD Project.

CONCLUSION 13/20: COMMITMENT TO THE MIDAD PROJECT

That, as part of the Second Phase of the MIDAD Project:

- a) a Memorandum of Agreement (MOA) be signed by Bahrain, Iran, Jordan, Kuwait, Lebanon, Oman, Qatar, Saudi Arabia, Syria and Yemen in order to legally reflect their commitment to the MIDAD Project; and*
- b) other States from within and outside the MID Region, interested to participate in the MIDAD Project, be invited to sign the MOA.*

4.3.38 In addition to the above, the meeting noted that the MIDAD SG*/1 meeting initiated discussions on the MIDAD Purpose and Scope, the technical, operational, financial, legal and institutional issues related to MIDAD. In particular, it was agreed that:

- in addition to the users' requirements, the latest and future developments related to AIM, in particular, the outcome of the ICAO AIS-AIMSG should be taken into consideration when developing the MIDAD Scope, which needs finally to be documented in a User Requirements Document;
- MIDAD should be designed not only to support the present users' needs but also the future ATM requirements as defined in the ATM Operational Concept (Doc 9584), in particular, the Collaborative Decision Making (CDM) and the System Wide Information Management (SWIM);
- the potential users' organizations and stakeholders (IATA, CANSO, AACO, etc), as well as the Military Authorities, should be made aware of the MIDAD Project and invited to participate actively in its development to generate ownership. In this respect, it was agreed that this could be facilitated through the presentation of MIDAD to the IATA RCG meetings, CANSO ME Conference, ICAO MID AIM Seminar and Civil/Military Cooperation Seminar/Workshop, etc;
- the development of the Requirements Document is the responsibility of the ICAO MIDAD Study Group, which might need assistance to fulfil this task;

MIDANPIRG/13
Report on Agenda Item 4.3

- in a collaborative environment like MIDAD there are always different possible topology solutions. The chosen topology must be based on sound requirements which have been assessed very carefully;
- depending on the identified user requirements and operational needs, the chosen topology could be a combination of different technical solutions (central, replicated and distributed). This would depend also on the kind of data to be processed and exchanged, i.e.: NOTAMs, static data, eTOD, etc. However, it was highlighted that, from a strategic and operational point of view, the chosen topology should include a central database, which might be in one location or replicated in 2 or more locations/servers;
- communication capabilities are the pre-requisite for any interoperability between national AIS/AIM systems, MIDAD and other Regional AIS databases in other ICAO Regions (EAD, AFI-CAD, etc). It was highlighted that the AFTN Network cannot be used for the purpose of MIDAD, except for NOTAM reception and distribution. Therefore, it was agreed that other means of communications (VSAT, public internet, AMHS, ICAO IPS conform networks, etc) should be explored. This should be done in close coordination with the CNS Sub-Group and the ATN/IPS Working Group;
- the Concept of Operation for MIDAD is very important for an efficient operation. Therefore, a clear and documented Concept of Operation forms the basis for all common work and shared responsibilities. The Concept of Operation shall be based on the target aeronautical data chain as published in RTCA DO-200A/EUROCAE ED76 standards. In this respect, it was re-iterated that MIDAD should enhance the aeronautical data quality, availability and timeliness in the MID Region;
- having the right number of staff available with the right competence, knowledge and skills for the whole undertaking of MIDAD is paramount. Therefore, recruitment, staff selection, ab-initio training, specialized training, and follow up-training in some essential areas of AIM were highlighted;
- the migration from the existing environment to the use of MIDAD shall also be studied and an outline concept needs to be part of the MIDAD study, including at least: a) data conversion concepts; b) data conversion plan and schedule; c) data migration concepts; d) data migration plan and schedule; and e) data migration in cases of version changes of the AIXM (backward compatibility);
- the most important benefits of MIDAD are the cost reductions generated from more efficient flight operations, reduced flight times and the enhancements of safety and security which are expected to emerge as MIDAD is implemented;
- addressing the treatment of costs and cost recovery during the three initial stages of the MIDAD Project: (1) Set-Up Phase, (2) Call for Tender Phase, (3) Implementation Phase, is very important;

MIDANPIRG/13
Report on Agenda Item 4.3

- in accordance with Doc 9082, paragraphs 23 to 26, users should be consulted as early as possible when major air navigation services are being planned and increased or new air navigation services charges might be observed. This should be the case for the implementation of the MIDAD Project;
- it's necessary to reach first an agreement on the MIDAD legal framework and then the funding of the second phase of the MIDAD project, which will include, inter-alia, the development of the Financial Plan/Model for the whole MIDAD Project phases (set-up, operations, maintenance, etc);
- starting from phase 2 of the project (detailed study) and taking into consideration the huge amount of work to be done and Documents to be developed, it's not realistic that this task be achieved on a voluntary basis and accordingly, the outsourcing is necessary, which raises legal, institutional and financial implications;
- the following options related to the MIDAD legal framework were identified:
 1. the MIDAD project to be implemented under the umbrella (legal framework) of one of the international/regional organizations i.e.: ACAC or IATA;
 2. a volunteer State/Group of States provides the legal framework by hosting the project;
 3. an ICAO TCB Project for the implementation of MIDAD, including the establishment of a MIDAD legal entity or agency (similar to the MIDRMA); or
 4. a limited liable private company owned by the member States.
- depending on the chosen option, the funding mechanism should be agreed upon by the member States and the users and has to be clearly documented in the financial model;
- the establishment of a MIDAD Supervisory Management Board might be necessary. This Board would be composed of Representatives appointed by the Directors General of Civil Aviation and should be empowered to take decisions. Another Alternative is to leave the task of supervision of the MIDAD Project to the DGCA's themselves through direct correspondence and/or through the DGCA-MID meetings;
- as part of the legal and institutional issues, it was highlighted that the MIDAD Supervisory Management Board should agree on the MIDAD Centres/Sub-Centres location(s), based on agreed criteria (geographical location, communication infrastructure, political stability, human resources availability, etc). Other institutional issues such as, States sovereignty, responsibility and accountability, intellectual property rights should be addressed; and
- A MIDAD Agency/Service Provider could be responsible for the development, establishment and operation of MIDAD.

MIDANPIRG/13
Report on Agenda Item 4.3

4.3.39 Based on the above, the meeting agreed that the only viable options for the MIDAD legal framework are Options 2 and 3 above. Accordingly, the meeting agreed to the following Conclusion:

CONCLUSION 13/21: MIDAD LEGAL FRAMEWORK

That, the following options be considered for the endorsement of the MIDAD legal framework by the DGCA-MID/2 meeting:

- a) a volunteer State/Group of States provides the legal framework by hosting the project; or*
- b) an ICAO TCB Project for the implementation of MIDAD, including the establishment of a MIDAD legal entity or agency (similar to the MIDRMA).*

4.3.40 The meeting agreed that it's necessary to reinforce the MIDAD Support Team (MIDAD ST), in order to monitor the developments related to MIDAD until the MIDAD STG/2 meeting, promote the project and prepare the necessary documentation for the upcoming meetings that will address the MIDAD project. It was underlined that the MIDAD ST will continue to work on a voluntary basis, using mainly the electronic means of communications (emails, teleconferencing, etc) to achieve the assigned tasks. Accordingly, the meeting agreed to the new composition of the MIDAD ST, as endorsed by the MIDAD SG*/1 meeting and encouraged States to support the MIDAD ST by providing additional information, as and when required.

4.3.41 Based on all of the foregoing, it was underlined that the success of the MIDAD project is directly linked to the effectiveness of the MIDAD Study Group. Accordingly, the meeting urged States to provide all necessary support to the MIDAD Study Group and participate actively in the decision-making process.

4.3.42 The meeting recognized that P-11 — Electronic AIP is an important step of Phase 2. In this respect, the meeting noted with satisfaction, that UAE has developed and published its eAIP in February 2011 and that trial versions of eAIP Bahrain, Egypt and Saudi Arabia have been developed and will be available for operational use, soon.

4.3.43 With regard to eTOD: P-13 — Terrain and P-14 — Obstacles, the meeting recalled that, as a follow-up action to MIDANPIRG/12 Conclusion 12/28 “*eTOD Checklist*” and Conclusion 12/29 “*eTOD Awareness Campaigns*”, a State Letter was issued on 19 April 2011 requesting States to inform the ICAO MID Regional Office, not later than 15 May 2011, about the actions taken/planned in order to implement these Conclusions; and send their updated eTOD implementation plans, specifying in particular, the status of implementation of Area 1 and Area 4, which are applicable since November 2008. The meeting noted that the number of replies to the above-mentioned State Letter was below expectation and reviewed the status of implementation of eTOD (Area 1 and Area 4) in the MID Region. The following was highlighted:

- Bahrain has fully implemented eTOD for Area 1 and Area 4 and the data is available through an eTOD management system, which offers tailored requests for users. However, the cost-recovery issue for the provision of eTOD to the users is not yet finalized.

MIDANPIRG/13
Report on Agenda Item 4.3

- Egypt has published in its AIP the information related to the availability of eTOD for Area 1 and Area 4. However, the cost-recovery issue for the provision of eTOD to the users is not yet finalized.
- Jordan has completed the work for Area 1 and expects to complete Area 4 by mid 2012, date at which the eTOD data related to both Area 1 and Area 4 would be made available to the users against fees that have not yet been determined.
- Qatar has fully implemented eTOD for Area 1, Area 3 and Area 4. The data will be available on the web free of charge by the end of 2012.
- Saudi Arabia has completed the work related to Area 1 and Area 4.
- UAE has made available the eTOD data related to Area 1 free of charge on the web, as part of the Integrated Aeronautical Information Package.

4.3.44 Based on the above, the meeting invited States to issue specific Aeronautical Information Circulars (AIC) related to the implementation of eTOD to inform the users about the availability and cost of the eTOD data.

Phase 3 — Information management

4.3.45 The meeting recalled that during Phase 3 of the transition to AIM, the digital databases introduced in Phase 2 will be used for the transfer of information in the form of digital data. This should be based on a Standard aeronautical data exchange model to ensure interoperability between all systems not only for the exchange of full aeronautical data sets, but also for short-term notification of changes.

4.3.46 The meeting noted that although one or two steps of Phase 3 have been partially implemented by a number of States in the MID Region; the entire scope of phase 3 could not be achieved before 2016-2020.

4.3.47 Considering all of the foregoing, the meeting urged States that have not yet done so to develop/update their National plans for the transition from AIS to AIM and provide updated information to the ICAO MID Regional Office, before **15 August 2012** for review by the AIM TF/7 meeting.

4.3.48 The meeting noted that, as a follow-up action to MIDANPIRG/12 Conclusion 12/36 an ACAC/ICAO AIM Seminar, hosted by Egypt, will be held in Cairo, 11 – 13 June 2012, in order to provide States with a better understanding of the planning and implementation issues related to the transition from AIS to AIM; and provide briefings related to AIM global developments and regional/national AIM-related activities and experiences with an emphasis on those related to the implementation of Regional/Sub-Regional AIS databases. The meeting encouraged States to participate actively in the above-mentioned Seminar.

MIDANPIRG/13
Report on Agenda Item 4.3

AIS/MAP Task Force TOR

4.3.49 Taking into consideration the latest developments related to the transition from AIS to AIM, and based on the outcome of the AIS/MAP TF/6 and ATM/SAR/AIS SG/12 meetings, the meeting agreed to rename the AIS/MAP Task Force to AIM Task Force with Terms of Reference (TOR) as at **Appendix 4.3D** to the Report on Agenda Item 4.3. Accordingly, the meeting agreed to the following Decision, which replaces and supersedes MIDANPIRG/12 Decision 12/37:

DECISION 13/22

TERMS OF REFERENCE OF THE AIM TASK FORCE

*That, the AIS/MAP Task Force be renamed AIM Task Force with Terms of Reference (TOR) as at **Appendix 4.3D** to the Report on Agenda Item 4.3.*

MIDANPIRG/13
Appendix 4.3A to the Report on Agenda Item 4.3

STATUS OF IMPLEMENTATION OF WGS-84 IN THE MID REGION

	FIR	ENR	TMA/CT A/CTZ	APP	RWY	AD/HEL	GUND	QUALITY SYSTEM	AIP	REMARKS
BAHRAIN	F	F	F	F	F	F	F	F	F	
EGYPT	F	F	F	F	F	F	F	F	F	
IRAN	F	F	F	N	F	F	F	F	F	
IRAQ	P	P	P	P	P	P	N	N	P	
JORDAN	F	F	F	F	F	F	F	F	F	
KUWAIT	F	F	F	F	F	F	F	F	F	
LEBANON	F	F	F	F	F	F	N	N	F	
OMAN	F	F	F	F	F	F	F	F	F	
QATAR	F	F	F	F	F	F	F	F	F	
SAUDI ARABIA	F	F	F	F	F	F	F	F	F	
SYRIA	F	F	F	F	F	F	N	N	F	
UNITED ARAB EMIRATES	F	F	F	F	F	F	F	F	F	
YEMEN	F	F	F	F	F	F	F	N	F	

Legend:

F: Fully implemented

P: Partly implemented

N: Not implemented

MID REGION AIS DATABASE STUDY GROUP (MIDAD STG)

1. TERMS OF REFERENCE

The terms of Reference of the MIDAD STG are to:

- 1) carry out necessary coordination with States for the establishment of the MID Region AIS Database (MIDAD);
- 2) initiate and monitor the development of the MIDAD initial Study/Business case;
- 3) initiate and monitor the development of the detailed MIDAD study addressing all technical, operational, financial, human, legal and institutional issues, and provide necessary guidance;
- 4) develop the Call for Tender for the establishment of MIDAD;
- 5) negotiate the contract for the establishment of MIDAD with the chosen Contractor (MIDAD Service Provider); and
- 6) agree on the mechanism for the monitoring of MIDAD operations and maintenance.

2. COMPOSITION

The MIDAD STG is composed of:

- a) all MID States; and
- b) concerned International/Regional Organizations as observers.

Other representatives from industry and user Organizations having a vested interest in Aeronautical Information Management and experience in the development of Regional AIS Databases, could participate as observers, as necessary.

MIDAD STUDY (First Phase)
Analysis of States' replies to the MIDAD Questionnaires

Questions/States	Bahrain	Egypt	Iran	Iraq	Jordan	Kuwait	Lebanon	Oman	Qatar	Saudi Arabia	Syria	UAE	Yemen
Is your AIS/AIM Organisation part of the regulator organisation? (AIS Manual, Figure 3-1, Alternative 1)	NO (Air Navigation Directorate/ATM)	NO (ANSP)	NO (ANSP/ATS Department)	YES	NO (ATM Department)	YES	YES (DGCA/ATS)	NO (DGMAN)	YES (ANS)	YES (GACA/ANS/AIS)	YES (ATM)	YES	YES
To which Organisation do the AIS Aerodrome Units belong to?	ATM	ANSP	Airport Authorities	Airport Authorities	CARC ANSP	DGCA	DGCA/ATS	CAA	CAA/ANS	GACA/ANS	CAA/ATM	Airport Authorities	Airport Authorities
To which organisation does the military AIS/AIM belong to?	MIL	No MIL AIS/AIM Units	No MIL AIS/AIM Units	Not known	No MIL AIS/AIM Units	No MIL AIS/AIM Units	No MIL AIS/AIM Units	No MIL AIS/AIM Units	No MIL AIS/AIM Units	Not known	No MIL AIS/AIM Units	No MIL AIS/AIM Units	No MIL AIS/AIM Units
Do the ARO Units belong to the AIS/AIM organisation?	YES	YES	NO	NO	YES	YES	YES	YES	NO	NO (ARO Units not existing)	YES	YES (belong to Airport Authorities AIS)	YES
Does the procedure design (PANS-OPS) belong to your AIS/AIM organisation?	YES	No answer	NO (ATS)	PANS-OPS not established	YES	YES	YES	YES	YES	YES	NO (ANS)	NO (Aerodromes)	NO (ANS)
AMHS availability at AIS/AIM HQ	YES	YES	NO (plan for end 2012)	NO	YES	NO (planned mid 2012)	NO (plan for Apr 2012)	YES	YES	YES	NO	YES	NO
AMHS availability at the Aerodrome AIS Units	YES	NO	NO (plan for end 2012)	NO	YES	NO (planned mid 2012)	NO (plan for Apr 2012)	NO	Yes (only for Doha)	YES	NO	NO	NO
Have you established a national plan for the transition from AIS to AIM?	YES	YES	YES	No answer	YES	YES	NO	YES	YES	YES	NO	YES	NO
Is MIDAD already part of your national planning for AIS/AIM? If No, do you intend to include MIDAD into your national planning for AIS/AIM?	NO/YES	No answer	NO/YES	No answer	NO/YES	NO/YES	NO/YES	NO/YES	NO/YES	NO/YES	NO/YES	NO/TBD	NO/YES
Would your state / organisation like to play an active role in the MIDAD?	YES	No answer	YES	No answer	YES	YES	YES	YES	YES	YES	YES	TBD	TBD
Would your state / organisation like to provide contributions to MIDAD set-up?	YES	No answer	YES	No answer	YES	TBD	YES	YES	YES	YES	NO	TBD	NO
Would your state / organisation participate in the operation of MIDAD?	YES	No answer	YES	No answer	YES	TBD	YES	YES	NO	YES	YES	TBD	YES
Do you think MIDAD has a realistic chance to be realised? If yes, can you give a percentage probability?	YES (60%)	No answer	YES/--	No answer	YES (70%)	YES (40%)	YES (80%)	YES (80%)	YES (60-70%)	YES (85%)	YES (70%)	No answer	YES (60%)
Do you think that MIDAD Improves safety?	YES	No answer	YES	No answer	YES	YES	YES	YES	YES	YES	YES	TBD	YES
Do you think that MIDAD brings Passenger time savings?	YES	No answer	YES	No answer	YES	YES	YES	YES	YES	Unknown	YES	No answer	YES
Do you think that MIDAD brings Environmental benefits?	YES	No answer	YES	No answer	YES	YES	YES	YES	YES	YES	YES	No answer	YES
Do you think that MIDAD brings Transfer of high-tech skills?	YES	No answer	YES	No answer	YES	YES	YES	YES	YES	YES	YES	TBD	YES
Does your state / organisation already has a preferred method of financing in mind for MIDAD?	NO	No answer	YES/States Contributions	No answer	YES/Direct Financing by 1 State	YES/States Contributions	YES/States Contributions	NO	NO	YES/To be notified later	YES/Direct Financing by 1 State	NO	NO
Does your state / organisation already prefer a specific institutional scenario for MIDAD?	NO	No answer	YES/Iran Preferred option will be provided before MIDANPIRG/13	No answer	YES/Commercial company owned by interested MID states and/or ANSPs based on one state law in the MID Region	YES/Commercial company owned by interested MID states and/or ANSPs based on one state law in the MID Region	YES/Commercial company owned by interested MID states and/or ANSPs based on one state law in the MID Region	NO	YES/GCC	NO	YES/one MID state and/or ANSP operates MIDAD on behalf of other interested MID states and/or ANSPs	NO	NO

- - - - -

**MIDANPIRG AERONAUTICAL INFORMATION MANAGEMENT
TASK FORCE (AIM TF)**

1. TERMS OF REFERENCE

1.1 The Terms of Reference of the AIM Task Force are:

- a) ensure that the planning and implementation of AIM in the MID Region is coherent and compatible with developments in adjacent regions, and that it is carried out within the framework of the ATM Operational Concept, the Global Air Navigation Plan and the associated Global Plan Initiatives (GPIs);
- b) seek to achieve common understanding and support from all stakeholders involved in or affected by the AIM developments/activities in the MID Region;
- c) provide expert inputs for AIM-related issues; and propose solutions for meeting ATM operational requirements;
- d) provide a platform for harmonization of developments and deployments in the AIM domain;
- e) monitor and review the latest developments in the area of AIM and procedure design issues associated to AIM, and provide regular progress reports to the ATM/SAR/AIS Sub Group and MIDANPIRG concerning its work programme, as appropriate; and
- f) review periodically its Terms of Reference and propose amendments as necessary.

1.2 In order to meet the Terms of Reference, the AIM Task force shall:

- a) monitor the status of implementation of the required AIM facilities and services and the transition from AIS to AIM in the MID Region, and provide necessary assistance and guidance to States in this respect;
- b) identify and review those specific deficiencies and problems that constitute major obstacles to the provision of efficient AIM services, and recommend necessary remedial actions;
- c) keep under review the adequacy of ICAO SARPs requirements in the area of AIM, taking into account, inter alia, changes in user requirements, the evolution of operational requirements and technological developments;
- d) develop proposals for the updating of relevant ICAO documentation, including the amendment of relevant parts of the MID Basic ANP and FASID, as deemed necessary;
- e) monitor and review technical and operating developments in the area of AIM and foster their implementation in the MID Region in a harmonized manner;
- f) foster the integrated improvement of AIM services through proper training and qualification of the AIM personnel; and

- g) establish and monitor AIM performance objectives for the MID Region.

2. COMPOSITION

2.1 The Task Force will compose of:

- a) MIDANPIRG Member States; and
- b) concerned International/Regional Organizations as observers.

Other representatives from industry and user Organizations having a vested interest in Aeronautical Information Management could participate as observers in the work of the Task Force, as appropriate.

MIDANPIRG/13
Report on Agenda Item 4.4

**REPORT ON AGENDA ITEM 4: PERFORMANCE FRAMEWORK FOR REGIONAL AIR NAVIGATION
PLANNING AND IMPLEMENTATION**

4.4 CNS

MID Internet Protocol Network (MID-IP Network)

4.4.1 The meeting noted that PAN European Network Service (PENS) implemented in Europe is a common facility that allows ANSPs two different IP interconnection possibilities. In cases where the ANSPs have their own IP networks, they can connect their national IP networks to PENS. However, in other cases where the ANSPs do not have their own IP network, the PENS project can install an access point, consisting of a PENS router, at each location where an IP connection needs to be implemented, in order to provide connectivity with the PENS network. Furthermore, the meeting was informed that other ICAO Regions are planning for implementing IP networks.

4.4.2 The meeting noted that the complete implementation of IPv6 will take time and consequently, there will be a long period for both protocols IPv4 and IPv6 to co-exist. The meeting agreed that careful attention to the current implementation of AFTN, CIDIN and ISO/OSI based ATN is required. Accordingly, the provisions for the AFTN, CIDIN, and ISO/OSI should continue to be developed to secure these implementations. Furthermore, the meeting agreed that the MID ATN implementation should take place on the basis of regionally agreed requirements, taking into consideration, the System Wide Information Management (SWIM) concept and any other new developments.

4.4.3 The meeting recalled, that MIDANPIRG/12 agreed to the development of the MID IP Network, where it was agreed that an IP Network survey be conducted, to which six MID States replied i.e. (Bahrain, Egypt, Iran, Jordan, Saudi Arabia and UAE). The replies were analysed and it was noted that the survey would require amendment to include more details, and further action on the establishment of MID IP Network is dependent on provision of replies to the survey from all MID States. Accordingly, the meeting agreed to the following Conclusion:

CONCLUSION 13/23: MID IP NETWORK SURVEY

*That, States complete the MID IP Network survey as at **Appendix 4.4A** to the Report on Agenda Item 4.4 and provide feedback to the ATN-IPS WG/4 meeting.*

4.4.4 The meeting noted that some MID States had already developed domestic IP networks, while other States are in the process of developing IP network. The meeting was of the view that for harmonization and compatibility issues these networks be based according to ICAO standards as outlined in Doc 9896. Accordingly, the meeting agreed to the following Conclusion:

CONCLUSION 13/24: DEVELOPMENT OF IP BASED MID NETWORKS

That, States, that have not yet done so, be urged to:

- a) *develop national plans, in line with the ICAO Manual on the Aeronautical Telecommunication Network (ATN) using Internet Protocol Suite (IPS) Standards and Protocols (Doc 9896), for migration to IPv6 taking the existing IPv4 based aeronautical systems into account;*

MIDANPIRG/13
Report on Agenda Item 4.4

- b) consider the use of IPv4/IPv6 protocol translation devices only as a provisional solution during the migration; and*
- c) include a requirement for both IPv4 and IPv6 in their ongoing Air Traffic Services (ATS) Message Handling System (AMHS) implementation programmes in order to ensure seamless transition and interoperability.*

Results of the ITU World Radio Communication Conference (2012) (WRC-12)

4.4.5 The meeting recalled that Frequency spectrum is a finite and limited resource, managed by the International Telecommunication Union (ITU), through its World Radiocommunication Conferences, held every three to four years.

4.4.6 The meeting recognized that the Availability of the necessary radio frequency spectrum continues to be a prerequisite for the safety of civil aviation and the effective implementation of the communications, navigation, and surveillance/air traffic management (CNS/ATM) systems. However, as demand for radio spectrum from non-aviation users keeps growing, aviation faces ever increasing competition for the limited available spectrum, in particular from mobile and broadband wireless access services. It is essential that aviation's requirements for radio frequency spectrum be strongly supported by all ICAO Member States in all international fora, where spectrum allocations are addressed, so as to ensure that aviation requirements for safety of live services are duly presented and understood.

4.4.7 The meeting noted that ICAO policies and practices related to the radio frequency spectrum matters are outlined in Assembly Resolution A36-25, which urges States to support aviation requirements for spectrum and instructs ICAO to make sufficient resources available to enable increased participation in spectrum management activities.

4.4.8 Based on the above, the meeting noted that the ICAO Secretariat had several activities to promote the ICAO Position and spectrum policy, to secure adequate support in the preparatory work leading up to WRC-12. Details of the results of the conference on all agenda items relevant to aviation are contained in **Appendix 4.4B** to the Report on Agenda Item 4.4.

4.4.9 The meeting noted that in general, the WRC-12 conference results conformed to the ICAO Position. A significant element in the ICAO preparatory activities for this conference was the early awareness and involvement of States in the development of the ICAO position.

4.4.10 The meeting was apprised of the poor participation to WRC-12 by the MID States civil aviation experts. Even though this issue was discussed in many previous MIDRPIRG meetings and appropriate conclusions were adopted related to the support of ICAO position at WRCs and the ITU study group meetings to which the attendance of civil aviation experts is important. The meeting agreed that supporting ICAO position to WRCs be presented to the MID-DGCA/2 meeting in order to gain the support at the highest possible level in the MID States.

4.4.11 The meeting urged MID States to support ICAO for the early development and dissemination of the draft ICAO Position for WRC-15 and encouraged them to actively participate in the preparatory work of the ITU, including the relevant meetings of the ITU-R. Furthermore, the meeting supported the idea of organization ACP Working group meeting and radio frequency seminar in the MID region in order to gain understanding of the ICAO position for WRC-15. The meeting urged MID States listed in the footnotes affecting aviation spectrum to remove their names from these footnotes, to allow for interference free operation of aviation systems.

MIDANPIRG/13
Report on Agenda Item 4.4

AFTN/CIDIN Routing Directory and Establishment of MID ATS Message Management Center AMC

4.4.12 The meeting recalled that a periodical data collection and publication in the MID ANP FASID for the AFTN/CIDIN/AMHS circuits and other related information is a human resource extensive task and would need to be supported by electronic tools, e.g. centralized database. In this context the meeting was apprised that AFTN/CIDIN/AMHS international connectivity information was maintained in ICAO EUR Region by EUROCONTROL in the AMC. Consequently, the meeting agreed that ICAO MID Regional Office request EUROCONTROL for the possibility to extend these tools to ICAO MID Region.

4.4.13 The meeting noted that MID States could utilize EUR-AMC to obtain some of the information electronically. Consequently, the meeting urged MID State to access the AMC website <http://www.eurocontrol.int/amc> and keep all information related to their States updated. Accordingly, the meeting agreed to the following Conclusion:

CONCLUSION 13/25: UPDATE THE AMC SYSTEM

That, States be urged to keep the data related to their COM CENTER updated in the EUR-AMC system.

4.4.14 The meeting was updated on the MID AFTN/CIDIN routing directory and agreed that the ICAO MID Regional Office coordinate with Jordan for the population of the MID AFTN/CIDIN routing directory in the MID-AMC when operational, also post the directory in the ICAO MID website. Accordingly, the meeting agreed to the following Conclusion:

CONCLUSION 13/26: MID AFTN/CIDIN DIRECTORY

That, ICAO MD Regional Office:

- a) take necessary steps with Jordan to populate the MID AFTN/CIDIN Directory in the MID-AMC; and*
- b) post the MID AFTN/CIDIN Directory in the ICAO MID Website.*

4.4.15 The meeting noted that Asymmetric routing may cause loss of messages due to the fact that a gateway cannot map a Non-Delivery Report to a subject message and noted that Singular AMHS diversion for an area representing several Private Management Domains (PRMDs) is substantial and cannot be performed by one letter as used in AFTN, to facilitate a diversion from AFTN to AMHS and vice versa.

4.4.16 Based on the above, the meeting urged MID AMHS COM Centres to review the current routing tables and make sure of deploying symmetric routes where possible, also encouraged MID States to make use of the corresponding PRMDs table to facilitate diversion from AFTN to AMHS and vice versa. Furthermore, the meeting agreed that States start the PRMD with the first two letters for their location indicator. Accordingly, the requirement for an easy access to an updated PRMD files is necessary, in this regard the meeting noted that Jordan volunteered to keep the PRMD file updated on their website: http://www.carc.gov.jo/inner_en.php?menu=3&id=17

MIDANPIRG/13
Report on Agenda Item 4.4

4.4.17 The meeting recalled that Trilateral AMHS Tests have been performed between Amman, Cairo, and Jeddah. The meeting noted with appreciation that the AMHS triangle was put into operation, and was the first AMHS triangle world-wide that uses static routing with pre-defined routing tables.

4.4.18 The meeting noted that Bahrain, Egypt, Jordan, Oman, Qatar, Saudi Arabia, and United Arab Emirates installed and operated AMHS systems while other MID States are in the process of installing new AMHS systems.

4.4.19 The introduction of AMHS and the implementation of new circuits make the manual maintenance of the routing directory difficult and complicated. The meeting recalled that in Europe this function is done by AMC operator with the aid of routing software where the AMC operator would have a complete view of the network; in addition AMC has a function utilized to create an optimum routing table, however this function has not been provided to the External COM Centre.

4.4.20 Based on the above, MIDANPIRG/12 tasked the ICAO MID Regional Office to request authorization from EUROCONTROL to provide routing functions and additional function available in the AMC to the MID Region. It was indicated that additional workload on EUR-AMC operator will be required and as a result of the meeting between EUROCONTROL and Jordan, three options were identified for supporting the MID Region requirement. The discussion and analysis for the three options indicated that most appropriate way forward for the MID Region will be that ICAO MID Region establish its own MID-AMC. Accordingly, the meeting agreed to following Conclusion:

**CONCLUSION 13/27: MID-ATS MESSAGE MANAGEMENT
CENTRE (AMC) PROJECT**

That,

- a) Jordan complete the development of the MID-AMC;*
- b) ICAO MID Regional Office communicate with EUROCONTROL to provide the necessary support for the project;*
- c) ATN-IPS WG and CNS SG develop the necessary legal framework for the use of the MID-AMC; and*
- d) States be encouraged to use the MID-AMC on trial basis for one year.*

CNS Sub Group and ATN/IPS Working Group Terms of Reference

4.4.21 The meeting noted that the CNS Sub Group and ATN-IPS Working Group had revised their Terms of Reference (TOR) to include the latest developments in their respective fields. Accordingly, the meeting agreed to the following Decisions:

**DECISION 13/28: REVISED TOR OF THE ATN-IPS
WORKING GROUP**

*That, the Terms of Reference (TOR) of the ATN-IPS Working-Group be updated as at **Appendix 4.4C** to the Report on Agenda Item 4.4.*

MIDANPIRG/13
Report on Agenda Item 4.4

DECISION 13/29: ***TERMS OF REFERENCE OF THE CNS
SUB-GROUP***

*That, the Terms of Reference (TOR) of the CNS SG be updated as at **Appendix 4.4D** to the Report on Agenda Item 4.4.*

MIDANPIRG/13
Appendix 4.4A to the Report on Agenda Item 4.4

MID IP NETWORK SURVEY

Introduction

This survey has been redeveloped while analyzing the previous version. The purpose is for collecting information about the existing IP infrastructure between the states in-order to come with a unified IP scheme plan for the MID-Region IP network.

General Information:

State:			
Does IP network existing in place?			
☐ Yes ☐ No			
Is Aviation systems connected together over IP?			
☐ Yes ☐ No			
Who to contact if more details or clarification is required?			
Name:			
Title:			
Email:			
Telephone:		Fax:	

Link Specific Information:

Please fill the following form **for each link** between you state and neighboring state within MID-Region:

1	Connection From:	State:	Location:
2	Connection To:	State:	Location:
3	Service Provider:		
4	Link Speed:	 Kbps	
5	Link Type:	☐ Leased Circuit ☐ Frame-relay ☐ V-SAT ☐ MPLS ☐ Other	
6	IP version:	☐ IPv4 ☐ IPv6	
7	IP Subnet:	☐ 10.____.____.____ Netmask: _____.____.____.____ ☐ 172.____.____.____ Netmask: _____.____.____.____ ☐ 192.168.____.____ Netmask: _____.____.____.____ ☐ Other: Netmask: _____.____.____.____	
8	Router / other	Manufacturer: Model:	
9	Router Interfaces Supported*:	☐ Async Serial ☐ Sync Serial ☐ Ethernet ☐ Other:	
	Router Interfaces Implemented	☐ Async Serial ☐ Sync Serial ☐ Ethernet ☐ Other:	
10	Supported Routing Protocols*:	☐ RIP ☐ OSPF ☐ BGP ☐ IS-IS ☐ Other:	
	Supported Routing Implemented	☐ RIP ☐ OSPF ☐ BGP ☐ IS-IS ☐ Other:	

11	Supported Voice Signaling on router*:	☐ SIP	☐ H.323	☐ Other:
	Supported Voice Implemented	☐ SIP	☐ H.323	☐ Other:
12	Data Applications in use*:	☐ AFTN/CIDIN OLDI/AIDC	☐ AMHS	☐ Other:
13	Voice Applications in use*:	☐ ATC Voice	☐ VHF Voice	☐ Other Voice:
14	Data end user interface:	☐ Serial	☐ IP based (Answer Below)	☐ Other:
15	Security measures between LAN and WAN*:	☐ Single-firewall (Type:) ☐ IPS (Type:) ☐ Dual-firewall (Types:) 		
16	Voice end user interface*:	☐ FXS/FXO	☐ ISDN	☐ VoIP
	Optional cost in USD	☐ Other:		
	Additional Info			

* Choose all that apply

MIDANPIRG/13
Appendix 4.4B to the Report on Agenda Item 4.4

WRC-12 RESULTS OF RELEVANCE TO INTERNATIONAL CIVIL AVIATION

1. Agenda Item 1.1: To consider and take appropriate action on requests from administrations to delete their country footnotes or to have their country name deleted from footnotes, if no longer required, taking into account Resolution 26 (Rev. WRC-07).

1.1 Under this agenda item, the ICAO Position supported the deletion of footnote No. **5.72** which allowed for the use of the bands 283.5 - 490 and 510 - 526.5 kHz by Norwegian fixed stations located north of 60°. Aeronautical Non-directional Beacons (NDB) operate in these bands. This footnote was deleted by the conference.

1.2 Footnotes Nos. **5.181**, **5.197** and **5.259** were introduced in about twenty countries in 1987 in view of the foreseen global transition from ILS to MLS and were intended to enable the introduction of the mobile service in the ILS bands as and when these would no longer be required for ILS. However, it has been apparent for a while that a global transition to MLS is not taking place as originally foreseen and that ILS will continue to be used by aviation for the foreseeable future. Therefore the existence of these footnotes is no longer justified. Most administrations have already removed their name from these footnotes at previous conferences, and this trend continued further during this conference.

1.3 The band 1 215 - 1 300 MHz is used by civil aviation for the provision of radionavigation services (primary radar) through footnote No. **5.331**. Footnote No. **5.330** also allocates the band in a number of countries to the fixed and mobile service. Given the receiver sensitivity of aeronautical uses of the band, ICAO does not support the continued inclusion of an additional service through country footnotes. Some country names were removed from Footnote No. **5.330** as a result of the conference, but the names of Djibouti, Egypt and Oman were added.

1.4 The ICAO Position supported the deletion of footnotes **5.362B** and **5.362C** which allocate the GNSS band 1 559-1 610 MHz on a secondary basis to the (terrestrial) fixed service in certain countries until 1 January 2015, after which time this allocation to the fixed service shall no longer be valid. The continued use by the fixed service constitutes a severe constraint on the safe and effective use of GNSS in some areas of the world, as coordination distances of up to 400 km between the stations of the fixed service and the aircraft would be required. Ten countries removed their names from footnotes **5.362B** and **5.362C** during WRC-12. This was a significant step forward towards achieving better worldwide protection of GNSS.

1.5 The band 4 200-4 400 MHz is reserved for use by airborne radio altimeters. Footnote No. **5.439** allows the operation of the fixed service in this band on a secondary basis. Radio altimeters are a critical element in aircraft automatic landing systems and serve as a sensor in ground proximity warning systems. The ICAO Position recommended deletion of this footnote. As a result of this conference, only one country now remains in this footnote, Iran (Islamic Republic of).

2 Agenda Item 1.2: Taking into account the ITU-R studies carried out in accordance with Resolution 951 (Rev. WRC-07), to take appropriate action with a view to enhancing the international regulatory framework.

2.1 The ICAO Position on this agenda item was to support new provisions or modifications to existing provisions that improve the flexibility with which spectrum allocated to aeronautical safety services can be used by aviation and/or tighten regulatory provisions that enhance the protection of aviation systems. Furthermore, the position was to ensure that any other measures taken at WRC-12 under this agenda item would not have an adverse impact on the use or protection of aeronautical systems.

2.2 No new radio regulatory measures were developed under this agenda item and Resolution **951**, which described the studies to be performed under this agenda item, was suppressed. This was fully in line with the ICAO position. Also, in line with ICAO proposals, the WRC continued the trend set by the last conference, towards increased flexibility of aeronautical spectrum allocations. This was mainly achieved under agenda items 1.3 and 1.4 of this conference, by enabling the sharing of spectrum between aeronautical mobile (route) allocations and aeronautical radionavigation allocations, while limiting the use of such shared allocations to systems which operate in accordance with ICAO SARPs.

3 Agenda Item 1.3: To consider spectrum requirements and possible regulatory actions, including allocations, in order to support the safe operation of unmanned aircraft systems (UAS), based on the results of ITU-R studies, in accordance with Resolution 421 (WRC-07).

3.1 The ICAO Position was to support, based on the results of studies identified in Resolution **421**, any modification to existing allocations, or new allocations required to accommodate UAS operations in non-segregated airspace while maintaining the safety and regularity of flight of all types of aircraft. Accordingly, the ICAO position was also to ensure that allocations used, in particular, for UAS command and control, ATC relay and sense and avoid in non-segregated airspace are in the aeronautical mobile (route) service (AM(R)S), aeronautical mobile satellite (route) service (AMS(R)S) and/or aeronautical radionavigation service (ARNS) and do not adversely affect existing aeronautical systems. Furthermore, the position was to oppose the use of this agenda item to seek new spectrum allocations to meet payload requirements.

3.2 In the preparations leading up to the conference, ITU-R studies, supported by ICAO, identified a requirement of 34 MHz of terrestrial spectrum and up to 56 MHz of satellite spectrum to support UAS line-of-sight (LOS) and beyond-line-of-sight (BLOS) command and control communications (C³) (the ITU equivalent terminology for C³ is Control and Non-Payload Communications (CNPC)).

3.2.1 For LOS links, the studies prior to the conference concentrated mainly on three potential candidate aeronautical safety bands: 960 – 1 164 MHz (DME band), 5 030 – 5 091 MHz (MLS band) and 15.4 – 15.5 GHz (ARNS band).

3.2.2 For BLOS links the main focus was on the 5 030 – 5 091 MHz band, which already has an appropriate AMS(R)S allocation which could support such use, and existing allocations to the Fixed Satellite Service in the 11/12/14 GHz (Ku) 20/30 GHz (Ka) bands.

3.3 The methods addressed during the conference concentrated mainly on the 5 GHz band for both LOS and BLOS, as well as existing FSS allocations in the Ku and Ka bands in support of BLOS. In the light of the mounting pressures from other services (IMT and BWA in particular) and the very limited implementation of MLS to date, aviation supported the shared use of the 5 GHz MLS band for the provision of both LOS and BLOS services, while maintaining a priority to MLS use in this band. On the other hand, ICAO did strongly oppose the use of little modified FSS allocations, without additional special radio regulatory provisions to reflect the safety-of-life criticality of BLOS C³ links in support of UAS.

3.3.1 In addition to safety through technically robust links as defined in relevant ICAO SARPs, the provision of aeronautical safety services relies on the use of AM(R)S and AMS(R)S allocations. AM(R)S and AMS(R)S are defined in the Radio Regulations as services *used permanently or temporarily for the safeguarding of human life and property*, and as such, any frequency bands providing safety of life services enjoy special measures in the Radio Regulations to ensure freedom from interference and to mitigate any eventual interference through swift regulatory action by the responsible radio regulators. This is reflected in No. **4.10**.

3.4 On the other hand, FSS is not defined as a safety service, and, due to lack of existing and effective radio regulatory measures, FSS frequency coordination and interference mitigation relies today, to a large extent, on voluntary commercially motivated cooperation between FSS operators.

3.5 The results of the conference were:

3.5.1 LOS: While retaining priority to the MLS service in the 5 030 – 5 091 MHz band, this band was also allocated to the AM(R)S, limited to internationally standardized aeronautical systems. Unwanted emissions from the AM(R)S in this band shall be limited to protect RNSS system downlinks in the adjacent 5 010 – 5 030 MHz band (future GNSS service and user downlink band).

3.5.2 BLOS: An existing allocation to the AMS(R)S in the 5 000 – 5 150 MHz band was slightly modified. In the bands 5 000 – 5 030 MHz and 5 091 – 5 150 MHz, the allocation was limited to internationally standardized aeronautical systems. In the band 5 030 – 5 091 MHz, coordination procedures were modified from No. **9.21** to No. **9.11A** which is more appropriate for coordination with terrestrial services, and the allocation was limited to internationally standardized aeronautical systems.

3.5.3 In line with WRC-07, and as reflected further under agenda item 1.4 during this conference; when making allocations to AM(R)S in bands already allocated to ARNS and used by ICAO standardized systems, it was acknowledged that compatibility between ICAO standardized systems would be taken care of within ICAO. Hence these new AM(R)S and AMS(R)S allocations are limited to internationally standardized aeronautical systems.

3.5.4 The conference did not support the allocation or use of FSS spectrum for the provision of BLOS C³, without substantive modifications to such allocations. Such required modifications were not identified at the conference. However, a study item was assigned to the upcoming ITU-R cycle; to identify technical, regulatory and operational recommendations, and an agenda item for WRC-15 was agreed; to consider, based on the result of the ITU-R studies, the possible regulatory actions to support the use of FSS frequency bands for the UAS C³ links, while ensuring the safe operation of UAS C³ links, consistent with the provision of a safety service, making reference to No. **4.10**. ICAO was invited to participate in the ITU-R studies.

3.5.5 As a consequence of the above, Resolution **421** (WRC-07) was suppressed. The above results are fully in line with the ICAO position.

4 Agenda Item 1.4: To consider, based on the results of ITU-R studies, any further regulatory measures to facilitate introduction of new aeronautical mobile (R) service (AM(R)S) systems in the bands 112 - 117.975 MHz, 960 - 1 164 MHz and 5 000 - 5 030 MHz in accordance with Resolutions 413 (Rev. WRC-07), 417 (WRC-07) and 420 (WRC-07).

4.1 Three separate issues were addressed under this item:

4.2 112 – 117.975 MHz

4.2.1 In order to support future requirements for air-ground communications, in particular to extend the current usage of the band 117.975-137 MHz in congested areas (e.g. Europe), WRC-07 made a provisional AM(R)S allocation in the 108 – 117.975 MHz band, pending further studies before WRC-12.

4.2.2 ITU-R, with the assistance of ICAO, has studied any potential compatibility issues between the analogue broadcasting and AM(R) services that may arise from the introduction of AM(R)S systems in the band 112 – 117.975 MHz. The result of these studies confirms that no harmful interference will arise from the introduction of AM(R)S in the band 112 – 117.975 MHz into analogue FM broadcasting receivers below 108 MHz and that both services can operate on a compatible basis. Regarding the compatibility with digital broadcasting service below 108 MHz, it was agreed to pursue this matter under traditional ITU-R activities and outside the WRC process.

4.2.3 Consequentially the allocation was confirmed and Resolution **413** was amended accordingly. It should be noted that this new AM(R)S allocation is shared with the ARNS in a manner that fully protects the ARNS. Furthermore, the allocation is limited to systems which meet ICAO SARPs published in Annex 10 to the ICAO Convention.

4.3 960 – 1 164 MHz

4.3.1 WRC-07 made a provisional AM(R)S allocation in the band 960 – 1 164 MHz to support the introduction of future applications and concepts in air traffic management requiring safety critical aeronautical communication. While recognizing that ICAO will take care of compatibility issues between ICAO standardized ARNS and AM(R)S systems sharing this allocation, ITU-R has conducted studies on operational and technical means to facilitate sharing between non-ICAO ARNS systems and the potential future AM(R)S systems identified to operate in the frequency band 960 – 1 164 MHz.

4.3.2 The results of the ITU-R studies provide separation distances below which site-specific compatibility studies should be performed in order to ensure that in particular the non-ICAO standardized ARNS systems operating in Armenia, Azerbaijan, Belarus, Bulgaria, China, the Russian Federation, Kazakhstan, Mongolia, Uzbekistan, Kyrgyzstan, Tajikistan and Ukraine remain protected.

4.3.3 Consequentially the allocation was confirmed and Resolution **417** was amended accordingly. It should be noted that this new AM(R)S allocation is shared with the ARNS in a manner that fully protects the existing and future use of ARNS in this frequency allocation. Furthermore, the allocation is limited to systems which meet ICAO SARPs published in Annex 10 to the ICAO Convention. Coordination procedures to protect the non-ICAO ARNS system identified above, were defined in a manner which ensures that affected countries respond to coordination requests, as a non-reply is considered as acknowledgement of being unaffected.

4.4 5 GHz air/ground aeronautical surface (WiMAX) system

4.4.1 Studies for WRC-07 indicated that 60 – 100 MHz were required for the new air/ground aeronautical surface (sometimes branded as AeroMACS) system planned in the 5 GHz band. WRC-07 allocated 5 091 – 5 150 MHz to the AM(R)S. This 59 MHz wide allocation is shared with the existing ARNS, fixed satellite service (FSS), aeronautical mobile telemetry, and an aeronautical security (AS) application which was pushed by some members of the aeronautical industry during WRC-07.

4.4.2 ITU-R studies in preparation for WRC-12 have focused on two issues; a) whether more spectrum was required for this service; b) compatibility studies to identify whether the this service could share the band 5 000 – 5 030 MHz, or parts of that band, without undue impact to other existing or planned services.

4.4.3 As regards a), the outcome of further studies in ITU-R and ICAO indicated that the 59 MHz shared allocation is not sufficient. ACP WG-F has concluded that about 90 MHz would be required to provide the necessary bandwidth for all the envisaged air/ground applications to be supported by the new service. The basis for these results is a method which satisfies the present sharing conditions with the existing low earth orbit (LEO) FSS, as specified in footnote No. 5.444A. To satisfy these stringent sharing conditions, the methodology is based on a maximum of 500 airports being visible to the satellite footprint, and only 1 transmitter being active on each frequency, at each airport at any given instant in time. Recently a different methodology was introduced in ITU-R, this methodology proposing a *frequency reuse of one*, in essence multiple transmitters being active simultaneously on the same frequency at each airport. Frequency reuse of one is a new development in the mobile or broadband industry, its standards are still immature, and the technology is unproven as regards achievable quality of service performance. The IEEE 802.16(2009) standard, which the aeronautical SARPs currently under development are based on, is technically capable of using a frequency reuse of one methodology. A recent ITU-R report indicates that such frequency reuse requires 20 to 30 dB higher transmitting power per transmitter for appropriate signal/noise shaping. This method makes no attempt at trying to satisfy existing radio regulatory sharing conditions, to protect the FSS (earth-Space) feederlink present in the band.

4.4.3.1 As regards b), the frequency band 5 000 – 5 010 MHz is used as a global navigation satellite service (GNSS) (earth-Space) feederlink for Galileo (Europe) and QZSS (Japan). 5 010 – 5 030 MHz is planned for GNSS service and user links (space-Earth). During the ITU-R studies which commenced after WRC-07, it was agreed, due to the current immaturity of GNSS user and service link requirements, to concentrate only the band 5 000 – 5 010 MHz as a potential additional frequency allocation to the new aeronautical surface service in the 5 GHz band. The agreed ITU-R studies confirm that sharing in the band 5 000 – 5 010 MHz is feasible, given similar conditions as were used to establish compatibility with the FSS in the band 5 091 – 5 150 MHz.

4.4.4 During the WRC it became apparent that an additional allocation of 10 MHz in the 5 GHz band was only supported by USA and African States, while there was very strong opposition from other Regions. Aviation in general did not appear to have a strong opinion on this issue, while the GNSS community was strongly represented. The allocation WRC-07 made to the AS within the 5 091 – 5 150 MHz band was revoked by this conference. This slightly improves the spectrum access available to the AM(R)S allocation for the air/ground aeronautical surface system in the band 5 091 – 5 150 MHz.

4.5 Overall results

4.5.1 Overall, agenda item 1.4 can be declared a success. The new AM(R)S allocations in the 108 – 117.975 MHz and 960 – 1 164 MHz bands, will be shared with existing ARNS in a manner which does not burden existing and foreseen future implementations of the ARNS. These new allocations pave the way for more efficient and flexible aeronautical use of these frequency bands, and also add a radio regulatory requirement for ICAO standardized systems in these bands. While it was not possible to get a 10 MHz wide additional allocation for the 5 GHz air/ground airport surface system during this conference, indications are that States which require additional bandwidth to support very large airports will have access to additional spectrum through use of Article 4.4 of the Radio Regulations. Also, WRC-15 will re-examine the FSS allocation currently present in the 5 091 – 5 150 MHz band.

5 Agenda Item 1.5: To consider worldwide/regional harmonization of spectrum for electronic news gathering (ENG), taking into account the results of ITU-R studies, in accordance with Resolution 954 (WRC-07).

5.1 This agenda item was to address spectrum needs associated with terrestrial portable radio equipment used by services ancillary to radio and television broadcasting. Despite considerable efforts made by the proponents for electronic news gathering, the conference did not agree to modifications to the Radio Regulations in support of this agenda item. The ICAO Position, to oppose any allocation which would adversely affect the interests of aviation, is fully covered by this outcome.

6 Agenda Item 1.7: To consider the results of ITU-R studies in accordance with Resolution 222 (Rev. WRC-07) in order to ensure long-term spectrum availability and access to spectrum necessary to meet requirements for the aeronautical mobile-satellite (R) service, and to take appropriate action on this subject, while retaining unchanged the generic allocation to the mobile-satellite service in the bands 1 525 - 1 559 MHz and 1 626.5 - 1 660.5 MHz.

6.1 The ICAO position on this agenda item was to support further regulatory provisions to strengthen AMS(R)S access to the bands 1 545 - 1 555 MHz and 1 646.5 - 1 656.5 MHz including, if required, changes to No. 5.357A, No. 5.362A and Resolution 222 and taking into account the results of ITU-R studies.

6.2 Before WRC-97 the bands 1 545 - 1 555 MHz and 1 646.5 - 1 656.5 MHz were allocated exclusively to the AMS(R)S, and therefore access by AMS(R)S users was intrinsically guaranteed by the Radio Regulations. Following the WRC-97 decision to replace the exclusive AMS(R)S allocation with a “generic” allocation to the mobile-satellite service (MSS), which forced sharing of the bands with maritime and land-mobile users, such guarantee was no longer available. Instead, an alternative footnote No 5.357A was introduced to partially compensate for the loss of the exclusive allocation by giving AMS(R)S users priority of access to the band. The wording of the footnote and of the associated Resolution 222 were subsequently (WRC-2000) strengthened to state explicitly that MSS operators carrying non-safety-related traffic must yield spectrum if necessary to accommodate the spectrum requirements for AMS(R)S communications.

6.3 Since WRC-2000, the effectiveness of those provisions to ensure that AMS(R)S spectrum requirements are consistently met was challenged several times by at least one AMS(R)S operator. WRC-07 therefore agreed that the matter should be on the agenda of WRC-12.

6.4 The studies conducted by the ITU-R in preparation of WRC-12 concentrated on two main issues.

6.4.1 The first was whether the 1 545 - 1 555 MHz and 1 646.5 -1 656.5 MHz bands (2 x 10 MHz in total) would be sufficient to accommodate the long-term spectrum requirements for the AMS(R)S. The conclusion was that the bands would be sufficient, as long as AMS(R)S users were granted priority access to the bands (if necessary by forcing other users to vacate them).

6.4.2 The second and closely related issue was whether the regulatory provisions of footnote No 5.357A and Resolution 222 were strong enough to ensure that AMS(R)S users were indeed granted priority access to the bands. The issue had arisen because, while those provisions unequivocally supported the priority access principle, there were doubts as to the effectiveness of the procedures for their application. The doubt were mainly related to the facts that such procedures were based on regional Memoranda of Understanding (MoU) governing the assignment of spectrum to MSS operators (including AMS(R)S), and that the content of the MoU was not in the public domain. Furthermore, the assignments agreed under the provisions of the MoU were not in the public domain either. This situation had led to conflicting claims as to whether AMS(R)S requirements were being met or not. Such claims could not be arbitrated by external parties, such as ICAO, due to the intrinsic lack of transparency of the process. On this second issue, the ITU-R studies did not reach a consensual conclusion. This divergence of views was reflected in the proposals submitted to the conference. While some proposals claimed that the issue did not exist and therefore no action was required, others (in line with the ICAO position) disagreed and advocated the introduction of a more transparent process, and in particular the involvement of ICAO.

6.5 The outcome of the conference favoured the ICAO position. Specifically, the conference agreed a substantial modification of Resolution 222, introducing the following changes:

- a) administrations, if they so desire, are invited to have their AMS(R)S traffic requirements submitted to ICAO before the yearly MoU meetings in which spectrum assignments in the band are agreed for the following year;
- b) ICAO is invited to evaluate and, as appropriate, comment on the AMS(R)S traffic requirements received from individual administrations, on the basis of the known global and regional aviation traffic requirements, including the time-scale of regional and global communication requirements;
- c) a new detailed Annex to the Resolution spells out the existing procedures in detail, with substantial modifications intended to ensure the transparency of the process, such as a requirement for administrations to make known the result of the spectrum assignment meetings, and the introduction of a “Reassessment Meeting” to be held if an administration claims that their AMS(R)S spectrum requirements have not been met (with a view assess the validity of the claim and subsequently redress the situation if required).

6.6 Taken together, the changes achieve the purpose of strengthening AMS(R)S access, as required by the ICAO position. The introduction of the detailed Annex effectively addresses the long-standing issue of transparency. The optional involvement of ICAO in the validation of the AMS(R)S traffic requirements provides additional support for AMS(R)S operators’ claims to spectrum and reinforces their position in the MoU meeting.

7 Agenda Item 1.9: To revise frequencies and channelling arrangements of Appendix 17 to the Radio Regulations, in accordance with Resolution 351 (Rev. WRC-07), in order to implement new digital technologies for the maritime mobile service.

7.1 This agenda item sought to facilitate the introduction of new digital technologies in the HF frequency bands, as contained within Appendix 17 of the Radio Regulations. The ICAO Position was to ensure that the introduction of new modulation techniques and/or changes to the table contained in Appendix 17, does not cause harmful interference to the AM(R)S operating according to the table contained in Appendix 27, and operating in frequency bands adjacent to those operated by the maritime service.

7.2 Modifications were made to Appendix 17, to accommodate wide band digital transmissions, using multiples of 3 kHz channels, in accordance with Recommendation ITU-R M.1798. Updates were also made to Article 52 *Special rules relating to the use of frequencies*, accordingly. These modifications do not affect AM(R)S spectrum, hence the updates are in line with the ICAO position.

8 Agenda Item 1.12: To protect the primary services in the band 37 - 38 GHz from interference resulting from aeronautical mobile service operations, taking into account the results of ITU-R studies, in accordance with Resolution 754 (WRC-07).

8.1 Prior to WRC-12, the frequency band 37 – 38 GHz contained a generic mobile allocation, shared with the fixed service as well as space research and fixed-satellite services. There has not been any aeronautical use of this band to date, however, prior to WRC-07, some concerns were raised about the potential incompatibility of aeronautical mobile use with other users in this band.

8.2 In 2007 the aerospace industry started developing a new concept, involving very low power point-to-point transmissions onboard aircraft to replace wiring and/or add sensors/transducers in locations on the airframe hitherto difficult to reach. During this early development phase, this frequency band was seen as a potential candidate band to support wireless avionics intra-communications (WAIC) systems. See also discussion on agenda item 8.2

8.3 Later, interest in this band was dropped by the aerospace industry, as preliminary R&D efforts indicated that lower frequency bands would have more favourable characteristics for WAIC use. Furthermore, the outcome of these studies indicated no realistic possibility of aeronautical mobile applications sharing this band with other users. As a result, WRC-12 modified the 37 – 38 GHz mobile allocation to exclude aeronautical mobile. Although the ICAO position was to support the use of technical protection limits to protect other services rather than excluding the band from aeronautical mobile, this outcome is not perceived as a substantive loss of aviation spectrum.

9 Agenda Item 1.14: To consider requirements for new applications in the radiolocation service and review allocations or regulatory provisions for implementation of the radiolocation service in the range 30 - 300 MHz, in accordance with Resolution 611 (WRC-07).

9.1 Under this agenda item, WRC-12 made an additional allocation to the Radiolocation service in the frequency band 154 – 156 MHz, by footnote. This frequency band is used by the fixed and mobile services, except aeronautical mobile. Aviation is not affected by this allocation.

10 Agenda Item 1.15: To consider possible allocations in the range 3 - 50 MHz to the radiolocation service for oceanographic radar applications, taking into account the results of ITU-R studies, in accordance with Resolution 612 (WRC-07).

10.1 WRC-12 allocated certain frequency ranges in the band 3 – 50 MHz for the use of oceanographic radars, on a secondary basis, allowing this technology to be used in a uniform manner, while not interfering with existing fixed and mobile services in those frequency ranges. The frequency ranges allocated are not used by the AM(R)S, hence there is no impact on aviation by these new allocations.

11 Agenda Item 1.19: To consider regulatory measures and their relevance, in order to enable the introduction of software-defined radio and cognitive radio systems, based on the results of ITU-R studies, in accordance with Resolution 956 (WRC-07).

11.1 The ICAO position was one of concern, that the new technologies, software-defined radio (SDR) and cognitive radio systems (CRS) may cause undue interference to other users, if appropriate regulatory measures were not taken. SDR is a radio using software as building blocks rather than hardware, and could potentially be modified with relatively little effort, to work outside its intended operational parameters. CRS operate by automatically adapting their transmission or reception parameters to communicate efficiently, avoiding interference with licensed or unlicensed users. For this technology to work in practice, CRS need to be able to detect all transmitters. Many aeronautical systems however are based on ground based transmitters providing service to airborne receivers. In such a case it is very possible for a cognitive radio to be beyond the line-of-sight of the transmitter, while still being within the line-of-sight of the airborne receiver, resulting in interference to that receiver.

11.2 The conference was of the firm view that SDR is a technology and not a service. Hence the conference did not consider any changes to the Radio Regulations to support the introduction of SDR. It is expected that national type approvals and licensing conditions for transmitters will cover this issue adequately.

11.3 While being of a similar view about CRS, the conference developed a new Recommendation **COM6/1** on the deployment and use of cognitive radio systems. This Recommendation asks administrations to actively participate in ITU-R studies on the implementation of CRS systems, as described in Resolution **ITU-R 58**, developed at the Radiocommunication Assembly, 16-20 January 2012 (RA-12).

11.4 These results satisfactorily cover the concerns addressed in the ICAO position.

12 Agenda Item 1.21: To consider a primary allocation to the radiolocation service in the band 15.4 - 15.7 GHz, taking into account the results of ITU-R studies, in accordance with Resolution 614 (WRC-07).

12.1 The frequency band 15.4 – 15.7 GHz is used by a variety of civil and military radionavigation and radar systems, including weather radars and airport surface detection equipment (ASDE) for operational control of aircraft and ground vehicle movements at airports.

12.2 The results of ITU-R studies in preparation for WRC-12 indicated that the addition of an allocation to the Radiolocation service to this frequency band was feasible, given that existing services were protected with adequate separation distances.

12.3 The conference allocated the frequency band 15.4 – 15.7 GHz to the radiolocation service on a primary basis, shared with the existing allocation to the aeronautical radionavigation, as well as fixed satellite service in portions of the band. This new allocation to the radiolocation service fully protects the aeronautical radionavigation service, as it is not to cause harmful interference to, or claim protection

from, stations operating in the aeronautical radionavigation service. This result is fully in line with the ICAO position.

13 Agenda Item 1.22: To examine the effect of emissions from short-range devices on radiocommunication services, in accordance with Resolution 953 (WRC-07).

13.1 Short range devices (SRD) are very low power emitters used for a variety of applications, such as radio frequency identification (RFID) tags. SRDs normally operate on a license exempt basis, and per definition should not interfere with other spectrum users. However, the conclusion of ITU studies is that without constraints, SRDs have the potential to cause harmful interference.

13.2 The view of the conference was that while the decision on frequency bands for use by SRDs is a national matter, there would be significant advantages in international harmonizing of band usage. ITU-R Resolution **54-1**, agreed during the RA-12 in the week prior to the WRC-12, assigns further studies on this issue to the ITU-R. No frequency bands were allocated to SRD. This outcome satisfactorily covers the concerns addressed in the ICAO position.

14 Agenda Item 1.23: To consider an allocation of about 15 kHz in parts of the band 415 - 526.5 kHz to the amateur service on a secondary basis, taking into account the need to protect existing services.

14.1 Aeronautical non-directional beacons (NDB) mainly operate in the frequency band up to 435 kHz in ITU Region 1 and 415 kHz in Regions 2 and 3. Above these frequencies and within the frequency band addressed under this agenda item, aeronautical radionavigation has a secondary allocation. Whilst the long-term goal is to remove NDB from use, this is unlikely to be achieved in the near future. However, NDB operations are on a slow demise, no growth in NDB use is foreseen.

14.2 While upgrading the aeronautical radionavigation service to a primary allocation in a number of countries, the amateur service was given a secondary allocation in the frequency band 472 – 479 kHz. The amateur service shall not transmit more than 5W EIRP in this frequency allocation, and not more than 1W EIRP if closer than 800km to the borders of certain concerned countries. Certain concerned countries do not allow the amateur service within their borders.

14.3 This allocation is in line with the ICAO position. The allocation of this new secondary allocation to the amateur service fully protects the current and projected NDB use.

15 Agenda Item 1.25: To consider possible additional allocations to the mobile-satellite service, in accordance with Resolution 231 (WRC-07).

15.1 Under this agenda item, the mobile satellite service scrutinized possible sharing with services in the frequency range 4 – 16 GHz, including a number of aeronautical bands. Despite considerable efforts made by the proponents of this agenda item, in the end the conference did not agree to any modifications to the Radio Regulations. The ICAO Position, to oppose any allocation which would adversely affect the interests of aviation, is fully covered by this outcome.

16 Agenda Item 4: In accordance with Resolution 95 (Rev. WRC-03), to review the resolutions and recommendations of previous conferences with a view of possible revision, replacement or abrogation.

16.1 The following Resolutions were addressed in a manner different from the ICAO Position:

16.1.1 Resolution **18** relates to the procedure for identifying and announcing the position of ships and aircraft of States which are not party to an armed conflict. A minor update was made to this Resolution, not affecting aviation.

16.1.2 Resolution **27** addresses the application of incorporation by reference in the Radio Regulations. Minor updates were made to this Resolution, mainly to clarify its application. This does not affect aviation.

16.1.3 Resolution **63** addresses the protection of radiocommunication services against interference caused by radiation from industrial, scientific and medical (ISM) equipment. Updates were made to this Resolution to better protect other users of the spectrum against ISM equipment. These updates do not negatively affect aviation.

16.1.4 Resolution **114** addresses the compatibility between the ARNS and the FSS, limited to feeder links of the non-geostationary mobile-satellite systems in the mobile-satellite service in the frequency band 5 091 – 5 150 MHz. An editorial update was made to this resolution to reflect a similar editorial update made to footnote No. **5.444**, exchanging the word “precedence” with “priority”.

16.1.5 Resolution **205** addresses the protection of systems operating in the mobile-satellite service in the band 406 – 406.1 MHz, limited to the use of low-power satellite emergency position-indicating radiobeacons (EPIRBs). Modifications to this Resolution address interference concerns from adjacent frequency band users, and are aimed at improving/defending the continued use of EPIRBs in this frequency band.

16.1.6 Resolution **225** addresses the study of additional frequency bands for the satellite component of IMT. Some minor changes were made to this resolution, describing the use of the frequency bands 2 500 – 2 520 and 2 670 – 2 690 MHz as being limited to Region 3. Neither of these bands is used by aviation.

16.1.7 Resolution **418** addresses the use of the band 5 091 – 5 250 MHz by the aeronautical mobile service for telemetry applications. This Resolution was modified to reflect the deletion of Resolution 419. This has no negative effect on aviation.

16.1.8 Resolution **419** addressed the use of the band 5 091 – 5 150 MHz by the aeronautical mobile service for aeronautical security (AS) applications. Consequential to the deletion of the AS from footnote No. **5.444B**, this Resolution has now been deleted. This is in line with the ICAO position as it improves access to the aeronautical air/ground surface AM(R)S in this frequency band, see discussion on agenda item 1.4.

16.1.9 Resolution **644** addresses telecommunication resources for disaster mitigation and relief operations. This Resolution was updated to accurately reflect dated references. Updates are in line with the ICAO Position.

16.1.10 Resolution **748** addresses compatibility between the aeronautical mobile (R) Service and the fixed satellite service (Earth-to-space) in the band 5 091 - 5 150 MHz. This Resolution was modified to reflect the deletion of Resolution **419**. This has no negative effect on aviation.

16.1.11 Resolution **953** addressed protection of radiocommunication services from emissions by short range devices. This Resolution defined the problem statement to be addressed under agenda item

1.22 of WRC-12 and was suppressed in line with the outcome of the conference. RA-12 developed Resolution ITU-R **51-1** to address continuing studies of this subject within the ITU-R. This outcome satisfactorily covers the concerns addressed in the ICAO position.

16.1.12 Resolution **956** addressed regulatory measures and their relevance to enable the introduction of software-defined radio (SDR) and cognitive radio systems (CRS). This Resolution described the problem statement to be addressed under agenda item 1.19 of WRC-12, and was suppressed in line with the outcome of the conference. ITU-R Resolution **58-1** as agreed by RA-12 and ITU Recommendation **Com6/1** describe further studies to be performed on the subject of CRS. This outcome satisfactorily covers the concerns addressed in the ICAO position.

17 Agenda Item 8.2: To recommend to the Council items for inclusion in the agenda for the next WRC and to give its views on the preliminary agenda for the subsequent conference and on possible agenda items for future conferences, taking into account Resolution 806 (WRC-07).

17.1 Wireless avionics intra-communications (WAIC) systems.

17.1.1 In line with the ICAO position, the WRC approved a new Resolution, to consider regulatory actions, including allocations, to support WAIC, and a new supporting agenda item at WRC-15.

17.1.2 The aerospace industry is developing new commercial aircraft to provide airlines and the flying public with more cost-efficient and environmentally friendly air transportation while maintaining required levels of safety and reliability. One important means of accomplishing these aims is to reduce overall aircraft weight, e.g. by reducing wiring, while providing multiple and redundant methods to transmit safety-related information within and on an aircraft. The utilization of wireless technologies may accomplish these goals while providing environmental benefits such as reduction of carbon footprints as well as cost savings to manufacturers and operators.

17.1.3 WAIC systems are envisaged to consist of point-to-point radio communications between transmitters and receivers installed on a single aircraft, the transmitters and receivers being integrated with the aircraft. In all cases, communication is part of a closed, exclusive network required for aircraft operation. WAIC systems will not provide air-to-ground or air-to-air communications. WAIC systems will be limited to safety and regularity-of-flight related applications.

17.2 Fixed Satellite Service spectrum for Unmanned Aircraft Systems

17.2.1 WRC-12 approved ITU-R studies to identify technical, regulatory and operational recommendations to enable safe use of FSS spectrum by UAS, and an agenda item for WRC-15 was agreed; to consider, based on the result of the ITU-R studies, the possible regulatory actions to support the use of FSS frequency bands for provision of UAS C³ links, while ensuring the safe operation of UAS C³ links, consistent with the provision of a safety service, making reference to No. **4.10**. ICAO was invited to participate in the ITU-R studies. See also discussion on Agenda Item 1.3 in this Appendix.

17.3 VSAT issues

17.3.1 The WRC approved a new Resolution, addressing the support of VSAT communications in the 3.4 – 4.2 GHz band (C-band) in the AFI region. The result originated from a proposal presented by the ATU in response to concerns expressed by African civil aviation entities, and coordinated by the ICAO AFI Regional Offices.

17.3.2 The concerns were related to the increasing demand from mobile system operators and other parties for access to the bands used by civil aviation VSAT communications in the region. Such VSAT communications are typically employed to replace or complement terrestrial communication infrastructure where it is lacking or inadequate. Applications include ground/ground point-to-point connectivity for ATC to ATC center communications as well as for ground/air communications (extended VHF coverage). The C-band is the most appropriate band for this purpose in the tropical regions due to excessive rain attenuation in higher frequency bands. The introduction of new non-aeronautical systems in the bands, such as BWA and IMT systems, could potentially threaten the continued availability of VSAT frequencies for civil aviation use.

17.3.3 The Resolution approved by the WRC is intended to address those concerns. It calls for ITU-R studies on technical and regulatory measures in the region to support the existing and future aeronautical and meteorological use of VSAT in the C-band. While there is no specific agenda item at WRC-15 for this issue, the Resolution calls for a review of the results of the studies and an action by WRC-15 as appropriate. The results of the studies will be reported to the WRC-15 through the report of the Director of the ITU Radiocommunication Bureau.

17.4 The conference agreed to include the following items of interest to aviation on the draft agenda for the WRC-15:

1.1 to consider additional spectrum allocations to the mobile service on a primary basis and identification of additional frequency bands for International Mobile Telecommunications (IMT) and related regulatory provisions, to facilitate the development of terrestrial mobile broadband applications, in accordance with Resolution **COM6/8 (WRC-12)**;

1.3 to review and revise Resolution **646 (Rev.WRC-12)** for broadband public protection and disaster relief (PPDR), in accordance with Resolution **COM6/11 (WRC-12)**;

1.4 to consider possible new allocation to the amateur service on a secondary basis within the band 5 250-5 450 kHz in accordance with Resolution **COM6/12 (WRC-12)**;

1.5 to consider the use of frequency bands allocated to the fixed-satellite service not subject to Appendices **30**, **30A** and **30B** for the control and non-payload communications of unmanned aircraft systems (UAS) in non-segregated airspaces, in accordance with Resolution **COM6/13 (WRC-12)**;

1.6 to consider possible additional primary allocations:

1.6.1 to the fixed-satellite service (Earth-to-space and space-to-Earth) of 250 MHz in the range between 10 GHz and 17 GHz in Region 1;

1.6.2 to the fixed-satellite service (Earth-to-space) of 250 MHz in Region 2 and 300 MHz in Region 3 within the range 13-17 GHz; and review the regulatory provisions on the current allocations to the fixed-satellite service within each range, taking into account the results of ITU-R studies, in accordance with Resolutions **COM6/4 (WRC-12)** and **COM6/5 (WRC-12)**, respectively;

1.7 to review the use of the band 5 091-5 150 MHz by the fixed-satellite service (Earth-to-space) (limited to feeder links of the non-geostationary mobile-satellite systems in the mobile-satellite service) in accordance with Resolution **114 (Rev.WRC-12)**;

1.12 to consider an extension of the current worldwide allocation to the Earth exploration-satellite (active) service in the frequency band 9 300-9 900 MHz by up to

600 MHz within the frequency bands 8 700-9 300 MHz and/or 9 900-10 500 MHz, in accordance with Resolution **COM6/18 (WRC-12)**;

1.14 to consider the feasibility of achieving a continuous reference time-scale, whether by the modification of coordinated universal time (UTC) or some other method, and take appropriate action, in accordance with Resolution **COM6/20 (WRC-12)**;

1.16 to consider regulatory provisions and spectrum allocations to enable possible new Automatic Identification System (AIS) technology applications and possible new applications to improve maritime radiocommunication in accordance with Resolution **COM6/21 (WRC-12)**;

1.17 to consider possible spectrum requirements and regulatory actions, including appropriate aeronautical allocations, to support wireless avionics intra-communications (WAIC), in accordance with Resolution **COM6/22 (WRC-12)**;

2 to examine the revised ITU-R Recommendations incorporated by reference in the Radio Regulations communicated by the Radiocommunication Assembly, in accordance with Resolution **28 (Rev.WRC-03)**, and to decide whether or not to update the corresponding references in the Radio Regulations, in accordance with the principles contained in Annex 1 to Resolution **27 (Rev.WRC-12)**;

4 in accordance with Resolution **95 (Rev.WRC-07)**, to review the resolutions and recommendations of previous conferences with a view to their possible revision, replacement or abrogation;

8 to consider and take appropriate action on requests from administrations to delete their country footnotes or to have their country name deleted from footnotes, if no longer required, taking into account Resolution **26 (Rev.WRC-07)**;

9 to consider and approve the Report of the Director of the Radiocommunication Bureau, in accordance with Article 7 of the Convention:

9.1 on the activities of the Radiocommunication Sector since WRC-12; and

9.2 on any difficulties or inconsistencies encountered in the application of the Radio Regulations.

MIDANPIRG/13

Appendix 4.4C to the Report on Agenda Item 4.4

ATN-IPS WORKING GROUP TOR**1. Terms of Reference (TOR)**

1.1 The Terms of Reference of the ATN-IPS Working Group (ATN-IPS WG) are:

- a) To promote regionally harmonized and agreed approach to transition planning to ATN in order for MID States to work collaboratively in developing their future transition arrangements towards the ATM system envisioned in the Global ATM Operational Concept; and
- b) address regional planning and implementation issues, related to AFTN/CIDIN/AMHS and networking issues including the usage of the public internet and development of MID IP NET standards

1.2 In order to meet the Terms of Reference, the ATN-IPS WG shall:

- a) Follow up on public Internet usage in the MID Region and document all Internet usage with particular attention to the safety/security of the data exchanged over the public internet;
- b) development of the ATN planning and implementation document to be main source for planning and implementation guidance;
- c) review and analyze the MID Region AFTN/CIDIN/AMHS plans and make suggestion for the improvement in accordance with the new development in the MID Region and coordinate the AMHS implementation;
- d) develop MID IP Network common specification and implementation guidance;
- e) develop AMHS implementation plan for the MID and related AMC implementation related materials;
- f) develop task list for the work programme and provide updates to CNS SG;
- g) Provide the necessary support for the implementation of the IPS in the MID Region; and
- h) develop the necessary legal framework for the use and operation of the MID-AMC.

2. Composition

ATN-IPS Group will be composed of experts nominated by MIDANPIRG Provider States.

Other representatives, who could contribute to the activity of the Group, could be invited to participate as observers.

MIDANPIRG/13
Appendix 4.4D to the Report on Agenda Item 4.4

**COMMUNICATION, NAVIGATION AND SURVEILLANCE SUB-GROUP
(CNS SG) OF THE MID REGION**

1. Terms of Reference

1.1 The terms of reference of the CNS Sub-Group are:

- a) ensure the continuing and coherent development of the MID Regional Air Navigation Plan in the fields of aeronautical communications, navigation and surveillance (CNS), including the development of CNS elements of the MID CNS/ATM Implementation Plan in the light of new developments, in harmony with the ICAO Global Air Navigation Plan (Doc 9750) and the plans for adjacent regions;
- b) review and identify any deficiencies that impede the implementation or provision of efficient CNS services in the MID Region and recommend correction actions;
- c) provide specific recommendations aimed at improving CNS services through the use of existing procedures and facilities or, through modernization programmes and evolutionary introduction of new procedures or technologies based on operational requirements;
- d) review and identify inter regional or any co-ordination issues in the fields of CNS and recommend actions to address those issues; and
- e) monitor and encourage CNS systems research and development, trial and demonstrations in the fields of CNS and facilitate the transfer of this information and expertise between MID States, including studies on institutional arrangement for the implementation of the CNS system in MID Region

1.2 In order to meet the Terms of Reference, the CNS SG shall:

- a) survey and update of CNS deficiencies in the MID Region on a regular basis and focus on surveys and information from users such as IATA and IFALPA;
- b) follow-up the developments of ICAO position regarding future ITU World Radio Communication (WRC) Conferences and their preparatory meetings, and urge States to support ICAO Position at WRC, and encourage States for the proper utilization of the frequency spectrum;
- c) develop ATN Plan for MID region and assist in its Implementation;
- d) develop Surveillance Plan and Strategy for the MID region in coordination with other subgroups to support MID Region Performance Objectives;
- e) review and update ATN/IPS WG TOR and task list and encourage harmonized and coordinated implementation plans, also develop the necessary legal framework for the use of the MID-AMC;

- f) introduction of data link usage to support the ATC at flight level 290 by 2010;
- g) develop MID CNS Regional Performance Framework Forms supported by detailed action plans and assist in measurement of agreed MID Metric;
- h) provide the necessary expertise to other MIDANPIRG subgroups task forces on issues related to CNS and infrastructure and coordinate requirements with these groups; and
- i) assist and encourage States groups to foster implementation of the CNS infrastructure and procedures.

2. Composition

2.1 The Sub-Group is composed of:

- a) MIDANPIRG States;
- b) concerned International/Regional Organizations as observers; and
- c) additional representatives from Industry may be invited on ad hoc basis, as observers, when required.

MIDANPIRG/13
Report on Agenda Item 4.5

**REPORT ON AGENDA ITEM 4: REGIONAL AIR NAVIGATION PLANNING AND
IMPLEMENTATION ISSUES**

4.5 CNS/ATM

MID Region Operational Improvements

4.5.1 The meeting was apprised of the outcome of the CNS/ATM/IC SG/6 meeting held in Cairo, 31 January–02 February 2012.

4.5.2 The meeting noted that Aviation System Block Upgrades (ASBUs) comprise a suite of modules, each having the following essential qualities:

- A clearly-defined measurable operational improvement and success metric;
- Necessary equipment and/or systems in aircraft and on ground along, with an operational approval or certification plan;
- Standards and procedures for both airborne and ground systems; and
- A positive business case over a clearly defined period of time.

4.5.3 The meeting noted that a high-level briefing on ASBUs was held in Cairo on 30 January 2012. The meeting noted that CNS/ATM/IC SG/6 reviewed the operational improvements contained in the current version of ASBU Working Document and agreed to the need of identification of those operational improvements which are of relevance to the MID Region. However, it was highlighted that the whole concept of ASBU will be finalized by the AN-Conf/12 and accordingly the meeting supported the following operational improvement identified and agreed that the CNS/ATM/IC SG further review them taking into consideration the outcome of both the ASBU workshop to be held in Cairo 30 September–04 October 2012 and the AN-Conf/12:

- a) Improved Airport Accessibility
- b) Increased Interoperability, Efficiency and Capacity through Ground-Ground Integration -AIDC-
- c) Service Improvement through Digital Aeronautical Information Management
- d) Improved Operations through Enhanced En-Route Trajectories
- e) Improved Flexibility and Efficiency in Descent Profiles (CDOs)
- f) Improved Flexibility and Efficiency in Departure Profiles
- g) Improved Runway Safety (A-SMGCS)
- h) Improved Airport Operations through A-CDM
- i) Improved access to Optimum Flight Levels through Climb/Descent Procedures using ADS-B

MIDANPIRG/13
Report on Agenda Item 4.5

MID Region Performance Metrics and Performance Framework Forms (PFFs)

4.5.4 The meeting recalled that, ICAO in 2008 completed the development of relevant guidance material so as to facilitate the realization of a performance based global air navigation system. Following the adoption of the performance-based approach to air navigation planning and implementation, all PIRGs in different regions have been working on the performance monitoring through an established measurement strategy. In this respect, it was noted that PIRGs have identified different sets of regional performance metrics, and recognized that data collection, processing, storage and reporting for the identified regional performance metrics are fundamental to the success of performance based approach.

4.5.5 In connection with the above, the meeting recalled that 8 performance Metrics have been endorsed by MIDANPIRG/12, through Conclusion 12/47, for performance monitoring of the air navigation systems in the MID Region.

4.5.6 The meeting noted that, as a follow-up action to the MIDANPIRG/12 Conclusions 12/47 and 12/48, the ICAO MID Regional Office issued on 24 May 2011 a State letter urging MID States to develop/update their National Performance Framework and report relevant data necessary for performance monitoring of the air navigation systems, with a view to update the Regional Performance Framework Forms (PFFs) and monitor the MID Region Performance Metrics. In this respect, the need for harmonization and avoidance of duplication of efforts with regard to the provision of data necessary for performance monitoring of the air navigation systems has been underlined.

4.5.7 The meeting noted that only UAE sent the ICAO MID Regional Office on 6 March 2012, their Performance Metric Report for 2011 with input to the eight (8) Regional Performance Metrics.

4.5.8 The meeting noted that the Air Navigation Commission (ANC), in reviewing different PIRG reports, noted that all the PIRGs were in the process of identifying metrics to measure regional performance in the relevant key performance areas. The Commission recognized that every PIRG requires their own region specific metrics. However, the ANC emphasized the need to have a set of performance metrics common to all ICAO regions to facilitate comparative analysis of overall regional development. Consequently, the Commission requested the Secretariat to complete the task of developing a set of performance metrics applicable to all ICAO Regions along with guidance for the collection of data (ANC Min 186/7 and AN-WP /8537 refers). In this regard, the meeting was informed that work is in progress for the development of a set of global Metrics mapped to ASBUs for review by the ANC and presentation to AN Conf/12 (Montreal, 19-30 November 2012).

4.5.9 Based on the above, the meeting reviewed the eight (8) MID Region Performance Metrics and agreed to the following:

- MID Metric 1 should be the responsibility of the MID Region Aviation Safety Group (RASG-MID);

Note: The details related to the coordination between MIDANPIRG and the RASG-MID are presented under Agenda Item 5.2.

- MID Metrics 2 and 3 are to be monitored by the AOP Sub-Group giving that States provide the ICAO MID Regional Office necessary data on the certified international aerodromes and number of runway incursions and excursions;

MIDANPIRG/13
Report on Agenda Item 4.5

- MID Metrics 4 and 5 are to be monitored by the MIDRMA Board and the ATM/AIM/SAR Sub-Group, giving that States provide the MIDRMA with the necessary data on a regular basis and in a timely manner;
- MID Metrics 6 is to be processed by the ICAO MID Regional Office, using the MID Air Navigation Deficiency Database (MANDD) and the outcome of all the MIDANPIRG Subsidiary bodies related to air navigation deficiencies; and
- MID Metrics 7 and 8 are to be monitored by the PBN/GNSS Task Force, giving that States provide the ICAO MID Regional Office necessary data.

4.5.10 With regard to the development of performance targets, the meeting was apprised of the proposals made by the different MIDANPIRG subsidiary bodies and agreed to the following:

- Performance Target associated with MID Metric 2: **Minimum 50%** of the international aerodromes should be certified;
- Performance Target associated with MID Metric 3:
 - ✓ Number of Runway incursions-related accident or serious incident: **max 1** per year;
 - ✓ Number of Runway excursions-related accident or serious incident: **max 2** per year.
- Performance Target associated with MID Metric 4: **Minimum 80%** of States report necessary data to the MIDRMA on regular basis and in a timely manner;
- Performance Target associated with MID Metric 5: the overall collision risk in MID RVSM airspace meets the ICAO overall **TLS of 5×10^{-9}** fatal accidents per flight hour;
- Performance Target associated with the MID Metric 6: elimination of **10%** of the deficiencies priority “U”;
- Performance Target associated with the MID Metric 7: **Minimum 30%** of instrument Runway ends with RNP/RNAV approach procedure; and
- Performance Target associated with the MID Metric 8: **Minimum 70%** of the en-route PBN routes are implemented in accordance with the regional PBN plan.

4.5.11 In accordance with MIDANPIRG/11 Conclusion 11/70 – “Regional Performance Framework”, the meeting noted that the different MIDANPIRG subsidiary bodies continued work on the development and update of the Regional PFFs. The meeting reviewed the Regional PFFs related to AGA, AIM, ATM, CNS and MET as at Appendices **4.5A, 4.5B, 4.5C, 4.5D** and **4.5E** to the Report on Agenda Item 4.5, respectively, as updated by the CNS/ATM/IC SG/6 meeting. It was also underlined that the Regional PFFs should be further reviewed to evolve to the newly designed Air Navigation Report Forms (ANRF), taking into consideration the global developments and the users’ needs and expectations.

MIDANPIRG/13
Report on Agenda Item 4.5

4.5.12 In accordance with MIDANPIRG/11 Conclusion 11/71 – “National Performance Framework” and MIDANPIRG/12 Conclusion 12/48, the meeting urged States to develop/update their National Performance Framework. It was clarified that the National Performance Framework, includes, inter-alia, the following:

- identification of the national objectives with measurable indicators and metrics, which support the regional objectives identified in the Regional PFFs;
- allocation of resources for the achievement of the agreed objectives, based on cost-benefit analysis;
- development of the National PFFs; and
- development of necessary procedures related to the collection and reporting of necessary data, performance measurement, human resources (training), coordination (internally and with neighbouring States, as appropriate), etc.

4.5.13 Based on all of the above, the meeting agreed to the following Conclusion to replace and supersede the MIDANPIRG/12 Conclusion 12/48:

CONCLUSION 13/30: NATIONAL PERFORMANCE FRAMEWORK

That, States be urged to:

- a) develop, update and/or complete their National Performance Framework, including the National Performance Framework Forms (PFFs), ensuring the alignment with and support to the regional performance objectives;*
- b) incorporate the agreed MID Region Performance Metrics into their National performance monitoring process; and*
- c) report relevant data necessary for performance monitoring of the air navigation systems to the ICAO MID Regional Office, on a regular basis, with a view to update the Regional PFFs and monitor the MID Region Performance Metrics.*

MID BASIC ANP and FASID (DOC 9708)

4.5.14 The meeting recalled that an electronic copy of the MID Basic ANP and FASID (Doc 9708) is available on the ICAO MID Website at: <http://legacy.icao.int/mid/midanpirg/edocs/index.html>. However, it was highlighted that a more up-to-date version encompassing the latest proposals for amendments related to ATS Routes (ATS 1 Table) and an updated ATS 1 Chart is available on the ICAO GIS portal. The meeting noted that the version of the MID Basic ANP and FASID available on the ICAO MID website, will be updated using the version available on the ICAO GIS portal.

4.5.15 The meeting recalled that MIDANPIRG/12, through Decision 12/49, recognized the need for a complete review of both the content and format of the MID Basic ANP and FASID. The need to evolve the current ANPs to a new web-based format (eANPs) was also underlined.

MIDANPIRG/13
Report on Agenda Item 4.5

4.5.16 The meeting was apprised of the outcome of the CNS/ATM/IC SG/6 meeting (Cairo, 31 January-2 February 2012) related to the progress achieved with regard to the review of the different Parts of the MID Basic ANP and FASID, as a follow-up action to the MIDANPIRG/12 Decision 12/49:

DECISION 12/49: REVIEW OF THE MID AIR NAVIGATION PLAN (ANP)

That, in support to ICAO efforts to improve regional ANPs, the MIDANPIRG subsidiary bodies:

- a) carry out a complete review of the MID Basic ANP and FASID parts related to their Terms of Reference (TOR) and Work Programme;*
- b) develop revised draft structure and content of the Basic ANP in order to reconcile it with the ATM Operational Concept, the Global Plan provisions and the performance based approach;*
- c) identify the need for and development of those FASID Tables necessary to support the implementation of a performance-based global air navigation systems; and*
- d) report progress to MIDANPIRG/13.*

4.5.17 The meeting noted that a similar work has been carried out in the European Region. The meeting further noted that a Task Force has been established in Europe for the development of the AIM Parts of the EUR ANP. The meeting noted also that the review of the EUR ANP did not include the AOP, CNS and MET Parts.

4.5.18 Based on the outcome of the EUR ANP AIM Task Force and the review carried out by the AIS/MAP TF/6, the ATM/SAR/AIS SG/12 and the CNS/ATM/IC SG/6 meetings, the meeting endorsed the AIM Parts of the MID ANP at **Appendices 4.5F, 4.5G and 4.5H** to the Report on Agenda Item 4.5, and agreed accordingly to the following Conclusion:

CONCLUSION 13/31: ENDORSEMENT OF THE AIM PARTS OF THE MID BASIC ANP AND FASID

*That, the AIM Parts of the MID Basic ANP and FASID, including the AIM FASID Tables at **Appendices 4.5F, 4.5G and 4.5H** to the Report on Agenda Item 4.5:*

- a) are endorsed;*
- b) be used as a planning document for the transition from AIS to AIM in the MID Region; and*
- c) be formally included in the MID ANP through a proposal for amendment, when the new structure of the MID ANP is finalized and the AIM FASID Tables are populated with relevant data.*

MIDANPIRG/13
Report on Agenda Item 4.5

4.5.19 With regard to the other Parts of both the MID Basic ANP and FASID, the meeting was apprised of the outcome of the different MIDANPIRG subsidiary bodies and noted that little progress has been achieved. It was recognized that the task requested by MIDANPIRG through Decision 12/49 is huge and challenging. Accordingly, the meeting agreed that during the review of the different Parts of the MID Basic ANP and FASID, the following should be taken into consideration:

- the recent developments in the air navigation fields (development of a revised version of the Global Air Navigation Plan, Aviation System Block Upgrades (ASBUs), electronic Air Navigation Plan (eANP), etc);
- the upcoming AN-Conf/12 meeting (Montreal, 19-30 November 2012);
- the work carried out in the European Region for the review of the EUR ANP;
- the revised MID ANP AIM Parts and AIM FASID Tables; and
- the need to evolve to a new web-based format (eANPs).

4.5.20 Based on the above, the meeting agreed to the establishment of an Ad-hoc Working Group tasked with the development of a revised version of the MID ANP (both Basic ANP and FASID), in accordance with MIDANPIRG Decision 12/49 and agreed accordingly to the following Decision:

**DECISION 13/32: ESTABLISHMENT OF THE MID AIR NAVIGATION PLAN
AD-HOC WORKING GROUP (ANP WG)**

That, the MID Air Navigation Plan Ad-hoc Working Group (ANP WG) be established to fulfil the requirements set up by MIDANPIRG through Decision 12/49.

4.5.21 In the same vein, based on the outcome of the AOP SG/8 meeting, the meeting agreed that there's a need to update the information contained in the AOP 1 Tables. The need for harmonization between the AOP 1 Table and the ICAO Doc 7910 "Location Indicators" was also highlighted. Accordingly, the meeting urged States to provide the ICAO MID Regional Office with necessary updates in order to consolidate the associated proposal for amendment.

4.5.22 The meeting noted that the Aerodromes Section at ICAO HQ developed, in coordination with the Regional Officers Aerodromes and Ground Aids (RO/AGA), a new format for the FASID AOP 1 Table as at **Appendix 4.5I** to the Report on Agenda Item 4.5. The revised FASID AOP1 Table is expected to be available electronically on line in May 2012, as part of the new eANP. The meeting encouraged States to review the revised FASID AOP1 Table and provide comments/suggestions for necessary adjustment/ improvement before the AN-Conf/12.

4.5.23 With regard to the MET Parts of the MID ANP, the meeting noted that the MET Part of the Basic ANP and some of the MET FASID Tables are kept current through Conclusions of various global groups such as the World Area Forecast System Operations Group (WAFSOPSG). The meeting recalled also that the FASID Table MET 1A and FASID Table MET 2A can be retrieved from the global database available at: <http://192.206.28.84/MET/>. It was also highlighted that the FASID Table MET 1B is expected to be available on a global database end of 2012.

MIDANPIRG/13
Report on Agenda Item 4.5

States Action Plan for CO₂ Emission Reduction

4.5.24 The meeting recalled that a Workshop on States action plans for CO₂ emission reduction was held in Dubai, UAE, 14-16 June 2011 to support MID States in the preparation and submission of their action plans. The Workshop provided the participants with detailed information on how to develop their action plans and a hands-on training session on the ICAO interactive action plan website which will help States to submit their action plan electronically to ICAO.

4.5.25 The meeting noted that the Workshop raised concern about the Emission Trading Scheme (ETS) planned measures by the European Union (EU) and requested ICAO intervention to alleviate the situation. In this respect, the meeting recalled that during the DGCA-MID/1 meeting, Saudi Arabia reconfirmed its position toward the issue of environment and the need to tackle the impact of international aviation on climate change on an international scale through ICAO. In addition it was highlighted that any action should take into account the interests of developing States and should not impose additional burdens on them, but provide assistance in the fields of building capabilities, transferring technology, and adjusting to environmental effects.

4.5.26 The DGCA-MID/1 meeting noted the proposal submitted by Jordan, and Saudi Arabia for the establishment of a High Level Environmental Regional Group to develop a unified position for States towards the EU ETS and to lead other activities pertaining to environment and aviation fuel emissions that are of concern to States.

4.5.27 Based on the above and considering the importance of according the environmental issues the proper attention, the meeting noted that the DGCA-MID/1 meeting, through Conclusion 1/12, agreed to the establishment of a High Level Environmental Regional Group, with the objectives of dealing with the development of ICAO Resolution on the subject matter and dealing with impact of any regional or national initiative in order to protect the civil aviation interests of the region and to contribute towards the mitigation of aviation emissions.

4.5.28 Based on the above, the meeting urged States to follow up with respective departments to nominate a focal point for CO₂ emission; and to submit the State action plans to the ICAO MID Regional Office, before **30 June 2012**. Accordingly, the meeting agreed to the following Conclusion:

CONCLUSION 13/33: STATE ACTION PLANS FOR CO₂ EMISSION

That, States, that have not yet done so, be urged to:

- a) send the contact details of their CO₂ emission focal point to the ICAO MID Regional Office; and*
- b) submit their action plan for CO₂ emission to ICAO before 30 June 2012.*

ICAO Fuel Savings Estimation Tool (IFSET), and Environment ATM Measurement

4.5.29 The meeting noted that ICAO General Assembly Resolution A37-19 requested ICAO to develop the necessary tools to assess the benefits associated with operational improvements, for example PBN, CDO/CCO, RVSM, FUA, etc. in order to achieve a global annual average fuel efficiency improvement of 2 percent until 2020.

MIDANPIRG/13
Report on Agenda Item 4.5

4.5.30 Operational improvements are key strategy that can be applied to deliver tangible reductions in aircraft fuel consumption. The Global Air Navigation Plan (Doc 9750) and the operational opportunities to minimize fuel use and reduce emissions (Circular 303) are among several documents providing guidance regarding operational improvements being implemented to improve efficiency of the ATM System.

4.5.31 Implementation of operational improvements will generally have benefits in areas such as improved airport and airspace capacity, shorter cruise climb and descend times through the use of more optimized routes, and an increase of unimpeded taxi times. These improvements have the potential to reduce fuel burn and lower levels of pollutants.

4.5.32 Calculation of aviation emissions is dependent on several different factors including the number and type of aircraft operations, the type and efficiency of the aircraft engines, the type of fuel used, the length of flight, the power setting, the time spent at each stage of flight, and the location (altitude) at which exhaust gases are emitted.

4.5.33 The main objective is to estimate and report fuel savings resulting from national or regional operational improvements through the use of a simple tool. In this respected the meeting noted that ICAO developed the ICAO Fuel Savings Estimation Tool – (IFSET), which can be accessed at <http://www.icao.int/environmental-protection>.

4.5.34 The meeting received a presentation on the ICAO Fuel Savings Estimation Tool (IFSET) that allows States to estimate fuel savings from operational improvements consistent with CAEP-approved Green House Gases (GHG) models and consistent with Global Air Navigation Plan.

4.5.35 The meeting was apprised of the outcome of the IFSET Workshop held in Cairo, 29 January 2012 which was supported by CANSO. The meeting noted that the outcome of the Workshop has been considered when updating the Regional PFFs.

4.5.36 The meeting agreed to establish an Air Traffic Management Measurement Task Force (ATMM TF) dedicated to the measurement process, with Terms of Reference (TOR) as at **Appendix 4.5J** to the Report on Agenda Item 4.5. Accordingly, the meeting agreed to the following Decision:

**DECISION 13/34: ESTABLISHMENT OF THE AIR TRAFFIC MANAGEMENT
MEASUREMENT TASK FORCE (ATMM TF)**

*That, the ATMM TF be established with Terms of Reference (TOR) as at
Appendix 4.5J to the Report on Agenda Item 4.5.*

4.5.37 The meeting agreed that MID States/ANSPs in the MID Region start reporting the benefits as they plan or implement any type of operational improvement. The meeting further agreed that the results be sent to ICAO every six month using the IFSET tool.

4.5.38 Considering the need to have a clearly defined regional approach for using IFSET as a tool for estimating environment benefits, the meeting agreed to the following Conclusion:

MIDANPIRG/13
Report on Agenda Item 4.5

CONCLUSION 13/35: ESTIMATING ENVIRONMENT BENEFITS

That, in order to allow the Air Traffic Management Measurement Task Force (ATMM TF) and the CNS/ATM/IC SG to follow-up the implementation of the ATM operational improvements and estimate the fuel savings accrued from the corresponding improvements on regional basis

- a) *States be urged to:*
 - i) *use IFSET or a more advanced model/measurement capability available to estimate environment benefits accrued from operational improvements;*
 - ii) *send the IFSET reports/the accrued environmental benefits to ICAO MID Regional office on a bi-annual basis.*
- b) *IATA to:*
 - i) *encourage users to support the programme; and*
 - ii) *consolidate users' inputs and report the accrued environmental benefits to ICAO MID Regional office on a bi-annual basis.*

ICAO New FPL Format (INFPL) Implementation in the MID Region

4.5.39 The meeting was apprised of the outcome of the joint ACAC/ICAO INFPL implementation workshop/seminar and agreed that MID States conduct internal awareness campaigns, share their experience, perform test according to the developed test schedule for the Region, also MID States that are unable to meet the target date of implementation to request support from other MID States to perform conversion from new to present in order that New FPL are not rejected by the automated systems. Furthermore, the meeting noted that even manual flight plan system requires an upgrade which may involve changes to the procedures, training and documents.

4.5.40 The meeting agreed that the conduct of internal awareness campaign on INFPL is important to all stake holder involved in the handling of flight plans. Furthermore the meeting agreed that these campaigns are good opportunity to address any FPL issue within the State. Therefore, the awareness package will differ from States to State. However, the material presented during the different INFPL SG meetings and seminar/workshop can be utilized for the awareness campaigns. Accordingly, the meeting agreed to the following Conclusion:

CONCLUSION 13/36: ICAO NEW FLIGHT PLAN FORMAT AWARENESS CAMPAIGNS

That, States be urged to conduct internal awareness campaigns on INFPL and invite all stakeholders within their States.

4.5.41 The meeting noted that Flight Plan Implementation Tracking System (FITS) website at <http://www2.icao.int/en/FITS/Pages/home.aspx>, provides information regarding the implementation status of the new flight plan provisions in each State along with guidance and harmonized solutions to any difficulties encountered in the implementation. The FITS has been updated with latest information regarding the MID Region.

MIDANPIRG/13
Report on Agenda Item 4.5

4.5.42 The meeting urged MID States to provide progress report as requested by MIDANPIRG/12 Conclusion 12/55, in order to reflect in FITS and since changes are likely to occur rapidly as the due date of the applicability is nearing, the meeting agreed that progress reports should be provided to ICAO MID Regional Office on monthly basis.

4.5.43 The meeting reviewed and updated the status of INFPL implementation as at **Appendix 4.5K** to the Report on Agenda Item 4.5. In this respect, the meeting noted the difficulties raised by Iran with regard to the procurement of the necessary hardware/software for the timely implementation of the INFPL.

4.5.44 The meeting was of the view that the risk of large scale cutover can be mitigated by performing proper testing in due time; in this respected it was highlighted that the regional transition strategy for implementation of INFPL defined three testing phases to ensure seamless transition. The meeting agreed that neighbouring States should not perform testing on the same day. Accordingly, the meeting agreed to the following Conclusion:

CONCLUSION 13/37: ICAO New FPL Format TESTING SCHEDULE

*That, States be urged to follow the testing schedule as at **Appendix 4.5L** to the Report on Agenda Item 4.5.*

4.5.45 The meeting appreciated UAE's offer to perform tests for all MID States requiring to conduct INFPL system tests, however a 48 hours prior notice is required by UAE to arrange for the necessary resources. Accordingly, the meeting urged MID State to conduct INFPL testing with UAE.

4.5.46 The meeting noted that EUROCONTROL testing participation is open to all, EUR and non-EUR States, details on EUR test plan and other documents concerning ICAO New Flight Plan in EUR are available at http://www.cfm.eurocontrol.int/cfm/public/subsite_homepage/homepage.html. EUROCONTROL will support mainly EUR States that require the conversion from New to Present until the end December 2013.

4.5.47 The meeting was apprised of the different INFPL activities and noted that Strategic Support Team(s) composed of regional expert members may be established as necessary to assist MID States with the implementation of INFPL and noted that Bahrain, Jordan, Lebanon, Saudi Arabia and UAE agreed to be members of SST. Accordingly, the meeting agreed to the following Conclusion:

CONCLUSION 13/38: INFPL STRATEGIC SUPPORT TEAM (SST)

That, in order to support INFPL implementation in the MID region, those States requiring support request the ICAO MID Regional Office to coordinate with the SST members the provision of the required support.

4.5.48 The meeting noted that a Special Implementation Project (SIP) has been approved by ICAO to support Libya, Syria and Yemen for the implementation of ICAO New flight plan. Accordingly, ICAO MID Regional Office coordinated special support meeting which was hosted by Jordan 19-21 March 2012. However, Libya was unable to attend. The meeting noted that four parallel tracks solutions were identified and agreed which will allow the two States to be on track.

MIDANPIRG/13
Report on Agenda Item 4.5

4.5.49 Noting the requirement for harmonizing the implementation of Amendment No. 1 to the Fifteenth Edition of the Procedures for Air Navigation Services-Air Traffic Management, MIDANPIRG/12 meeting agreed to the MID Region Strategy for Implementation of the ICAO New Flight Plan Format and associated ATS messages that has been revised by INFPL SG*/4 meeting to include the recent developments. Accordingly, the meeting agreed to the following Conclusion:

CONCLUSION 13/39: REVISED STRATEGY FOR THE IMPLEMENTATION OF INFPL

*That, the revised MID Region Strategy for the implementation of INFPL be adopted as at **Appendix 4.5M** to the Report on Agenda Item 4.5.*

4.5.50 The meeting recalled that MIDANPIRG/12 recommended the development of one reference document for INFPL Implementation in the MID Region. Accordingly, the meeting reviewed the document as at **Appendix 4.5N** to the Report on Agenda Item 4.5, which includes among other the list of focal points and the testing scripts and agreed to the following Conclusion:

CONCLUSION 13/40: MID REGION INFPL IMPLEMENTATION DOCUMENT

*That, the MID Region INFPL Implementation document be adopted as at **Appendix 4.5N** to the Report on Agenda Item 4.5.*

4.5.51 The meeting recalled that MIDANPIRG/12 did not support the development of regional contingency plan for INFPL implementation. However, MIDANPIRG/12 had decided that MID States should develop contingency measures, and noted that States that are unable to accept the New FPL Format could request support from other State, to convert FPL and other ATS messages on behalf of the requesting State as contingency measure. This situation was not envisaged when Amendment 1 was proposed and the initial guidance material issued, although this circumstance is not ideal but possible.

4.5.52 The meeting noted that appropriate testing between the two States shall be conducted to ensure the conversion meets the operational needs of the requesting States, after which letter of agreement should be signed covering overall responsibilities. In this regard the meeting appreciated the offer from Bahrain and Saudi Arabia to provide support to States that need assistance in the conversion.

Surveillance Developments in the MID Region

4.5.53 The meeting noted that MID States are installing mode S radars and some MID States experienced IC code conflicts with the European region that has a large number of operational mode S radars. Accordingly, MIDANPIRG/12 meeting agreed that ICAO MID Regional Office coordinate and formalize the process of IC code allocation for the ICAO MID Region with EUROCONTROL.

4.5.54 The meeting was apprised of agreement that MICA cell in EUROCONROL will provide the MICA web based application and same support to the MID Region as done in the ICAO EUR Region.

4.5.55 The meeting reviewed the document at **Appendix 4.5O** to the Report on Agenda Item 4.5 laying down recommendations and requirements for an efficient support of the MICA cell to the allocation of IC codes for ICAO MID Region. Accordingly, the meeting agreed to the following Conclusion:

MIDANPIRG/13
Report on Agenda Item 4.5

**CONCLUSION 13/41: MID REGION PROCESS FOR MODE S IC CODES
ALLOCATION**

*That, the process for the allocation of IC codes for Mode S radars in the MID Region be adopted as at **Appendix 4.5O** to the Report on Agenda Item 4.5.*

4.5.56 The meeting was apprised of the MID Surveillance workshop that was held in Jeddah, Saudi Arabia, (08-10 May 2011), with the objective to provide MID States with a better understanding of evolving aeronautical surveillance infrastructure/technology to enhance situational awareness and harmonize the implementation in the MID Region.

4.5.57 The meeting reviewed the MID Region Surveillance strategy and timelines for the ADS-B out implementation developed during the workshop as at **Appendix 4.5P** to the Report on Agenda Item 4.5. Furthermore, the meeting reviewed the MID Region Strategy for the Implementation of ADS-B out, as at **Appendix 4.5Q** to the Report on Agenda Item 4.5. The meeting was of the view that both strategies be consolidated. Accordingly, the meeting agreed to the following Decision:

DECISION 13/42: MID REGION SURVEILLANCE STRATEGY

*That, the CNS SG review MID Surveillance Strategy and ADS-B Strategy at **Appendices 4.5P** and **4.5Q** to the Report on Agenda Item 4.5 and develop a consolidated MID Surveillance Strategy.*

4.5.58 The meeting noted that Bahrain exchange surveillance data with Kuwait, Qatar, and provide UAE surveillance data, also Qatar and UAE exchange surveillance data.

4.5.59 The meeting recalled MIDANPIRG/12 *Conclusion 12/46: Exchange of Surveillance data* and encouraged all MID States to share surveillance data to significantly reduce surveillance gaps in order to enhance safety and efficiency with no huge investments.

4.5.60 The meeting urged MID States to strictly adhere to the 24-bit aircraft addresses allocated to their States as listed in Annex 10, Volume III, Part I, Chapter 9, Table 9-1, and maintain databases for all the 24bit aircraft address allocation pertaining to their States and send the assigned allocations to ICAO MID Regional Office and MIDRMA for inclusion in their databases. The meeting noted that Bahrain, Iraq, Jordan, Kuwait and Oman provided the allocation list. Accordingly, the meeting agreed to the following Conclusion:

CONCLUSION 13/43: ALLOCATION OF 24 BIT AIRCRAFT ADDRESS

That, States be urged to:

- a) *allocate 24 bit aircraft address according to Annex 10, Volume III, Part I, Chapter 9, Table 9-1 (allocation of aircraft addresses to States);*
- b) *send the allocation list to ICAO MID Regional Office and MIDRMA by 30 September 2012; and*
- c) *provide ICAO MID Regional Office and MIDRMA with regular updates to the allocation list.*

MIDANPIRG/13
Report on Agenda Item 4.5

GNSS Implementation in the MID Region

4.5.61 The meeting recalled that the frequency Interference-free operation of Global Navigation Satellite System (GNSS) is essential. The meeting further recalled that the frequency band 1 559 - 1 610 MHz, is used for elements of GNSS.

4.5.62 The meeting noted that the International Telecommunication Union (ITU) process, allows under footnotes No. 5.362B and 5.362C the operation of fixed service in some States on a secondary basis until 1 January 2015. The continued use by the fixed service constitutes a severe constraint on the safe and effective use of GNSS in some areas of the world, as distances of up to 400 km between the stations of the fixed service and the aircraft is required to ensure safe operation of GNSS. Ten States have removed their names from footnotes 5.362B and 5.362C during WRC-12. This was a significant step forward towards achieving better worldwide protection of GNSS.

4.5.1 The meeting noted that the following MID States (*Iraq, Jordan, Qatar, Sudan, Syria and Yemen*) have their States names under footnotes 5.362B and/or 5.362C. Accordingly, the meeting urged these States to remove their names from the footnote and agreed to the following Conclusion:

CONCLUSION 13/44: PROTECTION OF GNSS SIGNAL

That, States that are listed in the footnotes 5.362B and 5.362C be urged to take necessary measures to remove their names from these footnotes as soon as possible.

4.5.63 The meeting reviewed and updated the Strategy for the implementation of GNSS in the MID Region to be in line with ICAO General Assembly Resolution A37-11. Accordingly, the meeting agreed to the following Conclusion:

CONCLUSION 13/45: STRATEGY FOR THE IMPLEMENTATION OF GNSS IN THE MID REGION

*That, the Strategy for implementation of GNSS in the MID Region be updated as at **Appendix 4.5R** to the Report on Agenda Item 4.*

4.5.64 The meeting encouraged MID States to conduct GNSS studies, workshops and seminars, since GNSS is the only sensor that supports all PBN navigation specifications. The meeting agreed that the questionnaire at **Appendix 4.5S** to the Report on Agenda Item 4.5, be used by the ICAO MID Regional Office to conduct a survey on the implementation of GNSS in the MID Region, and agreed to the following Conclusion:

CONCLUSION 13/46: GNSS SURVEY

*That, States complete the GNSS questionnaire at **Appendix 4.5S** to the Report on Agenda Item 4.5 and send it to the ICAO MID Regional Office before 1 September 2012.*

MIDANPIRG/13
Report on Agenda Item 4.5

PBN Implementation in the MID Region

4.5.65 The meeting was apprised of the outcome of the PBN/GNSS TF/3 meeting (Cairo, 30 November – 02 December 2010) and PBN/GNSS TF/4 meeting (Cairo, 02-04 October 2011).

4.5.66 The meeting recalled the 36 ICAO General Assembly Resolution A36-23 urged the Planning and Implementation Regional Groups (PIRGs) and States, inter alia, to complete a States PBN implementation plan by 2009 to achieve specific implementation goals starting with 2010. Accordingly, the MID Regional PBN Implementation Strategy and Plan were developed in October 2008 and adopted by MIDANPIRG/11 in February 2009 in order to allow sufficient time for the MID States to complete the development of their States PBN Implementation plans by December 2009. Furthermore, the meeting recalled that A36-23 resolution was superseded by resolution A37-11.

4.5.67 The meeting noted that the modification of General Assembly Resolution A36-23 with A37-11 basically means that aerodromes that do not have any operations of aircraft equipped with APV are exempted to introduce APV procedures. On one side this could be interpreted as a relaxation of the resolution, on the other hand, it is bolstering of Safety, the reason being that it was reported that many States had the excuse of not having APV equipped aircraft to particular aerodromes, not doing anything on improvement of the approach procedures. This means that even when there are GNSS equipped aircraft, they left old (less safe) approach procedures. General Assembly Resolutions A37-11 requires that there has to be at least a GNSS procedure with LNAV only for those runways that are not served with APV aircraft.

4.5.68 In light of completion of ICAO Continuous Descent Operations (CDO) Manual Doc 9931, which standardized the development and implementations of CD operations, the meeting noted that MIDANPIRG/12 agreed to Conclusion 12/61: Implementation of Continuous Descent Operations.

4.5.69 Based on the above, the meeting reviewed the MID Regional PBN Implementation Strategy and plan to include the new requirement as per ICAO General Assembly Resolution A37-11, and accommodate the developments globally and in MID States. Accordingly, the meeting agreed to the following Conclusion:

**CONCLUSION 13/47: MID REGIONAL PBN IMPLEMENTATION
STRATEGY AND PLAN**

*That, the MID Regional PBN Implementation Strategy and Plan be updated as at
Appendix 4.5T to the Report on Agenda Item 4.5.*

4.5.70 The meeting was of the view that prompt action by the Region and States is required to accelerate PBN planning, development and implementation to a pace of at least achieving closer to the ICAO Resolution implementation targets.

4.5.71 Based on the above, the meeting agreed that a comprehensive Regional Support Strategy is required and should include the following objectives;

- Promotion of PBN to decision makers within States to create the political will to invest and devote the necessary resources for PBN implementation;

MIDANPIRG/13
Report on Agenda Item 4.5

- Establishing a regional working-level team or forum to identify implementation needs and to direct and/or organize the appropriate resources that will deliver PBN solutions to States;
- Formulation of cooperative arrangements to assist States in PBN implementation; and
- Development of additional support mechanisms that create skills and capabilities within States to implement and to sustain PBN operations

4.5.72 Based on the above, the meeting agreed to establish MID PBN Support Team (MPST). The meeting agreed on three areas of work for the MPST: 1) promote PBN and convince Stakeholders to support PBN; 2) Gap Analysis and States PBN Implementation Plan update/improvement; and 3) Implementation of PBN.

4.5.73 The meeting noted that UAE had requested a PBN Go-Team visit which was conducted during 16-20 January 2011. Accordingly, the meeting agreed that UAE be the champion of MPST, and IATA to support. Furthermore, the meeting encouraged MID States that are advanced in PBN implementation to participate in the work of MPST.

4.5.74 The meeting reviewed the MPST Terms of Reference (TOR) as at **Appendix 4.5U** to the Report on Agenda Item 4.5. Accordingly, the meeting agreed to the following Decision:

DECISION 13/48: ESTABLISHMENT OF MID PBN SUPPORT TEAM (MPST)

*That, MPST be established with TOR as at **Appendix 4.5U** to the Report on Agenda Item 4.5.*

4.5.75 The meeting noted the PBN Go-Team recommended that each ICAO Region develop the PBN Go-Team capabilities within the Region in order to assist MID States in the Implementation of PBN. Accordingly, the meeting agreed to the following Conclusion:

CONCLUSION 13/49: MID PBN SUPPORT TEAM (MPST)

That,

- a) ICAO MID Regional Office provide the leadership for MPST;*
- b) UAE be the champion for the MPST;*
- c) IATA fully commit and support the MPST; and*
- d) MID States assign members to MPST and allocate necessary resources.*

4.5.76 The meeting reviewed and updated the status of the MID Region State PBN implementation plan and PBN implementation focal points as at **Appendices 4.5V** and **4.5W** to the Report on Agenda Item 4.5.

MIDANPIRG/13
Report on Agenda Item 4.5

4.5.77 The meeting noted that MIDANPIRG/12 had agreed on Conclusion 12/58 *PBN IMPLEMENTATION PROGRESS REPORT*, urging MID States to keep the ICAO MID Regional Office updated using the spreadsheet and the progress report. In this regard the meeting received the progress reports from the following States (Bahrain, Egypt, Jordan, Qatar, Saudi Arabia and UAE). Accordingly, the meeting agreed that progress reports to be sent in June and December in order to monitor the progress of implementation of PBN in the Region the meeting agreed to the following Conclusion:

CONCLUSION 13/50: PBN IMPLEMENTATION PROGRESS REPORT

That, for future reporting on the status of PBN implementation, States be urged to:

- a) use the excel sheet as at **Appendix 4.5X** to the report on Agenda Item 4.5, and PBN Implementation Progress Report Template as at **Appendix 4.5Y** to the Report on Agenda Item 4.5; and*
- b) submit progress reports to ICAO MID Regional Office every six months and whenever major progress is achieved.*

4.5.2 The meeting noted that a PBN Symposium will be held in Montréal from 16 to 19 October 2012. The event will share the latest developments relating to PBN applications. Accordingly, the meeting encouraged MID States to participate actively in the symposium.

MIDANPIRG/13
Appendix 4.5A to the Report on Agenda Item 4.5

**MID REGIONAL PERFORMANCE OBJECTIVES
AERODROMES PERFORMANCE OBJECTIVES**

AERODROME CERTIFICATION	
Benefits	
Safety	- Improved safety of aerodromes operation - Reduced number of incident/accident. - Safety level improved
Environment	Reduced emissions through effective aerodrome operation.
Capacity	Increased capacity through better planning and operation
Efficiency	Improved aerodrome capacity and level of service.
Performance Measurement	
Performance Metrics:	- Number of States having fully implemented certification of aerodromes. - Number of certified aerodromes - Number of deficiency related to the aerodromes field - Number of States having implemented QMS - Number of runway incursion/excursion. - Number for adequate aerodromes for NLA operation.

Strategy					
ATM Operational Concept Components	Projects/Tasks	Linkage to ASBU Module	Timeframe Start/End	Responsibility	Status
AO (Aerodrome operations), CM (Conflict management) DCB (Demand and capacity balancing) AUO (Airspace user operation)	Establish a regulatory framework specifying the requirement for aerodrome Certification.	B0-65	2013	States	valid
	Establish a regulatory authority	B0-65	2014	States	valid
	Develop and maintain aerodrome certification regulations & standards	B0-65	ongoing	States	valid
	Facilitate the implementation of aerodrome certification by conducting courses and technical support.	B0-30	2013	ICAO & AOP	valid
	monitor the implementation of aerodrome certification by all MID States	B0-80	Ongoing	ICAO & AOP	valid
	review and update the deficiencies in the aerodrome field and provide necessary guidance for their elimination	B0-80	Ongoing	ICAO & AOP	valid

<i>Strategy</i>					
ATM Operational Concept Components	Projects/Tasks	<i>Linkage to ASBU Module</i>	Timeframe Start/End	Responsibility	Status
	ensure promulgation of information on status of certification of aerodromes in the State AIP	B0-30	Ongoing	States	valid
	SMS AT CERTIFIED AERODROMES				
	Facilitate the implementation of SMS by conduct of courses and guidance materials.	B0-75	Ongoing	ICAO & AOP	valid
	establishment of a requirement for SMS to be part of aerodrome certification	B0-75	2013	States	valid
	implementation of SMS	B0-75 B1-80	Ongoing	States	valid
	Develop action plan on safety targets and hazard reporting	B0-75	2011-2016	States	valid
	Surveillance, internal audit and Safety Oversight Programmes	B0-75	Ongoing	ICAO & States	valid
	implementation of digital data exchange with originators	B0-30	2013-2018	States	valid
	foster the integrated improvement of AIS/AIM through proper training and qualification of the AIS/AIM personnel in the MID Region and certification of the AIM Services	B0-30	2011-2016	ICAO & AIM TF & States	valid
	AERODROME EMERGENCY PLANNING				
	conduct a survey to assess the level of implementation on aerodrome emergency planning	B0-80	2011-2012	ICAO	valid
	Establish a requirement of aerodrome emergency planning	B0-80	2013	States	valid
	development of aerodrome emergency planning document	B0-80	2013	States	valid
	Conduct full scale aerodrome emergency exercise at intervals not exceeding two years	B0-75 B0-80	Ongoing	States	valid
	Conduct partial emergency exercise in the intervening year to ensure that deficiencies found during the full scale exercise have been corrected.	B0-75 B0-80	Ongoing	States	valid

4.5A-3

<i>Strategy</i>					
ATM Operational Concept Components	Projects/Tasks	<i>Linkage to ASBU Module</i>	Timeframe Start/End	Responsibility	Status
	Facilitate the implementation of aerodrome emergency planning by conduct of courses and guidance materials	B0-80	2012-2016	ICAO & AOP SG	valid
Linkage to GPIs	GPI-5: Performance-based navigation GPI-13: Aerodrome design and management GPI-14: Runway operations GPI-18: Aeronautical Information				

**MID REGIONAL PERFORMANCE OBJECTIVES
AERODROMES PERFORMANCE OBJECTIVES**

RUNWAY SAFETY PROGRAMME	
Benefits	
Safety	• Improved safety of runway operation • Reduced number of incident/accident. • Safety level improved
Environment	• Reduced emissions through effective aerodrome operation.
Capacity	• Increased capacity through better planning and operation
Efficiency	• Improved aerodrome capacity and level of service.
Performance Measurement	
Performance Metrics:	• Number of runway incursions per year. • Number of runway excursions per year. • Number of accident per 100,00 departures.

Strategy					
ATM Operational Concept Components	Projects/Tasks	Linkage to ASBU Module	Timeframe Start/End	Responsibility	Status
AO (Aerodrome operations), CM (Conflict management) DCB (Demand and capacity balancing) AUO (Airspace user operation)	• Facilitate the implementation of runway safety programme by conducting seminars and workshops..	B0-75	2013	ICAO & Partners	valid
	• Establish a Runway safety Team	B0-75	2014	Sates	valid
	Runway Incursion Prevention				valid
	• establish Runway Incursion Prevention programme, identify its goals as part of the national Runway Safety programme and monitor implementation plan	B0-75	2014	Sates	valid
	• implement, where warranted, precise surface movement guidance to and from a runway to improve capacity, safety and efficiency	B0-75	2015	States	valid
	• develop, at aerodromes a positioning system for all vehicles and aircrafts operating on the movement area on a cost-benefit basis	B0-75	2013 – 2016	States & AOP SG	valid

4.5A-5

<i>Strategy</i>					
ATM Operational Concept Components	Projects/Tasks	<i>Linkage to ASBU Module</i>	Timeframe Start/End	Responsibility	Status
	implement procedures and technologies to enhance the performance of runway operations and optimize runway capacity	B0-75	2013 – 2016	States & AOP SG	valid
	Runway Excursion Prevention				
	establish collaborative bodies with ATM, aircraft operators and aerodrome operators for implementing plans aimed at prevention of runway excursions	B0-75	2012 – 2016	States	valid
	harmonize, coordinate and support the Runway Excursion Prevention measures and implementation activities on a regional basis	B0-75	2012 – 2017	ICAO, States & AOP SG	valid
	develop and implement an integrated maintenance programme at aerodromes that includes pavement and visual aids	B0-75	2010-2016	States & AOP SG	valid
	implement and monitor Runway End Safety Area (RESA) requirements at aerodromes	B0-75	Ongoing	ICAO, States & AOP SG	valid
	monitor and ensure meeting Runway strip characteristics.	B0-75	Ongoing	States & AOP SG	valid
	develop measures and ensure inspection of the movement area including control of Foreign Object Debris (FOD)	B0-75	Ongoing	States & AOP SG	valid
	provision of enhanced visual aids and markings on runway and movement area.	B0-75	2014	States	valid
	monitor and ensure meeting Runway strip frangibility requirements	B0-75	Ongoing	States & AOP SG	valid

<i>Strategy</i>					
ATM Operational Concept Components	Projects/Tasks	Linkage to ASBU Module	Timeframe Start/End	Responsibility	Status
	Runway Pavement Maintenance				
	promote the awareness about the requirements for the provision of Pavement Maintenance in the movement area	B0-75	ongoing	ICAO & AOP SG	valid
	develop and implement a runway maintenance programme	B0-75	2012-2014	States & AOP SG	valid
	harmonize, coordinate and support the Runway pavement maintenance guidance for implementation activities on a regional basis	B0-75	201-2015	ICAO & AOP SG	valid
	Seminar on runway surface friction measurement	B0-75	2014	ICAO	valid
	measurement and reporting of friction characteristics of wet paved runways.	B0-75	201-2015	Sates	valid
	Availability of a friction measurement equipment	B0-75	2012-2014	States	valid
	establishment of maintenance friction level below which corrective action should be initiated.	B0-75	2012-2014	States & AOP SG	valid
	identify minimum friction level below which information that a runway may be slippery when wet should be made available	B0-75	2012-2014	States & AOP SG	valid
	monitor the removal of runway contaminants in particular; rubber deposits and accumulated sand	B0-75	Ongoing	States & AOP SG	valid
	monitor implementation of the requirements for measurement and reporting of the friction characteristics and carrying out appropriate corrective maintenance in accordance with defined maintenance performance level	B0-75	Ongoing	ICAO, States & AOP SG	valid
Linkage to GPIs	GPI/6 Air traffic flow management GPI/9 Situational awareness GPI/13 Aerodrome design and management GPI/14 Runway operations GPI/15 Match IMC and VMC operating capacity GPI/18 Aeronautical information				

**MID REGIONAL PERFORMANCE OBJECTIVES
AERODROMES PERFORMANCE OBJECTIVES**

AERODROME SAFETY	
Benefits	
Safety	- Improved safety of aerodromes operation - Reduced number of incident/accident. - Safety level improved
Environment	- Reduced emissions through effective aerodrome operation. - Reduced aircraft noise impact on residential and commercial areas around the aerodrome
Capacity	Increased capacity through better planning and operation
Efficiency	Improved aerodrome capacity and level of service.
Performance Measurement	
Performance Metrics:	- Number of obstacles penetrating obstacle limitation surface. - Number of certified aerodromes - Number of deficiency related to the aerodromes field - Number of runway incursion/excursion.

Strategy					
ATM Operational Concept Components	Projects/Tasks	Linkage to ASBU Module	Timeframe Start/End	Responsibility	Status
AO (Aerodrome operations), CM (Conflict management) DCB (Demand and capacity balancing) AUO (Airspace user operation)	OBSTACLE LIMILTATION				
	Establish a regulatory framework on Obstacle Limitation Surfaces (OLS) around the aerodrome	B0-65	2014	States	valid
	Monitor the height of buildings or structures within the boundaries of OLS	B0-65	ongoing	States	valid
	WILDLIFE HAZARD CONTROL				
	survey and collect information on state's practice with respect to airport wild life control	B0-80	2013	ICAO	valid
	establishment of national bird control committee.	B0-80	2013	States	valid
	organize a seminar on wildlife hazard reporting, assessment and reduction.	B0-80	2013	ICAO & AOP	valid
	landuse management inside and in the vicinity of aerodrome.	B0-30	Ongoing	States	valid
	establishment of a national procedure for recording and reporting wildlife strikes to aircraft.	B0-75	2013	States	valid

Strategy					
ATM Operational Concept Components	Projects/Tasks	Linkage to ASBU Module	Timeframe Start/End	Responsibility	Status
	collect wildlife strike reports and forward to ICAO for inclusion in the ICAO IBIS database.	B0-75	Ongoing	States	valid
Linkage to GPIs	GPI-5: Performance-based navigation GPI-13: Aerodrome design and management GPI-14: Runway operations GPI-18: Aeronautical Information				

MIDANPIRG/13
Appendix 4.5B to the Report on Agenda Item 4.5

MID REGIONAL PERFORMANCE OBJECTIVES
AIM PERFORMANCE OBJECTIVES

TRANSITION FROM AIS TO AIM	
Benefits	
Safety	• Safety level improved
Environment	• Reduced emissions through use of optimum routes/trajectories
Capacity	• Increased capacity through better utilization of airspace
Cost effectiveness	• Fuel cost reduction through use of optimum routes/trajectories
Performance Measurement	
Performance Metrics:	• number of States having fully implemented WGS 84 • number of States having implemented eTOD for Areas 1 & 4 • Number of deficiency Priority “U” related to the AIS/MAP field • Number of States having implemented QMS • Number of States having developed eAIP • Number of States having developed a National Plan for the transition from AIS to AIM • Number of States having implemented an AIXM based AIS Database • Number of States having implemented an Integrated Aeronautical Information Database (IAID)

Strategy					
ATM Operational Concept Components	Projects/Tasks	Linkage to ASBU Module	Timeframe Start/End	Responsibility	Status
ATM SDM, AUO, CM	• improve the compliance with the AIRAC system, , including the use of the internet for the advance posting of the aeronautical information considered of importance to users.	B0-30	Ongoing	States	valid
	• complete WGS-84 implementation	B0-10 B0-65	2012	States	valid
	• monitor the implementation of WGS-84 until complete implementation of the system by all States and take remedial action, as appropriate	B0-10 B0-65	ongoing	ICAO & AIM TF	valid
	• foster the implementation of QMS based on the MID Region Methodology for the implementation of QMS and the Eurocontrol CHAIN deliverables	B0-30	Ongoing	ICAO & AIM TF & States	valid

<i>Strategy</i>					
ATM Operational Concept Components	Projects/Tasks	<i>Linkage to ASBU Module</i>	Timeframe Start/End	Responsibility	Status
	monitor the implementation of QMS until complete implementation of the requirements by all MID States	B0-30	Ongoing	ICAO & AIM TF	valid
	review and update the deficiencies in the AIS/MAP field and provide necessary guidance for their elimination	B0-30	Ongoing	ICAO & AIM TF	valid
	plan for the transition from AIS to AIM in the MID Region	B0-30	2008-2016	ICAO & AIM TF & States	valid
	monitor the implementation of AIS automation in the MID Region in order to ensure availability, sharing and management of electronic aeronautical information	B0-30	2008-2013	ICAO & AIM TF	valid
	development of eAIPs by MID States	B0-30	Ongoing	States	valid
	establishment of Integrated Aeronautical Information Database (IAID)	B0-30	2011-2016	States	valid
	provision of AIM products and services based on the established IAID	B0-30 B1-25	2013-2020	States	valid
	support the development of a MID Region AIS database (MIDAD)	B0-30	2011-2016	States & ICAO & AIM TF	valid
	establishment of formal arrangements with approved data originators concerning aeronautical data quality	B0-30	2009-2016	States	valid
	implementation of digital data exchange with originators	B0-30	2013-2018	States	valid
	foster the integrated improvement of AIS/AIM through proper training and qualification of the AIS/AIM personnel in the MID Region and certification of the AIM Services	B0-30	2011-2016	ICAO & AIM TF & States	valid

4.5B-3

<i>Strategy</i>					
ATM Operational Concept Components	Projects/Tasks	<i>Linkage to ASBU Module</i>	Timeframe Start/End	Responsibility	Status
	provide Terrain and Obstacle data for area 1	B0-30 B0-85 B2-25	2008-2012	States	valid
	provide Terrain and Obstacle data for area 4	B0-30 B0-85 B2-25	2008-2012	States	valid
	assessment of Annex 15 requirements related to the provision of eTOD for area 2 and area 3	B0-30 B0-85 B2-25	2010-2012	States	valid
	development of an action plan for the provision of eTOD for area 2 and area 3	B0-30 B0-85 B2-25	2013	States	valid
	provide necessary Terrain and Obstacle data for area 2	B0-30 B0-85 B2-25	2015	States	valid
	provide necessary Terrain and Obstacle data for area 3	B0-30 B0-85 B2-25	2015	States	valid
	foster the implementation of Aerodrome mapping and electronic aeronautical charts in the MID Region	B0-30	2012-2016	ICAO & AIM TF & States	valid
Linkage to GPIs	GPI-5: Performance-based navigation GPI-11: RNP and RNAV SIDs and STARs GPI-9: Situational awareness GPI-18: Aeronautical Information GPI-20: WGS-84 GPI-21: Navigation systems				

MIDANPIRG/13
Appendix 4.5C to the Report on Agenda Item 4.5

**MID REGIONAL PERFORMANCE OBJECTIVES
ATM PERFORMANCE OBJECTIVES**

OPTIMIZATION OF THE ATS ROUTE STRUCTURE EN-ROUTE AIRSPACE	
Benefits	
Safety	Improved safety of ATS routes
Environment	reductions in fuel consumption and CO₂ emission
Capacity	- increase in airspace capacity - ability of aircraft to conduct flight more closely to preferred trajectories
Cost effectiveness	Fuel cost reduction through use of optimum routes/trajectories
Performance Measurement	
Performance Metrics:	- number of RNAV 1 Routes implemented, in accordance with the MID Basic ANP - number of implemented ATS Routes from the MID ATS Route Catalogue - number of States having implemented RNAV 5 area in the level band FL160-FL460 - number of duplicate 5LNC eliminated - number of eliminated deficiency related to non-implementation of ATS Routes - number of concerned States implementing 20NM radar longitudinal separation - number of concerned States implementing 10NM radar longitudinal separation

	Strategy				
ATM Operational Concept Components	Project/Tasks	<i>Linkage to ASBU Module</i>	Time Frame Start-End	Responsibility	Status
AOM	<i>En-route airspace</i>				
	develop Airspace Concept based on the MID PBN implementation plan, in order to design and implement a trunk route network, connecting major city pairs in the upper airspace and for transit to/from aerodromes, on the basis of PBN and, in particular, RNAV 5, taking into account interregional harmonization	B0-10 B0-20 B0-65 B0-101	ongoing	ATM/SAR/AIS SG (ARN TF)	valid
	review user requirements for the establishment of ATS routes in the MID Region	B0-10 B0-20	Ongoing	ATM/SAR/AIS SG ARN TF	valid
	monitor status of PBN implementation	B0-65	2010-2012	States	valid
	review the implementation of pending ATS Routes and update the MID Basic ANP and the MID	B0-10 B0-20 B0-65	Ongoing	ATM/SAR/AIS SG ARN TF	valid

	<i>Strategy</i>				
ATM Operational Concept Components	Project/Tasks	<i>Linkage to ASBU Module</i>	Time Frame Start-End	Responsibility	Status
	ATS Route catalogue				
	follow-up with States on the implementation of pending ATS Routes and update the list of air navigation deficiencies, accordingly	B0-10 B0-20	On going	ATM/SAR/AIS SG ARN TF	valid
	monitor implementation of 20NM Radar longitudinal separation between States	B0-101	2010-2013	Iraq, Iran and Yemen	Implemented by Bahrain; Jordan; Kuwait; Lebanon; Saudi Arabia; Syria and UAE
	monitor implementation of 10NM Radar longitudinal separation between States	B0-101	2011-2016	Bahrain; Iraq; Jordan; Kuwait; Lebanon; Oman, Saudi Arabia; Syria, UAE and Yemen	Implemented between (Bahrain and UAE) and (Oman and UAE)
	monitor the process of allocation of 5LNCs	B0-65	On going	ICAO	valid
	elimination/Reduction of the use of duplicate 5LNCs	B0-65	On going	ICAO States	valid
linkage to GPIs	GPI/5: performance-based navigation, GPI/7: dynamic and flexible ATS route management, GPI/8: collaborative airspace design and management, GPI/20: WGS-84				

OPTIMIZATION OF THE TERMINAL AIRSPACE	
Benefits	
Safety	enhance safety in terminal air space
Environment	reductions in fuel consumption and CO₂ emission
Capacity	- increase terminal capacity - ability of aircraft to conduct flight more closely to preferred trajectories
Cost effectiveness	- Fuel cost reduction through use of optimum routes/trajectories - implementation of PBN routes in terminal airspace - implementation of SID and STARS
Performance Measurement	
Performance Metrics:	- number of States implemented PBN routes in terminal airspace - total Number of PBN routes in MID region terminal airspace - number States implemented SID and STARS - percentage of CO₂ reduction of implemented new routes

	Strategy				
ATM Operational Concept Components	Project/Tasks	Linkage to ASBU Module	Time Frame Start-End	Responsibility	Status
AOM, AO	<i>In terminal airspace</i>				
	develop terminal Airspace Concept taking into consideration the MID PBN impl. plan.	B0-65	2012-2014	States	valid
	formulate safety plan (assessment and monitoring)	B0-65	2012-2014	States, MPST	valid
	support for operational approvals	B0-65	On going	MPST	valid
	publish national regulations for aircraft and operators approval using PBN manual as guidance and considering available foreign approval material	B0-65	On going	States	valid
	training on PBN	B0-65	On going	States MPST	valid
	system performance measuring (measurement and monitoring plan)	B0-65	On going	States, ATM/SAR/AIS SG	valid
	implement SIDs and STARS	B0-65	2009-2016	States	valid
	monitor implementation progress in accordance with MID PBN implementation roadmap and States implementation plan	B0-65	2009-2016	States, ATM/SAR/AIS SG	valid
Linkage to GPIs	GPI/5: performance-based navigation, GPI/7: dynamic and flexible ATS route management, GPI/8: collaborative airspace design and management, GPI/10: terminal area design and management, GPI/11: RNP and RNAV SIDs and STARS and GPI/12: Functional integration of ground systems with airborne systems.				

	ENHANCE CIVIL/MILITARY COORDINATION AND CO-OPERATION
	Benefits
Safety	ensure safe and efficient action in the event of unlawful interference
Environment	- reductions in fuel consumption and CO2 emission - allow a more efficient ATS route structure; and
Capacity	increase airspace capacity
Cost effectiveness	Fuel cost reduction through use of optimum routes/trajectories
	Performance Measurement
Performance Metrics:	- reduction of the number of ATS routes not implemented due to Military restrictions - increase the number of CDRs implemented in accordance with user requirements - reduction of the number of incident related to uncoordinated flights operating over high seas - percentage of CO2 reduction of implemented new PBN approaches - number of ATS routes not implemented due to Military restrictions - number of Conditional Routes (CDR) implemented in accordance with user requirements - number of reported incident related to uncoordinated flights operating over high seas

	Strategy				
ATM Operational Concept Components	Projects/Tasks	Linkage to ASBU Module	Timeframe Start/End	Responsibility	Status
AOM, AUO	establish civil/military coordination bodies at national level	B0-10 B0-65 B0-35	2008-2014	States	valid
	implement collaborative civil/military airspace planning at national level	B0-10 B0-65 B0-35	On going	States	valid
	develop a regional strategy and an Action Plan for implementation of flexible use of airspace in a phased approach beginning with more dynamic sharing of restricted airspace while working towards full integration of civil and military aviation activities	B0-05 B0-10 B0-65 B0-35	2009-2013	ATM/SAR/AIS SG ARN TF	valid
	implement FUA	B0-35	2009- 2016	States	valid
	monitor FUA implementation progress	B0-35	On going	ATM/SAR/AIS SG	valid
Linkage to GPIs	GPI/1: flexible use of airspace, GPI/7: Dynamic and flexible ATS route management, GPI/8: Collaborative airspace design and management				

REGIONAL PERFORMANCE OBJECTIVES RVSM OPERATIONS IN THE MID REGION	
Benefits	
Safety	safety level maintained or improved
Environment	reductions in fuel consumption and emissions;
Capacity	increased capacity through better utilization of airspace
Cost effectiveness	fuel cost reduction through use of optimum routes/trajectories
Performance Measurement	
Performance Metrics:	- number of States reporting necessary data to the MIDRMA on regular basis and in a timely manner - percentage of the RVSM approved aircraft in the MID Region with known height-keeping monitoring results - Overall Risk of Collision in the MID RVSM airspace

	Strategy				
ATM Operational Concept Components	Projects/Tasks	Linkage to ASBU Module	Timeframe Start/End	Responsibility	Status
	develop an Action Plan for the implementation of RVSM within Baghdad FIR		2009-2010	BFRI WG	completed
	develop necessary planning material related to RVSM implementation in Baghdad FIR		2009-2011	BFRI WG MIDRMA ICAO	completed
	ensure that Iraq met all RVSM implementation requirements		2010-2011	BFRI WG MIDRMA ICAO	completed
	implement RVSM within Baghdad FIR		2011	Iraq ICAO MIDRMA	completed
	develop Baghdad FIR Post RVSM Implementation Safety Report		2011-2012	Iraq MIDRMA	valid
	monitor RVSM operations in the MID Region		Ongoing	MIDRMA, MIDRMA Board, ATM/SAR/AIS SG ICAO	valid
	develop MID RVSM Safety Monitoring Reports (SMR) with a view to demonstrate that safety objectives continue to be met		Ongoing	MIDRMA	valid
	assess MID RVSM SMRs and take action as required		Ongoing	ATM/SAR/AIS SG MIDRMA Board MIDANPIRG	valid
linkage to GPIs	GPI-2: Reduced Vertical Separation Minima				

IMPLEMENTATION OF THE NEW ICAO FPL FORM	
Benefits	
Safety	enhance safety by use of modern capabilities onboard aircraft
Environment	reductions in fuel consumption and CO₂ emission utilizing proper flight planning and aircraft capabilities are known in advance to ANSP
Capacity	- ability of air navigation service providers to make maximum use of aircraft capabilities - ability of aircraft to conduct flights more closely to their preferred trajectories - optimized demand and capacity balancing through the efficient exchange of information
Cost effectiveness	facilitate utilization of advanced technologies thereby increasing efficiency
Performance Measurement	
Performance Metrics:	- status of implementation of ICAO new FPL provisions - status of updates in the FITS - number of States meeting the deadline for implementation of the ICAO new FPL provisions - number of States providing the focal points and initiated impact studies

	Strategy			
ATM Operational Concept Components	Projects/Tasks	Timeframe Start/End	Responsibility	Status
SDM	Planning and implementation of transition elements	2009-2012	INFPL SG	valid
	States to assign focal points and form and internal nucleus team	2009 - 2010	States	valid
	ensure that enabling regulatory (regulations procedures, AIP etc..) provisions are developed	2009- 2012	States	valid
	ensure that the automation and software requirements of local systems are fully adaptable to the changes envisaged in the new FPL form	2009 - 2012	States	valid
	ensure that issues related to the ability of all system to pass information correctly and to correctly identify the order in which messages are received, to ensure that misinterpretation of data does not occur	2009- 2012	States	valid
	analyze each individual data item within the various fields of the new flight plan form, comparing the current values and the new values to verify any problems with regard to applicability of service provided by the facility itself or downstream units	2009 – 2011	INFPL SG States	valid

	<i>Strategy</i>			
ATM Operational Concept Components	Projects/Tasks	Timeframe Start/End	Responsibility	Status
	ensure that there are no individual State peculiarities or deviations from the flight plan provisions	2009- 2012	States	valid
	ensure that the accepting ATS Reporting Office accepts and disseminates all aircraft capabilities and flight intent to all the downstream ACCs as prescribed by the PANS-ATM provisions	2009 – 2012	INFPL SG States	valid
	plan the transition arrangements to ensure that the changes from the current to the new ICAO FPL form occur in a timely and seamless manner and with no loss of service	2009-2012	States INFPL SG	valid
	in order to reduce the chance of double indications it is important that any State having published a specific requirement(s) which are now addressed by the amendment should withdraw those requirements in sufficient time to ensure that aircraft operators and flight plan service providers, after 15 November 2012, use only the new flight plan indications.	2009- 2012	States	valid
	internal testing	2009 – June 2012	States	valid
	external testing and transition into operation	1 April to 30 June 2012	States	valid
	airspace users validation and filling of NEW FPLs if appropriate	1 July to 14 November 2012	States and users	valid
	Plan and ensure the training of relevant stakeholders (air traffic controllers, etc)	2009 - 2012	States	valid
	develop and make available, guidance material for users, including but not limited to ANSP personnel	2009 - 2011	INFPL SG	valid

	<i>Strategy</i>			
ATM Operational Concept Components	Projects/Tasks	Timeframe Start/End	Responsibility	Status
	establish and enhance as appropriate a central depository (FITS) in order to track the implementation status	Ongoing	ICAO	Completed
	inform the ICAO regional offices on an ongoing basis	Ongoing- Dec 2012	States	Valid
linkage to GPIs	GPI/5 RNAV and RNP (Performance-based- navigation, GPI/9 Situational awareness, GPI/16 Decision Support systems and alerting systems, GPI/17 Data link application, GPI/18 Aeronautical Information GPI/21 Navigation systems and GPI/23 Aeronautical radio spectrum.			

MIDANPIRG/13
Appendix 4.5D to the Report on Agenda Item 4.5

CNS PERFORMANCE OBJECTIVES

REGIONAL PERFORMANCE OBJECTIVES RADIO SPECTRUM MANAGEMENT AND PROCESSES TO PROTECT THE AERONAUTICAL SPECTRUM	
Benefits	
Safety	Protection and availability of required spectrum for safety of air systems specially GNSS
Environment	Supports ATM for the optimized use of technologies to reduce effect on environment
Capacity	- proper administration of the allocated aviation spectrum - resolve air Space communications
Cost effectiveness	use of advance technologies to reduce costs
	Performance Measurement
Performance Metrics:	- number of aviation experts participate in and satisfactory results of WRC-12 - number of States coordinate with TRA to support the ICAO position - current Aviation Frequency spectrum is protected to extent possible - availability of Frequency Spectrum for Future Aeronautical utilization - number of States deleted their State name from the foot notes affecting aviation spectrum

	Strategy				
ATM Operational Concept Components	Projects/Tasks	Linkage to ASBU Module	Timeframe Start/End	Responsibility	Status
AOM, AUO, ATMSDM	implement frequency spectrum management tool	B0-65	2008-2013	ICAO States	valid
	harmonize Regional coordination for the protection of the aviation spectrum at WRC , and beyond	B0-65	Ongoing	ICAO, CNS SG States	valid
	promote the participation of Civil Aviation Experts in State's delegation to ITU WRC Meetings	B0-65 B1-90	Ongoing	ICAO CNS SG	valid
	Civil Aviation Spectrum experts attend WRC, be part of their National delegation and coordinate with TRA	B0-65 B1-90	Ongoing	States	valid
	disseminate ICAO policy statements of requirements for aeronautical radio frequency spectrum for WRC	B0-65 B1-90	Ongoing	ICAO	complete
	deletion of MID States name from footnote affecting Aviation spectrum and inform ICAO Mid Regional Office	B0-65 B1-90	Ongoing	States	valid

	<i>Strategy</i>				
ATM Operational Concept Components	Projects/Tasks	<i>Linkage to ASBU Module</i>	Timeframe Start/End	Responsibility	Status
	ICAO attend WRC to provide necessary support to the delegation for the support of the aviation spectrum	B0-65 B1-90	Ongoing	ICAO	valid
	organize workshop for the Regional support to ICAO position		Sep 2010	ICAO	complete
	attend Regional Workshop along with the National TRA		Sep 2010	States	complete
	increase awareness and Ensure frequency Spectrum availability for future aviation needs	B0-65 B1-90	Ongoing	ICAO/States	valid
Linkage to GPIs	GPI-23: Aeronautical radio spectrum				

REGIONAL PERFORMANCE OBJECTIVE IMPROVEMENT OF AERONAUTICAL TELECOMMUNICATION NETWORK INFRASTRUCTURE RELATED TO ATN IMPLEMENTATION	
Benefits	
Safety	improve safety with reliable means of communication
Environment	ATN communication improve air space usage thus benefiting the environment
Capacity	better coordination using more reliable networks
Cost effectiveness	improvement in operational efficiency
Performance Measurement	
Performance Metrics:	- Number of deficiency Priority “U” related to the ATN - status of the development of the Regional Plan - number of States follow the implementation Plan

	Strategy				
ATM Operational Concept Components	Projects/Tasks	Linkage to ASBU Module	Timeframe Start/End	Responsibility	Status
AO, TS, CM, AUO	develop Regional ATN Planning document	B0-25 B0-40	2008-2013	ATN/IPS WG	valid
	review of ATN implementation issues and develop coordinated solutions	B0-25	2009-2013	ATN/IPS WG and CNS SG	valid
	develop conformance procedures and check list for AMHS	B0-25	2009-2011	ATN/IPS WG and CNS SG	Completed
	develop information Security policy and Guidance	B0-25	2009-2013	ATN/IPS WG and CNS SG	valid
	coordinate and monitor implementation to be harmonized and interoperable globally	B0-25 B0-40	On going	ATN/ IPS WG and CNS SG	valid
	implement agreed G-G ATN application	B0-25	On going	States	valid
	monitor and report deficiencies to support the agreed MID METRICS	B0-25 B0-40	On going	ATN/IPS WG and CNS SG	Valid
	support other MIDANPIRG Subsidiary bodies for ATN infrastructure requirement	B0-25	2008-2016	ATN/IPS WG and CNS SG	Valid

REGIONAL PERFORMANCE OBJECTIVES IMPLEMENTING ADVANCED TECHNOLOGIES TO SUPPORT DATA LINK SERVICES	
Benefits	
Safety	improved safety through use of data links
Environment	Reduced emissions through use of optimum routes/trajectories
Capacity	Increased capacity through better utilization of airspace
Cost effectiveness	Fuel cost reduction through use of optimum routes/trajectories
Performance Measurement	
Performance Metrics:	- number of States developed data link implementation plan - number of States Implemented data links

	Strategy				
ATM Operational Concept Components	Projects/Tasks	Linkage to ASBU Module	Timeframe Start/End	Responsibility	Status
AO, TS, CM, AUO, DCB, ATMSDM	identify requirement and harmonize implementation plan for data link to ensure interoperability between States and Regions	B0-40	2010-2013	CNS/ATM/IC SG CNS SG	valid
	technical audit of available supporting infrastructure	B0-25 B0-40	2010-2013	CNSATM/IC SG	valid
	implement available technologies that bring immediate benefits (D-ATIS, CPDLC, ADS-C, ADS-B) and inform ICAO MID Regional Office	B0-25 B0-40	On going	States , user	valid
	Coordinate ADS-B implementation plan and concept of operations with other ICAO regions	B0-05 B0-40 B0-85 B0-86	2011-2013	CNS/ATM/IC SG CNS SG	valid
	monitor and report deficiencies to support agreed MID Metrics	B0-05	On going	All MIDANPIRG Subsidiary bodies	valid
Linkage to GPIs	GPI-22: Communications Infrastructure GPI-17: Data Link Application				

REGIONAL PERFORMANCE OBJECTIVES IMPLEMENTATION OF GNSS IN THE MID REGION	
Benefits	
Safety	• reduced navigational errors • additional navigational capabilities brings more safety
Environment	• supports the implementation of PBN which in turn bring benefits to environment
Capacity	• optimal use of advanced technologies • optimization of infrastructure
Cost effectiveness	• operational efficiency
Performance Metrics:	• alignment of GNSS Implementation strategy with PBN • status of Implementation of GNSS • number of States Implemented GNSS • number of report on trails and demo on GNSS

	Strategy				
ATM Operational Concept Components	Projects/Tasks	Linkage to ASBU Module	Timeframe Start/End	Responsibility	Status
AO, TS, CM, AUO AOM,	• carry out GNSS trials, demonstrations and test beds and surveys	B0-65	On going	States, ICAO	valid
	• determine the most appropriate augmentation system for the MID Region	B0-65	2009-2013	PBN/GNSS TF CNS/ATM/IC CNS SG	valid
	• define and implement required infrastructure /procedure according to regional PBN implementation plan	B0-65 B0-10	On going	States PBN/GNSS TF CNS/ATM/IC CNS SG	valid
	• monitor implementation progress	B0-65	On going	PBN/GNSS TF	valid
	• monitor and report deficiencies to support agreed MID METRICS	B0-65	On going	All MIDANPIRG Subsidiary bodies	valid
Linkage to GPIs	GPI-21: Navigation Systems GPI-9: Situational Awareness				

REGIONAL PERFORMANCE OBJECTIVES IMPROVE SITUATIONAL AWARENESS	
Benefits	
Safety	safe reduced separation
Environment	Sharing surveillance data will benefit the user for optimum flight routes bringing reductions in fuel consumption and CO₂ emission
Capacity	- operational Efficiency - ability of aircraft to conduct flight more closely to preferred trajectories - increase in airspace capacity
Cost effectiveness	reductions in fuel consumption
Performance Measurement	
Performance Metrics:	- number of States implement required surveillance infrastructure - number of States sharing surveillance data - Number of deficiency Priority “U” related to surveillance infrastructure

	Strategy				
ATM Operational Concept Components	Projects/Tasks	Linkage to ASBU Module	Timeframe Start/End	Responsibility	Status
AOM, AUO, ATMSDM	prepare Plan for introduction of new surveillance systems	B0-80 B0-85	2011-2013	States, ICAO PBN/GNSS TF CNS/ATM/IC CNS SG	valid
	organize workshop for developing MID surveillance roadmap	B0-80 B0-85	2009-2011	ICAO	completed
	MID States participate actively in the workshop to reach its objective	B0-80 B0-85	2011	States	completed
	follow up on the Regional Surveillance systems in MID Regional ANP and FASID	B0-80 B0-85	2008-2013	CNS SG	valid
	Study and identify applicable multilateral applications in the MID Region	B0-80 B0-85	2011-2013	CNS SG	valid
	monitor and report deficiencies in order to support agreed MID Metrics	B0-80 B0-85	On going	ATN/IPS WG and CNS SG	valid
	develop consolidated surveillance strategy	B0-80 B0-85	2011-2013	CNS SG	valid
Linkage to GPIs	GPI-9: Situational Awareness				

MIDANPIRG/13

Appendix 4.5E to the Report on Agenda Item 4.5

MID REGIONAL PERFORMANCE OBJECTIVES
MET PERFORMANCE OBJECTIVES

IMPLEMENT INTERNATIONAL AIRWAYS VOLCANO WATCH (IAVW), INTERNATIONAL TROPICAL CYCLONE WATCH (ITCW), AND IMPROVE THE QUALITY OF METEOROLOGICAL WARNINGS AND ADVISORIES	
Benefits	
Safety	Improve in-flight safety by providing information on volcanic ash, tropical cyclone and other hazardous weather by way of meteorological advisories and warnings
Environment	Reduced emissions through use of optimum routes/trajectories (achieved by optimizing flight routes with respect to volcanic ash, tropical cyclone and other hazardous weather phenomena by way of meteorological advisories and warnings)
Capacity	Increased capacity through better utilization of airspace
Cost effectiveness	Fuel cost reduction through use of optimum routes/trajectories
Performance Measurement	
Performance Metrics:	TBD

Strategy					
ATM Operational Concept Components	Projects/Tasks	Linkage to ASBU Module	Timeframe Start/End	Responsibility	Status
MET	Monitor and provide assistance in the regional implementation of meteorological warnings and advisories that include volcanic ash (VA) and tropical cyclone (TC) advisories and meteorological warnings and advisories based on current and future requirements	B0-xx	Ongoing	MET SG	In progress
	Track and investigate deficiencies in the format and dissemination of meteorological advisories and warnings and propose remediation plans and provide information to ICAO and WMO groups for possible assistance	B0-xx	Commence in 2012	BMG	In progress
	Conduct periodic tests for SIGMET on VA, TC, and phenomena other than VA and TC in view of assessing improvements in their implementation	B0-xx	ongoing	MET SG & BMG	In progress

<i>Strategy</i>					
ATM Operational Concept Components	Projects/Tasks	<i>Linkage to ASBU Module</i>	Timeframe Start/End	Responsibility	Status
	• Provide guidance and/or training related to the implementation of meteorological advisories and warnings, including the Regional SIGMET Guide as they related to the Annex 3 amendment cycle	B0-xx	Ongoing	MET SG	In progress
	• Develop contingency plan for volcanic ash with reference to developments made by the IVATF and WMO scientific steering committee	B0-xx	2012-2013	MET SG	To begin
Linkage to GPIs	GPI-19 – Meteorological Systems				

References: *Annex 3; Manual on Volcanic Ash, Radioactive Material and Toxic Chemical Clouds* (Doc 9691); *Handbook on the International Airways Volcano Watch (IAVW) Operational Procedures and Contact List* (Doc 9766); *Manual on Low-level Wind Shear* (Doc 9817); *MID Regional SIGMET Guide*; *EUR OPMET Data Management Handbook* (ICAO EUR Doc 018) – reference SIGMET test in Appendix C section 11

4.5E-3

DEVELOP REGIONAL MET REQUIREMENTS TO SUPPORT ATM	
Benefits	
Environment	Improve efficiency of ATM and airlines by providing tailored regional MET products needed to optimize flight routes in all weather conditions
Capacity	Increased capacity through better utilization of airspace
Cost effectiveness	Fuel cost reduction through use of optimum routes/trajectories
Performance Measurement	
Performance Metrics:	TBD

Strategy					
ATM Operational Concept Components	Projects/Tasks	Linkage to ASBU Module	Timeframe Start/End	Responsibility	Status
MET	Conduct MET seminar in coordination with WMO in 2013 or 2014 depending on regional and global developments related to MET requirements to support ATM	B0-xx	2013-2014	MET SG	future
	Assess aviation meteorological services, systems and architecture in the region and how they can integrate weather information into decision support tools	B0-xx	2013+	MET SG	future
	Investigate sub-regional exchange of MET information (e.g. weather radar data) and associated agreements that facilitate ATM operations particularly over busy routes that overlap different FIRs	B0-xx	2013+	MET SG	future
	Facilitate implementation of Meteorological Services for the Terminal Area (under development by WMO)	B0-xx	2014+	MET SG	future
Linkage to GPIs	GPI-19 – Meteorological Systems				

References: *Manual on co-ordination between Air Traffic Services, Aeronautical Information Services and Aeronautical Meteorological Services (Doc 9377)*

IMPROVE OPMET EXCHANGE EFFICIENCY	
Benefits	
Environment	• Increase OPMET availability and reliability needed for flight planning (efficiency) and in-flight re-planning (safety)
Capacity	• Increased capacity through better utilization of airspace
Cost effectiveness	• Fuel cost reduction through use of optimum routes/trajectories
Performance Measurement	
Performance Metrics:	• TBD

Strategy					
ATM Operational Concept Components	Projects/Tasks	Linkage to ASBU Module	Timeframe Start/End	Responsibility	Status
MET	• Improve the availability of OPMET data at the Regional OPMET Data Banks (RODB)	B0-xx	ongoing	BMG	In progress
	• Improve the inter-regional OPMET exchange	B0-xx	ongoing	BMG	In progress
	• Consider development of and maintenance of regional ROBEX tables and guidance material	B0-xx	ongoing	BMG	In progress
	• Facilitate and provide guidance to the implementation new/modified standards before applicability date and carry out post implementation review to ensure that standardized procedures are followed	B0-xx	ongoing	BMG	In progress
	• Conduct periodic quality checks and OPMET monitoring to improve the quality and timeliness of OPMET in the MID Region	B0-xx	ongoing	BMG in coordination with EUR DMG	In progress
	• Facilitate and monitor the migration to AIM and new MET codes (e.g. XML) for METAR/SPECI, TAF and SIGMET	B0-xx	ongoing	BMG & MET SG & RO	In progress
Linkage to GPIs	GPI-19 – Meteorological Systems				

References: SADIS User Guide, Asia/Pacific ROBEX Handbook; Asia/Pacific OPMET Data Banks Interface Control Document; EUR OPMET Data Management Handbook 4th Edition December 2010 – revised January 2012

4.5E-5

IMPLEMENT WAFS AND ASSOCIATED DEVELOPMENTS	
Benefits	
Environment	Improve the regional implementation of weather forecasts (including upper winds and upper-air temperatures, direction, speed and height of maximum winds and tropopause heights, as well as turbulence, icing, cumulonimbus) used by airlines and ATM needed to optimize flight routes which will provide an increase in efficiency and reduced carbon
Capacity	Increased capacity through better utilization of airspace
Cost effectiveness	Fuel cost reduction through use of optimum routes/trajectories
Performance Measurement	
Performance Metrics:	TBD

Strategy					
ATM Operational Concept Components	Projects/Tasks	Linkage to ASBU Module	Timeframe Start/End	Responsibility	Status
MET	Assist the regional implementation of new gridded products for turbulence, icing and CB forecasts	B0-xx	2012-2013	MET SG	In progress
	Facilitate in organizing regional training of new gridded products for turbulence, icing and cumulonimbus forecasts	B0-xx	2012-2013	ICAO & WMO	In progress
	Monitor the implementation of WIFS for backup purposes to SADIS noting the planned cessation of ISCS-G2 broadcast in June 2012	B0-xx	ongoing	MET SG	In progress
	Promote the implementation of Secure SADIS FTP service	B0-xx	By Nov 2012	MET SG	In progress
	Promote the migration from WAFS upper-air forecasts in GRIB1 to GRIB2 format	B0-xx	Preferably by 5 July 2012 but no later than Nov 2013	MET SG	In progress
	Monitor the implementation status of WAFS within the MID Regions, and report to MET SG	B0-xx	2012+	MET SG	To begin
	Report WAFS training needs of MID States to MET SG	B0-xx	2012+	MET SG	To begin
Linkage to GPIs	GPI-19 – Meteorological Systems				

References: Annex 3; <http://www.icao.int/anb/wafsopsq/>; <http://www.icao.int/anb/sadisopsq/>; Asia/Pac WAFS Implementation Plan and Procedures (http://www.bangkok.icao.int/edocs/WAFS_Service_Reference_v1.pdf)

MID ANP, VOLUME I, BASIC ANP**PART x - AERONAUTICAL INFORMATION MANAGEMENT (AIM)****1. INTRODUCTION****Regional AIS/AIM Planning**

1.1 This part of the Middle East Region Basic Air Navigation Plan contains basic planning principles, operational requirements, planning criteria and implementation guidelines related to Aeronautical Information Services and Charts (AIS/MAP) considered being the minimum necessary for effective planning of AIS and MAP facilities and services in the MID Region. It contains also the developing transition path to achieve MID Region Aeronautical Information Management (AIM) based on the *ATM Operational Concept (Doc 9854)* and the *Global Air Navigation Plan (Doc 9750)*.

1.2 The dynamic material constituted by the AIS/AIM facilities and services required for international air navigation is contained in the MID ANP Volume 2 - Facilities and Services Implementation Document (FASID). The FASID includes appropriate additional guidance, particularly with regard to implementation, to complement the material contained in the Basic ANP.

1.3 During the transition to and pending full implementation of AIM, it is expected that the existing requirements will be gradually replaced/complemented by new AIM related requirements. Subsequently, it is expected that the ANP will be subject to regular review and amendment, to reflect progression in the transition towards full implementation of AIM.

Standards, Recommended Practices and Procedures

1.4 The Standards, Recommended Practices and Procedures and related guidance material applicable to the provision of AIS and ultimately AIM are contained in the following ICAO documentation:

- a) Annex 4 – Aeronautical Charts;
- b) Annex 15 – Aeronautical Information Services;
- c) Doc 7030 – Regional Supplementary Procedures, MID Region;
- d) Doc 7383 – Aeronautical Information Services Provided by States;
- e) Doc 7910 – Location Indicators;
- f) Doc 8126 – Aeronautical Information Services Manual;
- g) Doc 8168 – Aircraft Operations Volume 2 – Construction of Visual and Instrument Flight Procedures;
- h) Doc 8400 – ICAO Abbreviations and Codes (PANS-ABC);
- i) Doc 8697 – Aeronautical Charts Manual;
- j) Doc 9377 – Manual on Coordination between Air Traffic Services, Aeronautical Information Services and Aeronautical Meteorological Services;
- k) Doc 9674 – World Geodetic System (1984) Manual;
- l) Doc 9855 – Guidelines on the Use of the Public Internet for Aeronautical Applications; and
- m) Doc 9881– Guidelines for Electronic Terrain, Obstacle and Aerodrome Mapping Information.
- n) Doc 9906 (Volume I) – Flight Procedure Design Quality Assurance System.

2. GENERAL PROCEDURES/REQUIREMENTS

MID Region Responsibilities

2.1 The ICAO Regional Office will, through MIDANPIRG:

- i) process endorsed proposals for amendment to ICAO AIS/AIM related documents;
- ii) process endorsed proposals for amendment to ICAO AIS/AIM related documents; and
- iii) support the MIDANPIRG AIM Task Force.

State Responsibilities

2.2 Each Contracting State is responsible for the aeronautical information/data published by its aeronautical information service or by another State or a non-governmental agency on its behalf.

2.3 Aeronautical information published for and on behalf of a State should clearly indicate that it is published under the authority of that State.

2.4 Each Contracting State should take all necessary measures to ensure that the aeronautical information/data it provides relating to its own territory, as well as areas in which the State is responsible for providing air traffic services outside its territory, is adequate, of required quality and timely. This should include arrangements for the timely provision of required information/data to the aeronautical information service by each of the State services associated with aircraft operations.

2.5 International NOTAM Offices (NOF) and their areas of responsibility should be established so as to ensure maximum efficiency in the provision of AIS and in the dissemination of aeronautical information.

2.6 The designated International NOTAM Offices for the MID Region are listed in the **MID ANP Volume 2 - FASID Table AIM-1**.

2.7 Coordination/liaison on a permanent basis should be established between AIS/AIM and other technical services responsible for planning and operating air navigation facilities and services.

2.8 Technical services responsible for origination of the raw aeronautical information should be acquainted with the requirements for promulgation and advance notification of changes that are operationally significant as established in Annexes 11 and 14 and other relevant ICAO documentation. They should take due account of the time needed by AIS/AIM for the preparation, production and issue of the relevant material.

2.9 Appropriate AIS/AIM personnel should be included in the air navigation planning processes. This should ensure the timely preparation of appropriate AIS documentation and that the effective dates for changes to the air navigation system and procedures are satisfied.

2.10 Whilst Annex 4 and Annex 15 detail the SARPs for the provision of charts and AIS respectively, the following State responsibilities are highlighted:

a) Each Contracting State should:

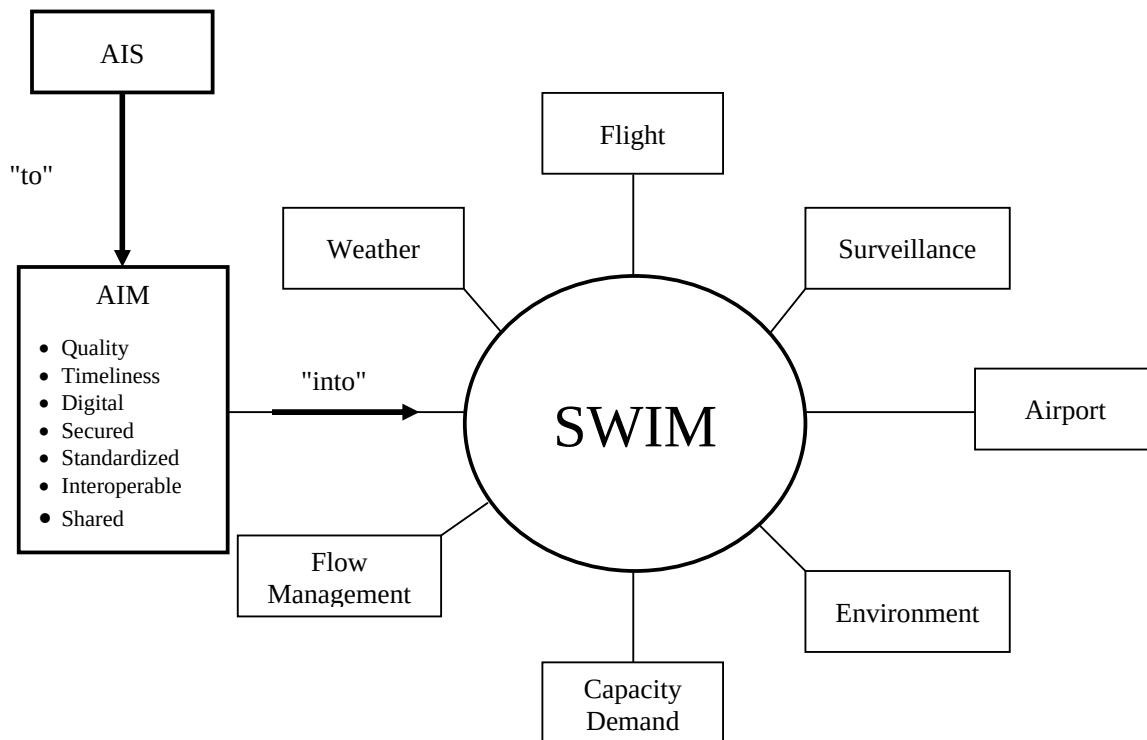
- i) Arrange for the implementation of a quality management system for aeronautical information and chart services. The quality management system should include the necessary policies, processes and procedures, including those for the use of metadata, to ensure and verify that aeronautical data is traceable throughout the aeronautical information data chain from origin to distribution to the next intended user. As part of the quality management system, arrangements should be made for the signature of letters of agreement with data originators to manage the aeronautical information data chain.
- ii) Ensure Human Factors are considered.
- iii) Ensure adherence to the AIRAC System.
- iv) Ensure that the aeronautical information/data to be exchanged with States is published as an Integrated Aeronautical Information Package (i.e. Aeronautical Information Publication (AIP), including amendment service, AIP Supplements, NOTAM, pre-flight information bulletins (PIB), Aeronautical Information Circulars (AIC), checklists and list of valid NOTAM) in accordance with the requirements of Annex 15.
- v) Arrange for the provision of an electronic AIP (eAIP) in accordance with the requirements of Annex 15.
- vi) Comply with WGS 84 requirements.
- vii) Introduce automation enabling digital data exchange with the objective of improving the speed, accuracy, efficiency and cost-effectiveness of aeronautical information services.
- viii) Ensure that pre-flight information is provided at all aerodromes/heliports normally used for international air operation, in accordance with the requirements of Annex 15, using Automated pre-flight information systems for the supply of aeronautical information/data for self-briefing, flight planning and flight information service.
- ix) Arrange for the provision of post-flight information.
- x) Arrange for the provision of required electronic Terrain and Obstacle Data (eTOD), in accordance with the requirements of Annex 15.
- xi) Arrange for the production and publication of necessary aeronautical charts in accordance with Annex 4 provisions and regional agreements.

3. AERONAUTICAL INFORMATION MANAGEMENT

3.1. The Global Air Traffic Management Operational Concept presented in ICAO Doc 9854 depends upon a system wide information management (SWIM). The management, utilization and transmission of data and information are vital to the proper functioning of the ATM system and are at the core of air navigation services.

3.2. As part of SWIM, AIM is required to support evolving requirements for, inter alia, collaborative decision making (CDM), performance-based navigation (PBN), ATM system interoperability, network-centred information exchange, and to take advantage of improved aircraft capabilities.

3.3. The scope of information management includes all types of information and in particular aeronautical information. The relationship diagram below shows a number of the core elements of SWIM:



Aeronautical Information Management (AIM) is considered to be the dynamic, integrated management of aeronautical information services — safely, economically and efficiently — through the provision and exchange of quality-assured digital aeronautical data in collaboration with all parties.

TRANSITION TO AIM

3.4. The transition to AIM requires that all aeronautical information, including that currently held in AIP be stored as individual digital standardized data sets to be accessed by user applications. The distribution of these data sets will both enhance the quality of output and ultimately provide a platform for new applications. This will constitute the future integrated aeronautical information package that will contain the minimum regulatory requirement to ensure the flow of information necessary for the safety, regularity and efficiency of international air navigation. (GPI-18 refers).

Guiding Principles for the Transition to AIM

3.5. The transition from AIS to AIM will have to:

- a) support or facilitate the generation and distribution of aeronautical information which serves to improve the safe and cost-effective accessibility of air traffic services in the world;
- b) provide a foundation for measuring performance and outcomes linked to the distribution of quality assured aeronautical information and a better understanding of the determinants of ATM, safety and effectiveness not related to the distribution of the information;
- c) assist States in making informed choices about their aeronautical information services and the future of AIM;

- d) build upon developments in States, international organizations and industry and acknowledge that the transition to AIM is a natural evolution rather than a revolution;
- e) provide over-arching and mature Standards that apply to a wide range of aeronautical information products, services and technologies;
- f) be guided by the *Global Air Navigation Plan* (Doc 9750) and ensure that all development is aimed at achieving the ATM system envisaged in the *Global Air Traffic Management Operational Concept* (Doc 9854); and
- g) ensure, to the greatest extent possible, that solutions are internationally harmonized and integrated and do not unnecessarily impose multiple equipment carriage requirements for aircraft or multiple systems on the ground.

The Roadmap to AIM

Source Document: ICAO Road Map for the Transition from AIS to AIM

3.6. The purpose of the roadmap is to develop the AIM concept and associated performance requirements by providing a basis upon which to manage and facilitate, on a worldwide basis, the transition from AIS to AIM. The roadmap is based on what is known today and has been developed with sufficient flexibility to facilitate the new concepts that will emerge from future research.

3.7. Three phases of action are envisaged for States and ICAO to complete the transition to AIM:

Phase 1 — Consolidation

3.8. During Phase 1, steps will be taken to establish a solid base by enhancing the quality of the existing products and improving the status of implementation of current Annex 4 and Annex 15 provisions. This is a pre-requisite before Phase 2 can be achieved.

Phase 2 — Going digital

3.9. Phase 2 of the transition to AIM will mainly focus on the establishment of data-driven processes for the production of the current products in all States. States that have not yet done so will be encouraged “to go digital” by using computer technology or digital communications and through introducing structured digital data from databases into their production processes. The emphasis will, therefore, not be on the introduction of new products or services but will be on the introduction of highly structured databases and tools such as geographic information systems.

Phase 3 — Information management

3.10. Phase 3 will introduce steps to enable future AIM functions in States to address the new requirements that will be needed to implement the Global Air Traffic Management Operational Concept in a net centric information environment. The digital databases introduced in Phase 2 will be used for the transfer of information in the form of digital data. This will require the adoption of a Standard for an aeronautical data exchange model to ensure interoperability between all systems not only for the exchange of full aeronautical data sets, but also for short-term notification of changes.

National Plans for the transition to AIM

3.11. States should be planning for the transition from AIS to AIM. The national plans for the transition from AIS to AIM should be based on the ICAO Roadmap for the transition from AIS to AIM, identifying clearly the associated performance goals and achievable milestones with a view to satisfy the requirements arising from the Global ATM Operational Concept, in particular the management of a seamless information flow ensuring interoperability between the different CNS/ATM systems.

AIM Implementation

3.12. The following provisions/regulatory requirements complement those contained in ICAO Annex 4 and Annex 15 with a view to expedite AIM implementation in the MID Region in a harmonized manner. They represent the basis for a number of provisions contained in the FASID tables.

Integrated Aeronautical Information Database (IAID)

(FASID Table AIM-2)

3.13. FASID Table AIM-2 sets out the requirements for the Provision of AIM products and services based on the Integrated Aeronautical Information Database (IAID).

3.14. States should designate and implement an authoritative Integrated Aeronautical Information Database (IAID). The designation of authoritative databases should be clearly stated in States' AIPs.

Electronic Terrain and Obstacle Data and Aerodrome Mapping Data Bases (AMDB)

(FASID Table AIM-3)

3.15. FASID Table AIM-3 sets out the requirements for the provision of Terrain and Obstacles Datasets and Aerodrome Mapping Data Bases (AMDB).

3.16. States should take the necessary measures for the provision of required electronic Terrain and Obstacle Data (eTOD), in accordance with Annex 15 provisions.

3.17. States should manage the eTOD implementation as a national programme supported by the necessary resources and detailed planning including priorities and timelines for implementation.

3.18. The implementation of eTOD should involve different Administrations within and outside of the Civil Aviation Authority i.e.: AIS, Aerodromes, Military, National Geographic and Topographic Administrations/Agencies, procedure design services, etc.

3.19. States, while maintaining the responsibility for data quality and availability, should consider to which extent the provision of electronic terrain and obstacle data could be delegated to other approved data providers.

3.20. States should establish formal arrangements to address cross-border issues, to ensure harmonization and more efficient implementation of eTOD.

3.21. States should take the necessary measures to ensure that the obstacle dataset is maintained up-to-date.

3.22. States should endeavour to integrate the acquisition of eTOD and AMDB data to realize efficiency gains and to take into account the complementary nature of AMDB and eTOD datasets.

Aeronautical Data Quality
(FASID Table AIM-4)

3.23. FASID Table AIM-4 sets out the requirements for aeronautical data quality.

3.24. States should take the necessary measures to ensure that aeronautical information/data it provides meet the regulatory Aeronautical Data quality requirements.

3.25. The Quality Management System in AIM should define procedures to meet the safety and security management objectives.

3.26. Recognizing the need to maintain or enhance existing safety levels of operations, States should ensure that any changes to the existing systems or the introduction of new systems used for processing aeronautical data/information are preceded by a safety assessment including hazard identification, risk assessment and mitigation.

3.27. States should ensure that the Critical, Essential and Routine aeronautical data/information, as specified in Annexes 4 and 15, is transferred by the data originators to the AIM service provider through direct electronic connection, in accordance with the agreed data exchange format.

AIM Certification
(FASID Table AIM-9)

3.28. FASID Table AIM-9 sets out the requirements for AIM Certification.

3.29. States should take necessary measures to ensure that AIM Services are provided by Certified AIM Service Provider(s).

3.30. The Certification of AIM Service Provider(s) should be based on the compliance with all regulatory and ICAO requirements related to the provision of AIM services.

MIDANPIRG/13

Appendix 4.5G to the Report on Agenda Item 4.5

MID ANP, VOLUME II, FASID

PART x - AERONAUTICAL INFORMATION MANAGEMENT (AIM)

RECORD OF AMENDMENTS

AMENDMENTS

P. f. Amdt. Serial No.	Originator	Date of Approval letter	Date Entered

P. f. Amdt. Serial No.	Originator	Date of Approval letter	Date Entered

MID ANP, VOLUME II, FASID

PART x - AERONAUTICAL INFORMATION MANAGEMENT (AIM)

1. INTRODUCTION

1.1. The material in this part complements that contained in Part x — AIM of the MID Basic ANP and should be taken into consideration in the overall planning processes for the MID region.

1.2. This part contains the details of the facilities and services to be provided to fulfil the basic requirements of the plan as agreed between the provider and user States concerned. Such agreement indicates a commitment on the part of the State(s) concerned to implement the requirement(s) specified. It provides a structured framework for States to plan and to monitor their progress and supports regional and national plans to implement the transition to AIM. This element of the FASID, in conjunction with the MID Basic ANP, is kept under constant review by MIDANPIRG in accordance with its schedule of management, in consultation with user and provider States and with the assistance of the ICAO MID Regional Office.

1.3. To satisfy new requirements arising from the Global Air Traffic Management Operational Concept, aeronautical information services must transition to a broader concept of aeronautical information management, with a different method of information provision and management given its data-centric nature as opposed to the product-centric nature of AIS. AIM is the dynamic, integrated management of aeronautical information services – safely, economically and efficiently – through the provision and exchange of quality-assured digital aeronautical data in collaboration with all parties.

2. ORGANISATION AND PROVISION OF AIM FACILITIES AND SERVICES

2.1. AIM requires all aeronautical information to be stored as data sets that can be accessed by user applications. The establishment and maintenance of an Integrated Aeronautical Information Database where data sets are integrated and used to produce current and future AIM products and services is a fundamental step in the transition to AIM. The following AIM FASID tables contain planning criteria and provisions requiring implementation and compliance by States:

- Responsibility for the provision of AIM Services
- Provision of AIM products and services based on the Integrated Aeronautical Information Database (IAID)
- Terrain and Obstacle data sets and Airport Mapping Databases (AMDB)
- Aeronautical Data Quality
- World Geodetic System – 1984 (WGS84)
- Aeronautical Charts
- Production Responsibility for sheets of the World Aeronautical Chart – ICAO 1:1 000 000
- Pre-Flight Information Services
- AIM Certification

2.2. FASID Table AIM-1 sets out the responsibilities for the provision of AIM services in the MID Region. It takes into account the current situation and new developments specific to the MID Region where States delegate certain AIS/AIM services to other States (e.g. with the establishment of Functional Airspace Blocs (FAB)). The responsibilities for the provision of aeronautical data, products and services in such cases need to be clearly assigned.

2.3. FASID Table AIM-2 sets out the requirements for the Provision of AIM products and services based on the Integrated Aeronautical Information Database (IAID). It reflects the transition from the current product centric AIS to data centric AIM. For the future digital environment it is important that the authoritative databases are clearly designated and such designation must be published for the users. This is achieved with the concept of the Integrated Aeronautical Information Database (IAID), a single access point for one or more authoritative databases (AIS, Terrain, Obstacles, AMDB, etc) for which the State is responsible.

2.4. FASID Table AIM-3 sets out the requirements for the provision of Terrain and Obstacles datasets and Aerodrome Mapping Data Bases (AMDB).

The eTOD implementation Checklist at **Attachment A** to Part x - AIM of the MID FASID is developed to assist States in the process of eTOD implementation.

2.5. FASID Table AIM-4 sets out the requirements for aeronautical data quality.

Attachment B to Part x - AIM of the MID FASID describes the safety and security objectives to be included in the Quality Management System of AIM.

Attachment C to Part x - AIM of the MID FASID lists the data originators and the type of aeronautical data/information required to be exchanged by direct electronic connection.

2.6. FASID Table AIM-5 sets out the requirements for the implementation of the World Geodetic System – 1984 (WGS-84). The requirement to use a common geodetic system remains essential to facilitate the exchange of data between different systems. The expression of all coordinates in the AIP and charts using WGS-84 is an important first step for the transition to AIM.

2.7. FASID Table AIM-6 sets out the requirements for the production of aeronautical charts. The provision of digital mapping data bases e.g. AMDB, allows for the provision and use of electronic aeronautical charts. Annex 4 SARPs include the requirement for an Electronic Aerodrome Terrain and Obstacle Chart.

2.8. FASID Table AIM-7 sets out the responsibilities for the production of the sheets of the World Aeronautical Chart 1: 1 000 000 (WAC). The assignment of the WAC sheets is determined by regional agreement, based on the delineation of areas specified in Appendix 5 to Annex 4 and taking into consideration the cross-border issues.

Note.- The World Aeronautical Chart 1: 1 000 000 provides information to satisfy the requirements of visual air navigation.

2.9. FASID Table AIM-8 sets out the requirements for the provision of pre-flight information services.

2.10. FASID Table AIM-9 sets out the requirements for AIM Certification.

Attachment A

ELECTRONIC TERRAIN AND OBSTACLE DATA (eTOD)

IMPLEMENTATION CHECKLIST

INTRODUCTION

The purpose of this eTOD checklist is to assist States in the process of implementation of eTOD. To ensure a safe and efficient implementation of eTOD, the Civil Aviation Authorities should:

- determine the State stakeholders affected, inter-alia:
 - Ministry responsible for Transportation/Civil Aviation;
 - Ministry responsible for land planning and environment;
 - Civil Aviation Authority;
 - Aeronautical Information Service Providers (AISP);
 - Air Navigation Service Providers (ANSP);
 - Aerodrome Service Providers;
 - Airlines, Helicopter operators and General Aviation;
 - Military;
 - Military survey Organization/Agency;
 - National Geodetic, Cadastral or State Survey Organisations;
 - Commercial survey companies or associations;
 - Local Authorities or those responsible for aerodrome safeguarding/construction approval in the vicinity of aerodromes;
 - GSM antenna operators;
 - Administrations for radio and television broadcasts;
 - Power Transmission companies.
- ensure that a Focal Point has been nominated to coordinate all eTOD issues at both the national and international level;
- consider arranging eTOD awareness campaigns and training;
- check the availability of State's policy for the safeguarding of aerodromes from obstacle penetration, consider how effective the policy is and determine if available data can be demonstrated to be in compliance with eTOD requirements. In the absence of a declared or established policy, consider establishing one;
- check the availability of a National obstacle notification and permission process;
- check if National regulation for the provision of eTOD has been developed. In the absence of a National Regulation, consider establishing one, taking into consideration the following:
 - the data providers responsible for the provision and processing of data and associated liability issues;
 - State's policy with regard to implementing the ICAO Annex 15 SARPs related to eTOD and eventually the notification of differences, if any;
 - State's policy with regard to data maintenance;
 - consider how and by whom the eTOD will be made available;

- State’s policy for the oversight/inspection of all involved parties/administrations in the process of provision of eTOD;
 - State’s policy for cost-recovery related to the provision of eTOD. Identify how the costs, both initial and ongoing, are to be recovered for each Area and in case charges are to be levied on the use of data, identify the appropriate means/mechanisms by which the revenue can be collected; and
- ensure that necessary resources for the implementation and ongoing maintenance of eTOD have been secured;
 - ensure that an Action Plan/Roadmap with clear timelines and assigned responsibilities for the provision of eTOD has been developed;
 - ensure that the possible sources of terrain and obstacle data have been identified;
 - as part of the planning of eTOD data acquisition activities, consider the integration of an Aerodrome Mapping Data Base survey;
 - ensure that the survey requirements for each of the four Areas, including resurvey intervals have been determined;
 - ensure that the responsibilities that may be placed upon surveyors to ensure that they use the correct standards, have been identified;
 - ensure that an eTOD validation and verification process is established;
 - ensure that a mechanism is established to ensure that the quality of eTOD is maintained from the survey up to the end user;
 - ensure that cross-border issues have been addressed and consider the establishment of agreements with neighboring States to exchange and harmonize common data, as necessary;
 - ensure that the means/media by which each dataset shall be made available have been determined; and
 - ensure that means of carrying out oversight/inspections for monitoring progress have been established.

Attachment B

SAFETY AND SECURITY MANAGEMENT OBJECTIVES

The quality management system of the AIM services provider should define procedures to meet the following safety and security management objectives

1. Safety management objectives:

- a. to minimise the contribution to the risk of an aircraft accident arising from data errors as far as reasonably practicable,
- b. to promote awareness of safety around the organisation by sharing lessons arising from safety activities and by involving all staff to propose solutions to identified safety issues and improvements to assist the effectiveness and efficiency of the processes,
- c. to ensure that a function is identified within the organisation being responsible for development and maintenance of the safety management objectives,
- d. to ensure that records are kept and monitoring is carried out to provide safety assurance of their activities,
- e. to ensure improvements are recommended, where needed, to provide assurance of the safety of activities.

The achievement of the safety management objectives shall be afforded the highest priority over commercial, operational, environmental or social pressures.

2. Security management objectives:

- a. to ensure the security of aeronautical data/information received, produced or otherwise employed so that it is protected from interference and access to it is restricted only to those authorised,
- b. to ensure that the security management measures of an organisation meet appropriate regulatory requirements for critical infrastructure and business continuity, and international standards for security management.

Attachment C

DIGITAL EXCHANGE WITH DATA ORIGINATORS

- 1) The following aeronautical data/information provided by the data originators should be transferred to the AIM services provider by direct electronic connection in accordance with the agreed data exchange format:
 - a) aeronautical information publications (AIP), including amendments;
 - b) supplements to the AIP;
 - c) the NOTAM and pre-flight information bulletins;
 - d) checklists and lists of valid NOTAMs;
 - e) electronic obstacle data, or elements thereof, where made available;
 - f) electronic terrain data, or elements thereof, where made available;
 - g) aerodrome mapping data, where made available.

- 2) The aeronautical data/information provided by the following data originators should be transferred to the AIM services provider by direct electronic connection in accordance with the agreed data exchange format.
 - a) air navigation service providers;
 - b) operators of those aerodromes and heliports, for which instrument flight rules (IFR) or Special-visual flight rules (VFR) procedures have been published in national AIP;
 - c) public or private entities providing:
 - i. services for the origination and provision of survey data;
 - ii. procedure design services;
 - iii. electronic terrain data;
 - iv. electronic obstacle data.

FASID TABLE AIM-1: Responsibility for the provision of AIM Services

EXPLANATION OF THE TABLE

Column:

- 1 Name of the State or territory
- 2 Designated international NOTAM Office (NOF)
- 3 Designated State for AIP production
- 4 Designated State for aeronautical charts (MAP) production
- 5 Designated State for the provision of the authoritative Integrated Aeronautical Information Database (IAID)
- 6 Designated State for the provision of the Pre-flight information services
- 7 Remarks — additional information, as appropriate.

State	NOF	AIP	MAP	IAID	Pre-flight briefing	Remarks
1	2	3	4	5	6	7
Bahrain						
Egypt						
Iran						
Iraq						
Jordan						
Kuwait						
Lebanon						
Oman						
Qatar						
Saudi Arabia						
Syria						
UAE						
Yemen						

FASID TABLE AIM-2: Provision of AIM products and services based on Integrated Aeronautical Information Database (IAID)

EXPLANATION OF THE TABLE

Column:

- 1 Name of the State or territory for which the provision of AIM products and services based on the IAID is required.
- 2 Requirement for the implementation and designation of the authoritative IAID, shown by:
 - FI – Fully Implemented
 - PI – Partially Implemented
 - NI – Not Implemented

*Note 1 — The IAID of a State is a single access point for one or more databases (AIS, Terrain, Obstacles, AMDB, etc).
The minimum set of databases which should be integrated is defined in Annex 15.*

Note 2 — Information providing detail of "PI" should be given in the Remarks column (the implemented components of the IAID).

Note 3 — The information related to the designation of the authoritative IAID should be published in the AIP (GEN 3.1)
- 3 Requirement for an IAID driven AIP production, shown by:
 - FC – Fully compliant (eAIP: Text, Tables and Charts)
 - PC – Partially compliant
 - NC – Not compliant

Note 4 — AIP production includes, production of AIP, AIP Amendments and AIP Supplements
- 4 Requirement for an IAID driven NOTAM production, shown by:
 - FC – Fully Compliant
 - NC – Not compliant
- 5 Requirement for an IAID driven SNOWTAM production, shown by:
 - FC – Fully Compliant
 - NC – Not compliant
- 6 Requirement for an IAID driven PIB production, shown by:
 - FC – Fully compliant
 - NC – Not compliant
- 7 Requirement for Charting systems to be interoperable with the IAID, shown by:

NC – Not compliant

NI – Not Implemented

NI – Not Implemented

11 Remarks — additional information, including detail of “PC”, “NC”, “PI” and “NI”, as appropriate.

[illegible]

FASID TABLE AIM-3: Terrain and Obstacles datasets and Airport Mapping Databases (AMDB)

EXPLANATION OF THE TABLE

Column

- 1 Name of the State or territory for which Terrain and Obstacles datasets and AMDB are required.
- 2 Compliance with requirement for the provision of Terrain datasets, shown by:
 FC – Fully compliant
 PC – Partially compliant
 NC – Not compliant
- 3 Compliance with requirement for the provision of Obstacle datasets, shown by:
 FC – Fully compliant
 PC – Partially compliant
 NC – Not compliant
- 4 Implementation of AMDB, shown by:
 FI – Fully Implemented
 PI – Partially Implemented
 NI – Not implemented
- 5 Action plan — short description of the State's Action Plan with regard to compliance with the requirements for provision of Terrain and Obstacles datasets and implementation of AMDB.
- 6 Remarks— additional information, including detail of “PC” and “NC”, as appropriate.

State	Terrain Datasets	Obstacle datasets	AMDB	Action Plan	Remarks
1	2	3	4	5	6
Bahrain					
Egypt					
Iran					
Iraq					
Jordan					
Kuwait					
Lebanon					
Oman					
Qatar					
Saudi Arabia					
Syria					
UAE					
Yemen					

FASID TABLE AIM-4: Aeronautical Data Quality

EXPLANATION OF THE TABLE

Column:

1	Name of the State or territory.
2	Compliance with the requirement for implementation of QMS for Aeronautical Information Services including safety and security objectives, shown by: FC – Fully compliant PC – Partially compliant NC – Not compliant
3	Compliance with the requirement for the establishment of formal arrangements with approved data originators concerning aeronautical data quality, shown by: FC – Fully compliant PC – Partially compliant NC – Not compliant
4	Implementation of digital data exchange with originators, shown by: FI – Fully Implemented PI – Partially Implemented NI – Not Implemented <i>Note 1 — Information providing detail of “PI” and “NI” should be given in the Remarks column (percentage of implementation).</i>
5	Compliance with the requirement for metadata, shown by: FC – Fully compliant PC – Partially compliant NC – Not compliant
6	Compliance with the requirements related to aeronautical data quality monitoring (accuracy, resolution, timeliness, completeness), shown by: FC – Fully compliant PC – Partially compliant NC – Not compliant

7	Compliance with the requirements related to aeronautical data integrity monitoring, shown by: FC – Fully compliant PC – Partially compliant NC – Not compliant
8	Compliance with the requirements related to the AIRAC adherence, shown by: FC – Fully compliant PC – Partially compliant NC – Not compliant
9	Action Plan — short description of the State's Action Plan with regard to aeronautical data quality requirements implementation, including planned date(s) of full compliance, as appropriate.
10	Remarks — additional information, including detail of “PC”, “NC”, “PI” and “NI”, as appropriate.

[illegible]

FASID TABLE AIM-5: World Geodetic System-1984 (WGS-84)

EXPLANATION OF THE TABLE

Column:

1	Name of the State or territory for which implementation of WGS-84 is required.
2	Compliance with the requirements for implementation of WGS-84 for FIR and Enroute points, shown by: FC – Fully compliant PC – Partially compliant NC – Not compliant
3	Compliance with the requirements for implementation of WGS-84 for Terminal Areas (arrival, departure and instrument approach procedures), shown by: FC – Fully compliant PC – Partially compliant NC – Not compliant
4	Compliance with the requirements for implementation of WGS-84 for Aerodrome, shown by: FC – Fully compliant PC – Partially compliant NC – Not compliant
5	Compliance with the requirements for implementation of Geoid Undulation, shown by: FC – Fully compliant PC – Partially compliant NC – Not compliant
6	Action Plan — short description of the State's Action Plan with regard to WGS-84 implementation, including planned date(s) of full compliance, as appropriate.
7	Remarks — additional information, including detail of "PC" and "NC", as appropriate.

State	FIR/ENR	Terminal	AD	GUND	Action Plan	Remarks
1	2	3	4	5	6	7
Bahrain						
Egypt						
Iran						
Iraq						
Jordan						
Kuwait						
Lebanon						
Oman						
Qatar						
Saudi Arabia						
Syria						
UAE						
Yemen						

FASID TABLE AIM-6: Aeronautical Charts

EXPLANATION OF THE TABLE

Column:

1	Name of the State or territory for which aeronautical charts are required
2	Compliance with the requirements for the Enroute Chart — ICAO (ENRC) and the ATC Surveillance Minimum Altitude Chart — ICAO (ATCSMAC), shown by: FC – Fully compliant PC – Partially compliant NC – Not compliant
3	Compliance with requirements for ICAO charts related to terminal areas (Instrument Approach Chart, Area Chart, Standard Departure Chart — Instrument (SID) and Standard Arrival Chart — Instrument (STAR), Visual Approach Chart) shown by: FC – Fully compliant PC – Partially compliant NC – Not compliant
4	Compliance with the requirement for ICAO Aerodrome charts Aerodrome/Heliport Chart, Aerodrome Ground Movement Chart and Aircraft Parking/Docking Chart, shown by: FC – Fully compliant PC – Partially compliant NC – Not compliant
5	Compliance with the requirements for ICAO Obstacle Charts Aerodrome Obstacle Chart —Type A (Operating Limitations), Aerodrome Terrain and Obstacle Chart — Electronic and Precision Approach Terrain Chart shown by: FC – Fully compliant PC – Partially compliant NC – Not compliant

- 6 Compliance with the requirement for ICAO World Aeronautical Chart (WAC), shown by:
 FC – Fully compliant
 PC – Partially compliant
 NC – Not compliant
- 7 Action plan — short description of the State's Action Plan with regard to aeronautical charts implementation, including planned date(s) of full compliance, as appropriate.
- 8 Remarks — additional information, including detail of "PC" and "NC", as appropriate.

State	ENRC & ATCSMAC	Charts related to Terminal Areas	AD Charts	Obstacle Charts	WAC	Action Plan	Remarks
1	2	3	4	5	6	7	8
Bahrain							
Egypt							
Iran							
Iraq							
Jordan							
Kuwait							
Lebanon							
Oman							
Qatar							
Saudi Arabia							
Syria							
UAE							
Yemen							

FASID TABLE AIM-7: Production responsibility for sheets of the World Aeronautical Chart - ICAO 1:1 000 000

EXPLANATION OF THE TABLE

Column

- 1 Name of the State accepting production responsibility.
- 2 World Aeronautical Chart — ICAO 1:1 000 000 sheet number(s) for which production responsibility is accepted.
- 3 Remarks

Note 1— When Aeronautical Charts — ICAO 1:500 000 or Aeronautical Navigation Charts — ICAO Small Scale, are made available instead of the 1:1 000 000 chart, this is to be indicated in the Remarks column.

Note 2— In those instances where the production responsibility for certain sheets has been accepted by more than one State, these States by mutual agreement should define limits of responsibility for those sheets.

State	Sheet number(s)	Remarks
1	2	3
Bahrain	2547	
Egypt	2447, 2448, 2543, 2544	
Iran	2338, 2339, 2428, 2429, 2443, 2444, 2548	
Iraq	2427, 2445	
Jordan	2426, 2446, 2447	<i>Note: Jordan to cover its own territory within Amman FIR</i>
Kuwait	2445	<i>Note: Kuwait to cover its own territory within Kuwait FIR</i>
Lebanon	2426	<i>Note: Lebanon to cover its own territory within Beirut FIR</i>
Oman	2563, 2670	
Qatar		
Saudi Arabia	2446, 2545, 2546, 2564, 2565, 2566, 2668, 2669	
Syria	2426	<i>Note: Syria to cover its own territory within Damascus FIR</i>
UAE		
Yemen	2686, 2687	

FASID TABLE AIM-8: Pre-Flight Information Services

EXPLANATION OF THE TABLE

Column:

1	Name of the State or territory.
2	Compliance with the requirements for the provision of Pre-Flight Information Bulletins (PIB) against each type of PIB, shown by: FC – Fully compliant PC – Partially compliant NC – Not compliant
<i>Note 1 —</i>	<i>AD: Aerodrome type bulletins</i> <i>Area: Area type bulletins (FIR or group of FIRs or States)</i> <i>FIR route: FIR route specific bulletin</i> <i>Narrow route: Narrow path route specific bulletin</i>
3	Compliance with the requirements for the availability of the elements of the Integrated Aeronautical Information Publications (IAIP), maps and charts to the flight operations personnel, shown by: FC – Fully compliant PC – Partially compliant NC – Not compliant
4	Requirement for a common point of access to aeronautical information and meteorological information briefings, shown by: FI – Fully Implemented PI – Partially Implemented NI – Not Implemented
5	Action Plan — short description of the State's Action Plan with regard to Pre-Flight Information Services, including planned date(s) of full compliance, as appropriate.
6	Remarks — additional information, including detail of "PC", "NC", "PI" and "NI", as appropriate.

State	PIB				IAIP	Aeronautical and Meteorological information	Action Plan	Remarks
	AD	Area	FIR route	Narrow route				
1	2				3	4	5	6
Bahrain								
Egypt								
Iran								
Iraq								
Jordan								
Kuwait								
Lebanon								
Oman								
Qatar								
Saudi Arabia								
Syria								
UAE								
Yemen								

FASID TABLE AIM-9: AIM Certification

EXPLANATION OF THE TABLE

Column:

1	Name of the State or territory for which implementation of AIM Certification is required.
2	Availability of AIM Regulations, shown by: FC – Fully compliant PC – Partially compliant NC – Not compliant
3	Compliance with the requirements for the establishment of a Safety Oversight System for ensuring the effective implementation of safety-related policy and procedures in the area of AIM, shown by: FC – Fully compliant PC – Partially compliant NC – Not compliant

Note 1 — A Safety Oversight System is based on the eight (8) Critical Elements (CEs) as defined in the ICAO Safety Oversight Manual (Doc 9734, Part A).

Note 2— As part of the Safety Oversight System, States should, in particular:

- a) establish an entity responsible for the safety oversight of the AIS/AIM service provider(s)(not necessarily limited to the safety oversight of AIM) with clearly defined functions and responsibilities, or delegate this function to a Regional/Sub-Regional Organization;*
- b) ensure the availability of sufficient number of qualified AIM inspectors;*
- c) establish minimum qualifications and experience for the AIM inspectorate staff;*
- d) establish detailed job descriptions reflecting all the regulatory and safety oversight tasks for the AIM inspectorate staff;*
- e) establish the necessary procedures for the AIM inspectorate staff;*
- f) establish and implement a formal surveillance programme for the continuing supervision of the AIS/AIM service provider(s) and ensure that safety oversight is effectively conducted; and*
- g) establish and implement a mechanism/system for the elimination of deficiencies identified by the AIM inspectorate staff.*

4 Compliance with the requirements for implementation of AIM certification, shown by:

FC – Fully compliant

PC – Partially compliant

NC – Not compliant

Note 3 — AIM Certification may be performed within the framework of ANS Certification

5 Action Plan — short description of the State's Action Plan with regard to the implementation of the different requirements of AIM certification, including planned date(s) of full compliance, as appropriate.

6 Remarks — additional information, including detail of "PC" and "NC", as appropriate

State	AIM Regulations	AIM Safety Oversight	AIM Certification	Action Plan	Remarks
1	2	3	4	5	6
Bahrain					
Egypt					
Iran					
Iraq					
Jordan					
Kuwait					
Lebanon					
Oman					
Qatar					
Saudi Arabia					
Syria					
UAE					
Yemen					

MIDANPIRG/13
Appendix 4.5I to the Report on Agenda Item 4.5

II-AOP 1-1

DRAFT

Table AOP 1

AIRPORT PLANNING CHARACTERISTICS FOR FACILITIES AND SERVICES

EXPLANATION OF THE TABLE

Table AOP 1 shows the operational requirements for physical characteristics at each aerodrome to be considered in planning the facilities for safe and efficient aircraft operations.

The physical characteristics of the aerodrome relate to the Aerodrome Reference Code (ARC), which is selected for aerodrome planning purposes and determined in accordance with the characteristics of the critical design aircraft for which an aerodrome facility is intended. The ARC provides a simple method for inter-relating the numerous specifications concerning the characteristics of aerodromes so as to provide a series of aerodrome facilities that are suitable for the aeroplanes that are intended to operate at the aerodrome. The code is not intended to be used for determining runway length or pavement strength requirements. The physical characteristics of taxiways and aprons should be appropriate for the runways with which they are related.

The granting of an aerodrome certificate signifies to aircraft operators and other organization operating on the aerodrome that at the time of certification, the aerodrome meets the specifications regarding the facility and its operation and that it has, according to the certifying authority, the capability to maintain these specifications for the period of validity of the certificate. The visual aids for navigation, including markings, lighting and signs, etc., at an aerodrome will be provided in accordance with Annex 14, Volume I specifications.

The requirements for alternate aerodromes should be satisfied by regular aerodromes used for international aircraft operations to the greatest practicable extent.

Column

1 Name of the city and aerodrome, preceded by the location indicator.

Note. — When the aerodrome is located on an island and no particular city or town is served by the aerodrome, the name of the island is included instead of a city.

Designation of the aerodrome as:

RS — international scheduled air transport, regular use;
RNS — international non-scheduled air transport, regular use;
AS — international scheduled air transport, alternate use; and
ANS — international non-scheduled air transport, alternate use.

	When an aerodrome is needed for more than one type of use, normally the type which is highest on the above list is shown. An exception is that AS aerodromes are identified even when they are required for regular use by international non-scheduled air transport.
2	Aerodromes used for international operations shall be certified in accordance with the specifications contained in Annex 14, Volume I as well as other relevant ICAO specifications. This column show the current status on certification, whether fully implemented or in progress and target date for completion if in progress.
3 & 4	Aerodrome reference code (ARC) for aerodrome physical characteristics expressed in accordance with Annex 14, Volume I, Chapter 1. The code letter or number within an element selected for design purposes is related to the critical aero-plane characteristics for which the facilities are provided. Column 3 shows the current ARC based on which the existing aerodrome facilities are provided and column 4 the planned ARC based on which the existing aerodrome facilities will be upgraded.
5	Target Date: Expected date of implementation of planned ARC
6 & 7	Required Rescue and firefighting service (RFF). The required level of protection expressed by means of an aerodrome RFF category number, in accordance with Annex 14, Volume I. Column 6 shows the current RFF category based on which the RFF facilities are provided. Column 7 shows the planned RFF category based on which the existing RFF facilities available will be upgraded.
8	Target Date- Expected Date of Implementation of planned RFF category
9	Runway designation numbers
10 & 11	Runway Type: Column 10 shows the Type of each of the runway provided. The types of runways, as defined in Annex 14, Volume I, Chapter 1, are: NINST — non-instrument runway; NPA — non-precision approach runway; PA1 — precision approach runway, Category I; PA2 — precision approach runway, Category II; PA3 — precision approach runway, Category III Column 11 shows the planned runway type to be provided.
12	Target date- Expected Date of Implementation of planned runway type
13	Runway Length: Required runway length expressed in terms of a balanced field length which should be adequate to meet the operational requirements of the aeroplanes for which the runway is intended. In planning, account is taken of local conditions (elevation, temperature, runway slope, humidity and runway surface characteristic). If the requirement for alternate use is more critical, the aircraft type and runway length requirements are also indicated below the abbreviation 'AS'.

Critical aircraft for pavement strength and required pavement strength are expressed as the all-up mass in thousands of kilograms. If the aircraft requiring the aerodrome for alternate use is more critical, the aircraft type and runway strength required are also indicated below the abbreviation 'AS'.

Note — A specific aircraft model based on the best available sources of information should be selected for planning runway length as this requirement is particularly affected by aircraft model differences. Aircraft models should thus be reviewed carefully to see that the correct one is used in determining the aerodrome characteristics.

14 Runway Visual Range (RVR)

TDZ — Observations should be provided representative of the touchdown zone.
MID — Observations should be provided representative of the middle of the runway.
END — Observations should be provided representative of the end portion of the runway.

15 Remarks: This column is for showing other information including critical design aircraft selected for determining ARC, critical aircraft selected for determining the RFF category and critical aircraft for pavement strength. Only one critical aircraft type is shown if it is used to determine all the above three elements; otherwise different critical aircraft types need to be shown for different elements.

16, 17 & 18 Alternate aerodromes for the regular aerodromes listed in Column 1. The aerodrome is shown by listing the name of city, airport name and location indicator. Column 17 shows the status of certification and column 18 shows the aerodrome reference code. Where more than one alternate aerodrome is available, the requirements should be based on the types of aircraft each is intended to serve.

Revised ANP FASID AOP1 TABLE - February 2012

Aerodromes Characteristics															Alternate Aerodromes		
Location indicator- name of City and Aerodrome, Designation	Aerodrome Certification- Implemented/ in progress/Target date for implementation	Aerodrome Reference Code (ARC)			RFF Category			Runway characteristics						Remark	Location Indicator/Name of City & aerodrome	Aerodrome Certification- Implemented/ In progress/ Target date	Aerodrome Reference Code
									Runway Type								
		Current	Planned	Target Date	Current	Planned	Target Date	Runway No.	current	Planned	Target Date	Runway Length	RVR				
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Bhutan																	
VQPR Paro/Paro intl RS	certified	3C	4D	Dec-14	5	8	Dec-14	15/ 33	NPA/NPA	PA I/NPA	2013	1800m	Thresholds	A 319 115	VECC Kolkotta, NSCB Intl VGZR Dhaka, Zia Intl	certified	4E
Brunei darussalam																	
WBSB brunei/brunei Intl	In progress/ 2014	4E	4F	2018	9	10	2018	03 21	NPA/PAI	PAI/PAI	2017	3600	Mid	B 747-400	WBKK Kota kinabalu	certified	4E

MIDANPIRG/13
Appendix 4.5J to the Report on Agenda Item 4.5

AIR TRAFFIC MANAGEMENT MEASUREMENTS TASK FORCE

1. TERMS OF REFERENCE

- a) follow-up the implementation of the ATM operational improvements required in the Regional Air Navigation Plan (ANP) or in national plans and to place special emphasis on identifying and estimating the fuel savings accrued from the corresponding improvements;
- b) carry out permanent coordination with various MIDANPIRG contributory bodies in order to ensure appropriate integration of all tasks contributing to the estimation of environment benefits related to the implementation of the ANP or national operational improvements;
- c) harmonize, at a regional level, the estimation of the environment benefits from operational improvements in order to reach consistent results;
- d) take into consideration the material prepared by ICAO, develop proposals to keep and upgrade the ICAO Fuel Savings Estimation Tool (IFSET) as necessary; and
- e) the ATM/M TF will Report its progress to CNS/ATM/IC SG.

1.2 Work programme for the ATM/M Task Force shall be to:

- a) improve Airport Accessibility;
- b) improve operations through enhanced En-Route trajectories; and
- c) improve flexibility and efficiency in Descent Profiles (PBN/CDO)

2. COMPOSITION

2.1 The Task Force is composed of:

- a) MIDANPIRG Member States;
- b) ACAC, CANSO, IACA, IATA, and IFALPA as observers; and
- c) other representatives from industry and user Organizations could participate as observers whenever required.

MIDANPIRG/13

Appendix 4.5K to the Report on Agenda Item 4.5

STATUS OF IMPLEMENTATION OF INFPL IN THE MID REGION

	Focal Point	Manf. Cont/ Budget	Internal Testing	ANSP to ANSP Testing	Milestone	Date of Acceptance of both present and new format	Date of Submission of Implem. Plan	Contingency 1/2/3	User Testing	Vendors involved	Remarks
Bahrain	√	√ / √	1 April 2012	1 March – 15 May	4	1 July 2012	1 Mar 2010	3	20-25 April - 2012	Avitech Thales	
Egypt	√	√ / √	30 May 2012	10 – 30 June	3	1 July 2012	28 Feb 2012		August September	Comsoft Thales	Only converter will be installed
Iran	√	√ / √			3					Avitech Thales	Letter sent to Thales Local converter
Iraq	√	√ / √	15 April	20 June and October	2	September			August	Uptec Canadian	Contract
Jordan	√	√ / √	1 January	June and October	4	1 June 2012		1, 2	June	Avitech	Converter will be used for the backup ATM system
Kuwait	√	√ / √	15 April 2012	1 June 2012	3	August	28 Feb 2012		1 August 2012	Indra Comsoft	
Lebanon	√	√ / √		June	3					Raytheon Thales Sofrevia	
Libya	√				3					INDRA	
Oman	√	√/√	25 May 2012	25 July 2012	4	1 September			15 July 2012	Comsoft Raytheon	
Qatar	√	√/√	31 March	23 Feb then April and June	5	1 July 2012	21 Mar 2010	1	15 April	Comsoft Selex	
Saudi Arabia	√	√/√	June	June July	4	1 August 2012		3	July	Thales Comsoft	Contract with Comsoft

	Focal Point	Manf. Cont/ Budget	Internal Testing	ANSP to ANSP Testing	Milestone	Date of Acceptance of both present and new format	Date of Submission of Implem. Plan	Contingency 1/2/3	User Testing	Vendors involved	Remarks
Sudan	√	√/√			3					Thales Contract in process	Will use converter from other State
Syria	√		√/√		3					Selex vitrociset	Contact initiated Contract was done via TCB 30424 (2004)
UAE	√	√/√	30 September 2010	23 Feb then March, April and July	6	1 July	28 Feb 2012	1	20 Feb and 02 – 29 March	Thales Comsoft	ACC Abu Dhabi waiting proposal
Yemen	√	√/√		September	3	26 September			October	ECIL ALES	

Mile Stone:

- 1- Empty
- 2- Analysis of the draft amendment
- 3- Evaluation of current system
- 4- Introduction of capability to pass new information
- 5- Check of AIDC / OLDI compatibility
- 6- Coordination with neighboring ANSP and airspace users
- 7- Implementation of new system

Contingency

- 1- No contingency all systems will be upgraded
- 2- Converter will be used
- 3- Ready to support neighbouring states for conversion

MIDANPIRG/13

Appendix 4.5L to the Report on Agenda Item 4.5

MID REGION TESTING SCHEDULE

State	Software/ Hardware Delivery Before 31 March 2012	Internal Testing Before 31 March 2012	External Testing 1 April to 30 June 2012		Airspace Users Testing 1 July to 14 November 2012		Inter-Regional Testing		Type of Solution Converter or Upgrade	Date of Acceptanc of both Present and New Format	Remarks
			State	Date	User	Date	State	Date			
Bahrain	Done	1 April 2012	UAE	15 Apr	GF Bahrain Air	20 Apr 25 Apr	Singapore	1 June	both	1 July	
			Qatar	16 Apr							
			Kuwait	3 Jun							
			Iran Saudi Arabia	15 May							
Egypt	1 - May	30 May	Saudi Arabia	10 June	Egypt Air Sama Airlines Air Cairo Express	15 Aug	Athens	Sep	Converter	1 July	Only converter will be installed
			Sudan	30 June		15 Sep	Israel	Sep			
			Jordan	17 June		20 Sep	Cyprus	Sep			
			Libya	25 June							
Iran											
Iraq	1 April	15 April	Kuwait Jordan	20 June October	Iraqi airways	August			Upgrade	Sep	
Jordan	1 May	1January	UAE Egypt Saudi Syria	March 17 June 20 June	RJA, SITA, Royal Falcon,	July July July	Eurocontrol Israel Cyprus	20 Feb July July	Both	July	Converter will be used for the backup ATM system

State	Software/ Hardware Delivery Before 31 March 2012	Internal Testing Before 31 March 2012	External Testing 1 April to 30 June 2012		Airspace Users Testing 1 July to 14 November 2012		Inter-Regional Testing		Type of Solution Converter or Upgrade	Date of Acceptanc of both Present and New Format	Remarks
			State	Date	User	Date	State	Date			
			Iraq	October	Jordan Aviation	July					
Kuwait	31 March	15 April	Bahrain Iraq Qatar	Jun October 17 June	KUA Aljazeera	August August	Pakistan	Aug	Both		
Lebanon											
Libya											
Oman	19 - May	25 - May	UAE Bahrain Yemen Iran	25 July July Sept Sept	Oman Air	15 July	Mumbai Karachi	August August	Upgrade	Sep 2012	
Qatar	31 March	31 March	UAE Bahrain Kuwait	23 Feb 16 April 17 June	Qatar Airways Amiri	15 April 20 April			Both	1 July	
Saudi Arabia	31 March 2012	June	Jordan Egypt Bahrain Yemen	20 Jun 27 Jun 25 Jun	SVA, Nas Aramco, Arabasc Jet Aviation Rabeg wings	July July July July July Sep	Addis Abba	July		1 August	

4.5L-3

State	Software/ Hardware Delivery Before 31 March 2012	Internal Testing Before 31 March 2012	External Testing 1 April to 30 June 2012		Airspace Users Testing 1 July to 14 November 2012		Inter-Regional Testing		Type of Solution Converter or Upgrade	Date of Acceptanc of both Present and New Format	Remarks
			State	Date	User	Date	State	Date			
			Sudan								
Sudan	May 2012										
Syria											
UAE	30 Septembe r 2010	30 September 2010	Qatar Bahrain Iran Oman Jordan	23 Feb 15 April 25 July March	Etihad Emirates	Feb Mar	Eurocontrol Pakistan	20-24 Feb 12 22 Feb 12	Upgrade + Converter	01 July	
Yemen			Saudi Arabia Oman	Sept Sept	AlYeme nia Alsaeeda	Oct					

MIDANPIRG/13
Appendix 4.5M to the Report on Agenda Item 4.5

**MID REGION
STRATEGY FOR THE IMPLEMENTATION OF
ICAO NEW FLIGHT PLAN FORMAT AND SUPPORTING ATS MESSAGES**

Recognizing that:

- 1) Dynamic information management will assemble the best possible integrated picture of the historical, real-time and planned or foreseen future state of the ATM situation and provide the basis for improved decision making by all ATM community members, further more for the ATM system to operate at its full potential, pertinent information will be available when and where required;
- 2) The *Global Air Traffic Management Operational Concept* (Doc 9854) requires information management arrangements that provide accredited, quality-assured and timely information to be used to support ATM operations and will use globally harmonized information attributes;
- 3) ATM Requirement 87 in the *Manual of Air Traffic Management System Requirements* (Doc 9882) provides that 4-D trajectories be used for traffic synchronization applications to meet ATM system performance targets, explaining that automation in the air and on the ground will be used fully in order to create an efficient and safe flow of traffic for all phases of flight;
- 4) The amended ICAO Flight Plan and associated ATS Message formats contained in Amendment 1 to the Fifteenth Edition of the PANS ATM (Doc 4444, applicable 15 November 2012) have been formulated to meet the needs of aircraft with advanced capabilities and the evolving requirements of automated air traffic management systems, while taking into account compatibility with existing systems, human factors, training, and cost;
- 5) The ICAO new flight plan Format introduces considerable changes related, inter-alia, to Performance Based Navigation (PBN), Automatic Dependent Surveillance - Broadcast (ADS-B) and Global Navigation Satellite Systems (GNSS), while maintaining a high degree of commonality with the existing flight plan format;
- 6) The complexities inherent in automated computer systems preclude the adoption of a single regional transition date and transitions to the new flight plan provisions will therefore occur throughout the declared transition period;
- 7) The risk of not updating all MID States automated systems as planned and before the implementation date of 15 November 2012; and
- 8) The risk of all users simultaneously commencing “NEW” on the common implementation date without proper testing with the States.

The MID Region implementation of Amendment 1 to the PANS-ATM shall:

- 1) Ensure that all States and airspace users implement the full provisions of Amendment 1 to PANS-ATM 15th Edition with applicability date of 15 November 2012, not just selected aspects of the provisions;
- 2) Acknowledge that States not implementing the full provisions of Amendment 1 are obligated to publish the non compliance in State AIP as a ‘significant difference’ well in advance of the 15

November 2012 applicability date and will be included on the MIDANPIRG List of Deficiencies in the CNS/ATM Fields; and

- 3) Ensure that, from 15 November 2012, all States and airspace users accept and disseminate 'NEW' flight plan and associated ATS message formats only and capabilities for 'PRESENT' flight plan provisions are discontinued.

The MID Regional transition to the PANS-ATM Amendment 1 provisions shall:

- 1) Comply with the guidance provided by ICAO as described in the ICAO guidance material in State Letter AN 13/2.1-09/9, dated 6 February 2009; titled "Guidance for implementation of flight plan information to support Amendment 1 of the Procedures for Air Navigation Services — Air Traffic Management, Fifteenth Edition (PANS-ATM, DOC 4444)";
- 2) States must ensure coordination with adjacent States for testing and transition and inform other interested stakeholders as appropriate;
- 3) Ensure that the INFPL SG undertakes coordination to facilitate harmonization with implementations in neighboring regions;
- 4) Eliminate or minimize State specific constraints and, if constraints continued to be ~~are~~ identified as necessary, implementation of such constraints should be agreed on a regional basis or sub regional basis in preference to an individual State basis;
- 5) Declare a preparation transition period from 1 January 2012 until 14 November 2012, comprising;
 - Before 31 March 2012 - ANSPs software delivery and internal testing,
 - 1 April to 30 June 2012 – ANSPs external testing and implementation; and
 - 1 July to 14 November 2012 – airspace users testing and implementation.
- 6) Encourage ANSPs and airspace users to coordinate appropriate implementation methodologies in order to ensure that migration to 'NEW' could be done without problems on the agreed and declared implementation date;
- 7) Encourage States and users to immediately commence preparations to implement Amendment 1 provisions preferably not later than declared preparation period and report progress to the INFPL SG periodic meetings;
- 8) States Implementing NEW Format should have the capability to process both PRESENT and NEW formats during the transition period;
- 9) MID States shall not support PRESENT format after 15 November 2012;
- 10) Strategic Support Teams (SST) to be identified and resourced to support those States who are behind the regional Implementation Plan, and;
- 11) Establish State and Regional coordination cells. Guidelines will be provided to align with the joint ICAO and IATA management center in ICAO HQ Montreal planned around the applicability date.

- 12) To mitigate Date Of Flight (DOF) complexities, adopt a regional approach that does not require processing of flight plans more than 24 hours prior to Estimated Off Blocks Time (EOBT) during the declared transition period.

INTERNATIONAL CIVIL AVIATION ORGANIZATION



MID REGION INFPL IMPLEMENTATION DOCUMENT

**For Amendment 1 to the 15th Edition of the
Procedures for Air Navigation Services – Air Traffic Management
(PANS-ATM, Doc 4444)**

- First Edition -

2012

TABLE OF CONTENT

1. Objective
2. Scope
 - 2.1 Programme phases
 - 2.2 Sample MS Project for Implementation
3. Reference documents
 - 3.1 The Amendment
 - 3.2 Global Guidance for implementation
4. Status of INFPL Implementation in MID Region
5. Strategy for the Implementation
6. Administrative Aspects
7. Financial aspects
 - 7.1 Programme finance sources map
8. Regional PFF for INFPL
9. National PFFs for INFPL
10. List of Focal Points
11. Regional Guidance for Implementation
12. MID Region testing Schedule
13. Tests and Scripts

1. Objective:

ICAO Air Navigation Commission, acting under delegated authority, at the first and second meetings of its 177th Session, on 22 and 24 January 2008, approved Amendment 1 to the *Procedures for Air Navigation Services — Air Traffic Management*, Fifteenth Edition (PANS-ATM, Doc 4444) for applicability on 15 November 2012. The amendment was approved on 27 May 2008 by the President of the Council on behalf of the Council in accordance with established procedure.

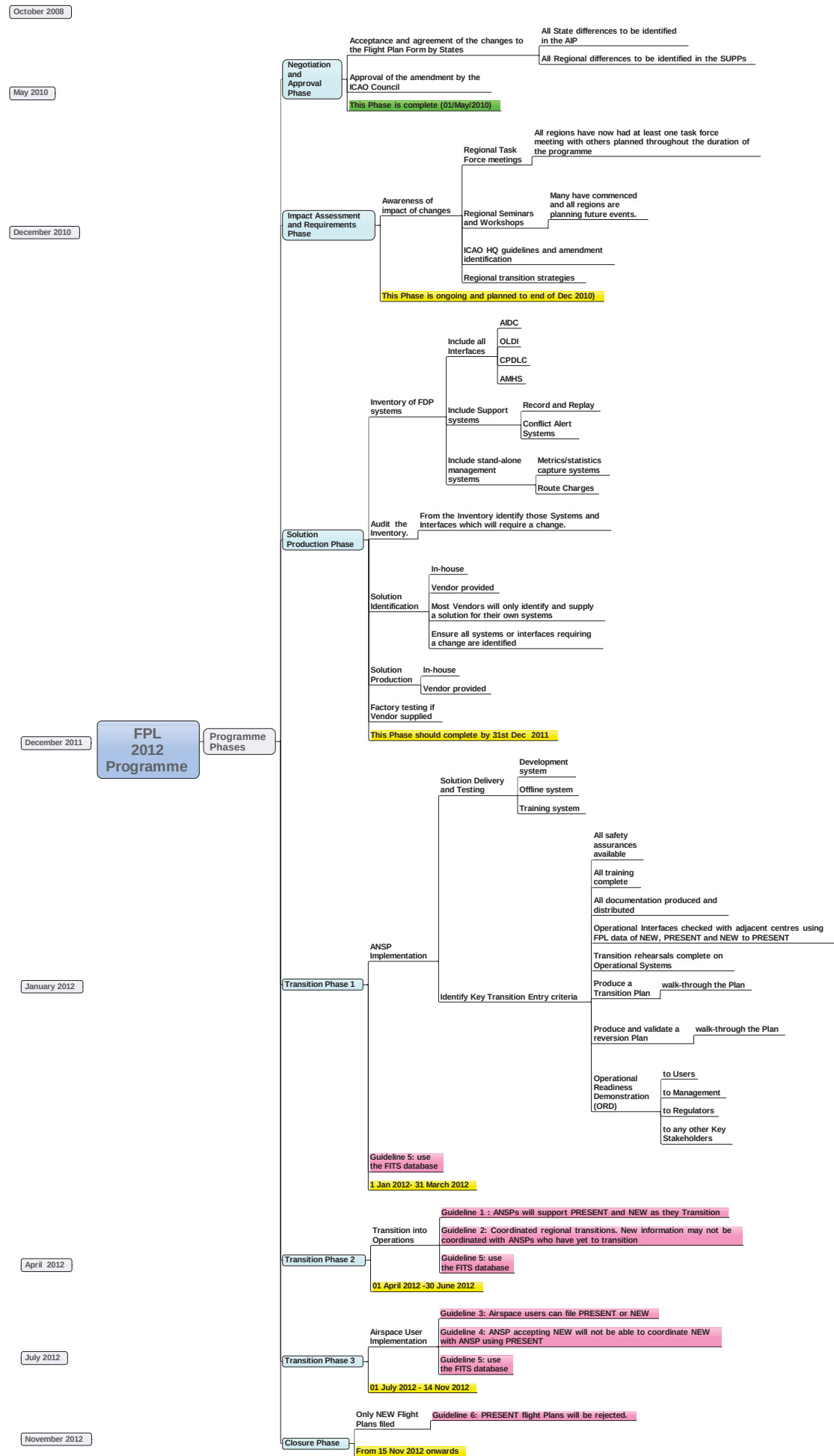
Amendment 1 stems from the work of the Flight Plan Study Group (FPLSG). The nature and scope of the amendment is to update the ICAO model flight plan form in order to meet the needs of aircraft with advanced capabilities and the evolving requirements of automated air traffic management (ATM) systems, while taking into account compatibility with existing systems, human factors, training, cost and transition aspects.

Copies of the interim edition of the amendment are available in section 6.1 of this documents which are attachments to the electronic version of this State letter AN 13/2.1-08/50. The interim edition contains the text as was approved by the Council and provided to States pending the issue of the replacement pages for the PANS-ATM in which the amendment will be incorporated. The attached amendment consists solely of a change to the ICAO flight plan form, related ATS messages and procedures and has an applicability date of 15 November 2012. As the existing ICAO flight plan will remain in use during the interim period it is deemed premature for ICAO to distribute the blue cover State letter containing the replacement pages associated with the amendment. Therefore, the replacement pages will be distributed in October 2012. In the meantime, you may wish to use the amendment contained in this letter to begin updating your flight data processing systems to meet the new requirements which will be applicable in 2012.

2- Scope

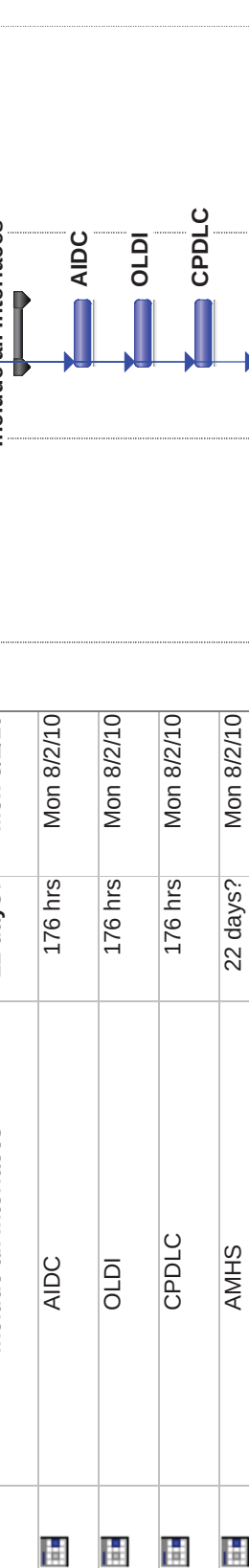
The next pages indicates the scope of ICAO New Flight Plan (FPL 2012) Programme phases as developed by ICAO and the sample MS project for the implementation of the ICAO New Flight Plan Format along with detailed timelines are also detailed in the following pages.

2.1.1. Programme phases



2.2. Sample MS Project for Implementation

ID	Task Name	Duration	Start		Mar	2nd Quarter			3rd Quarter			4th Quarter			1st Quarter		
						Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar
1	Programme Phases	740 days?	Tue 4/13/10														
2	Negotiation and Approval Phase	0 days	Mon 5/3/10				◆ 5/3										
3	Acceptance and agreement of the changes to the Flight Plan Form by States	0 days	Mon 5/3/10				◆ 5/3										
4	All State differences to be identified in the AIP	0 hrs	Mon 5/3/10				◆ 5/3										
5	All Regional differences to be identified in the SUPPs	0 hrs	Mon 5/3/10				◆ 5/3										
6	Approval of the amendment by the ICAO Council	0 hrs	Mon 5/3/10				◆ 5/3										
7	This Phase is complete (01/May/2010)	0 hrs	Mon 5/3/10				◆ This Phase is complete (01/May/2010)										
8	Impact Assessment and Requirements Phase	190 days	Tue 4/13/10														
9	Awareness of impact of changes	190 days	Tue 4/13/10														
10	Regional Task Force meetings	175 days	Tue 5/4/10														
11	Mostly now complete during the early part of the Phase	1400 hrs	Tue 5/4/10														
12	Regional Seminars and Workshops	190 days	Tue 4/13/10														
13	Some have commenced and expect all to complete by the end of this year	1520 hrs	Tue 4/13/10														
14	ICAO HQ guidelines and amendment identification	320 hrs	Mon 5/3/10														
15	Regional transition strategies	200 hrs	Mon 6/28/10														
16	This Phase is ongoing and planned (Until end of Dec 2010)	1400 hrs	Mon 5/3/10														
17	Solution Production Phase	373 days?	Mon 8/2/10														
				Task Split Progress	Milestone Summary Project Summary	External Tasks External Milestone Deadline			This Phase is on Solution P								
Project: FPL Programme PhasesSept Date: Wed 7/6/11																	

ID	Task Name	Duration	Start	2nd Quarter			3rd Quarter			4th Quarter			1st Quarter		
				Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb
18	 Inventory of FDP systems	66 days?	Mon 8/2/10												
19	Include all Interfaces	22 days?	Mon 8/2/10												
20	AIDC	176 hrs	Mon 8/2/10												
21	OLDI	176 hrs	Mon 8/2/10												
22	CPDLC	176 hrs	Mon 8/2/10												
23	AMHS	22 days?	Mon 8/2/10												
24	Include Support systems	22 days	Wed 9/1/10												
25	Record and Replay	176 hrs	Wed 9/1/10												
26	Conflict Alert Systems	176 hrs	Wed 9/1/10												
27	Include discreet management systems	22 days	Fri 10/1/10												
28	Metrics/statistics capture systems	176 hrs	Fri 10/1/10												
29	Route Charges	176 hrs	Fri 10/1/10												
30	Audit the Inventory.	22 days	Mon 11/1/10												
31	From the Inventory identify those Systems and Interfaces which will require a change.	176 hrs	Mon 11/1/10												
32	Solution Identification	64 days	Wed 12/1/10												
33	In-house	512 hrs	Wed 12/1/10												
34	Vendor provided	512 hrs	Wed 12/1/10												

Project: FPL Programme Phases Date: Wed 7/6/11	Task			
	Split			
	Progress			

Milestone
 Summary
 Project Summary

External Tasks
 External Milestone
 Deadline

Page 2

ID	Task Name	Duration	Start	2nd Quarter			3rd Quarter			4th Quarter			1st Quarter			
				Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar
35	 Most Vendors will only identify and supply a solution for their own systems	512 hrs	Wed 12/1/10													
36	 Ensure all systems or interfaces requiring a change are identified	512 hrs	Wed 12/1/10													
37	Solution Production	210 days?	Tue 3/1/11													
38	 In-house	872 hrs	Wed 3/2/11													
39	 In-house testing	85 days?	Mon 8/22/11													
40	 Vendor provided	880 hrs	Tue 3/1/11													
41	 Factory testing if Vendor supplied	640 hrs	Mon 8/29/11													
42	 This Phase should complete by 31st Dec 2011	0 hrs	Sat 12/31/11													
43	Transition Phase 1	60 days	Mon 1/9/12													
44	ANSP Implementation	60 days	Mon 1/9/12													
45	Solution Delivery and Testing	60 days	Mon 1/9/12													
46	 Development system	480 hrs	Mon 1/9/12													
47	 Offline system	480 hrs	Mon 1/9/12													
48	 Training system	480 hrs	Mon 1/9/12													
49	Identify Key Transition Entry criteria	179 days?	Sun 7/31/11													
50	 All safety assurances available	1240 hrs	Mon 8/29/11													
51	 All training complete	192 hrs	Wed 2/29/12													

Project: FPL Programme PhasesSept
Date: Wed 7/6/11

Task

Split

Progress

Milestone

Summary

Project Summary

External Tasks

External Milestone

Deadline

ID	Task Name	Duration	Start	2nd Quarter			3rd Quarter			4th Quarter			1st Quarter			
				Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar
52	 All documentation produced and distributed	528 hrs	Mon 1/2/12													
53	 Operational Interfaces checked with adjacent centres using FPL data of NEW, PRESENT and NEW to PRESENT	488 hrs	Mon 12/26/11													
54	 Transition rehearsals complete on Operational Systems	48 hrs	Fri 3/16/12													
55	Produce a Transition Plan	106 days?	Sun 7/31/11													
56	 produce a plan	67 days?	Sun 7/31/11													
57	 walk-through the Plan	312 hrs	Tue 11/1/11													
58	Produce and validate a reversion Plan	50 days?	Mon 12/26/11													
59	 produce a reversion plan	30 days?	Mon 12/26/11													
60	 walk-through the Plan	160 hrs	Thu 2/2/12													
61	Operational Readiness Demonstration (ORD)	13 days	Thu 3/15/12													
62	 to Users	104 hrs	Thu 3/15/12													
63	 to Management	104 hrs	Thu 3/15/12													
64	 to Regulators	104 hrs	Thu 3/15/12													
65	 to any other Key Stakeholders	104 hrs	Thu 3/15/12													
66	 Transition Phase 1 1 Jan 2012- 31 March 2012	528 hrs	Mon 1/2/12													
67	Transition Phase 2	67 days?	Mon 4/2/12													

Project: FPL Programme PhasesSept
Date: Wed 7/6/11

Task

Split

Progress

Task

Milestone

Summary

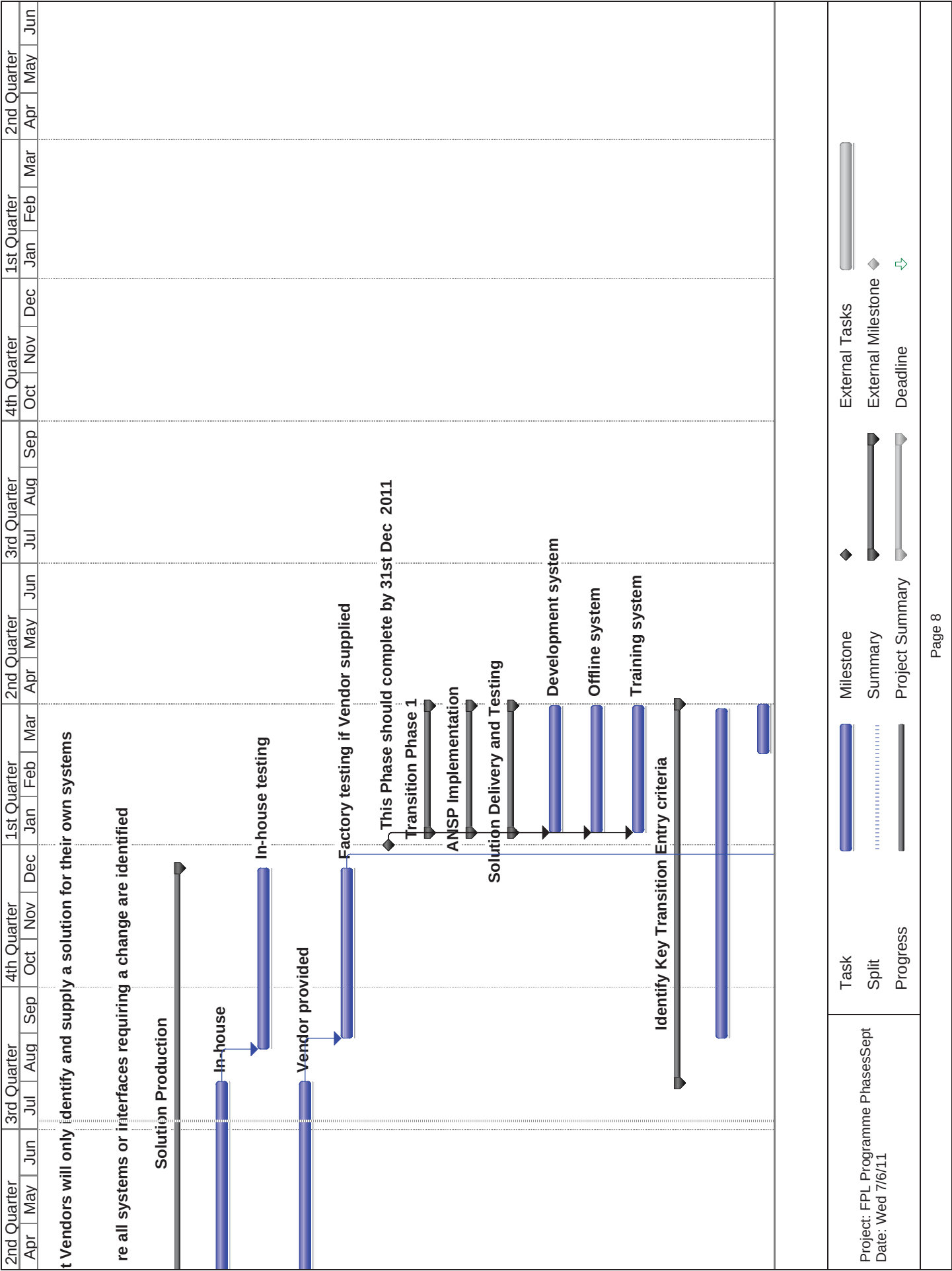
Project Summary

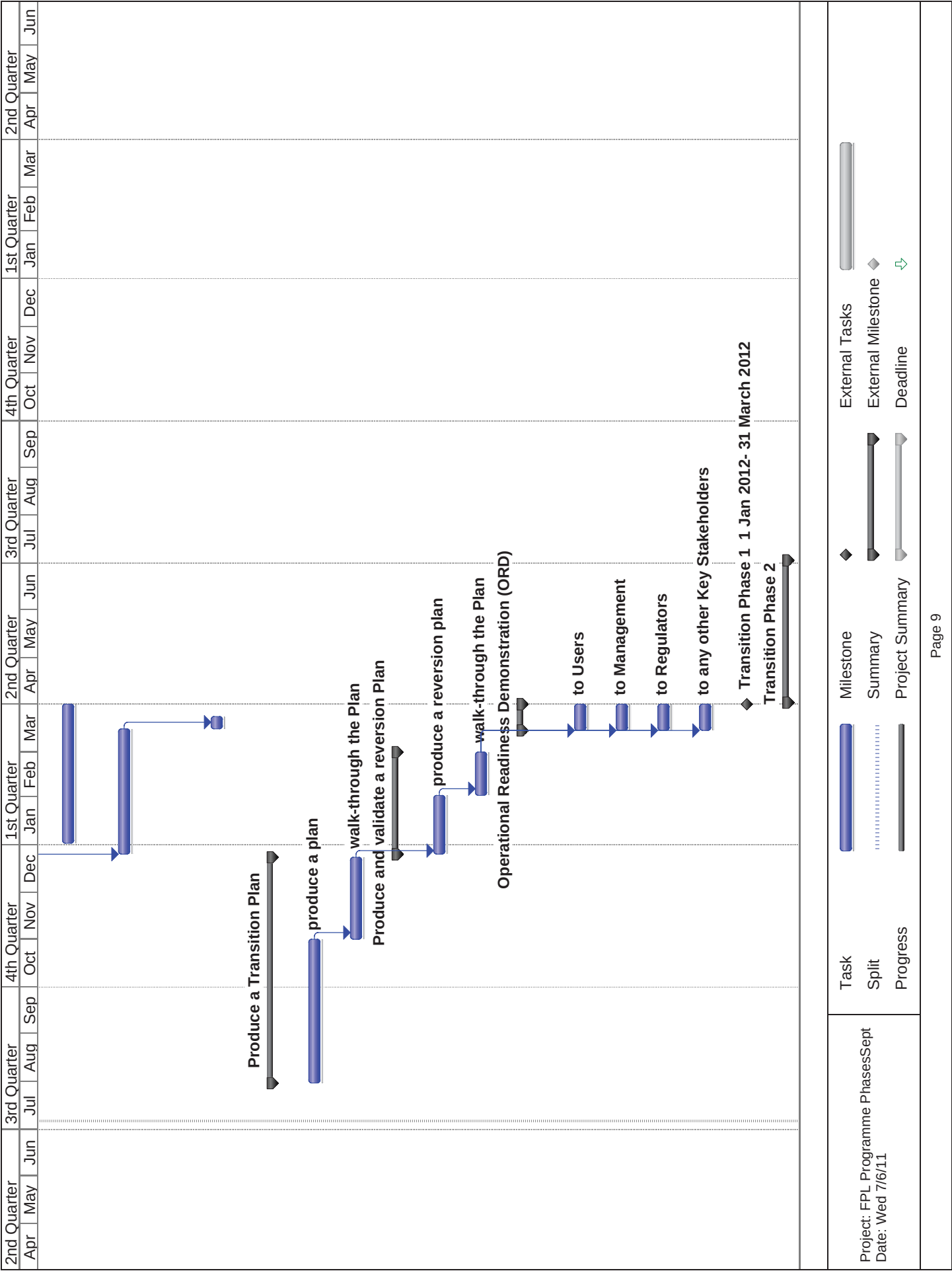
External Tasks

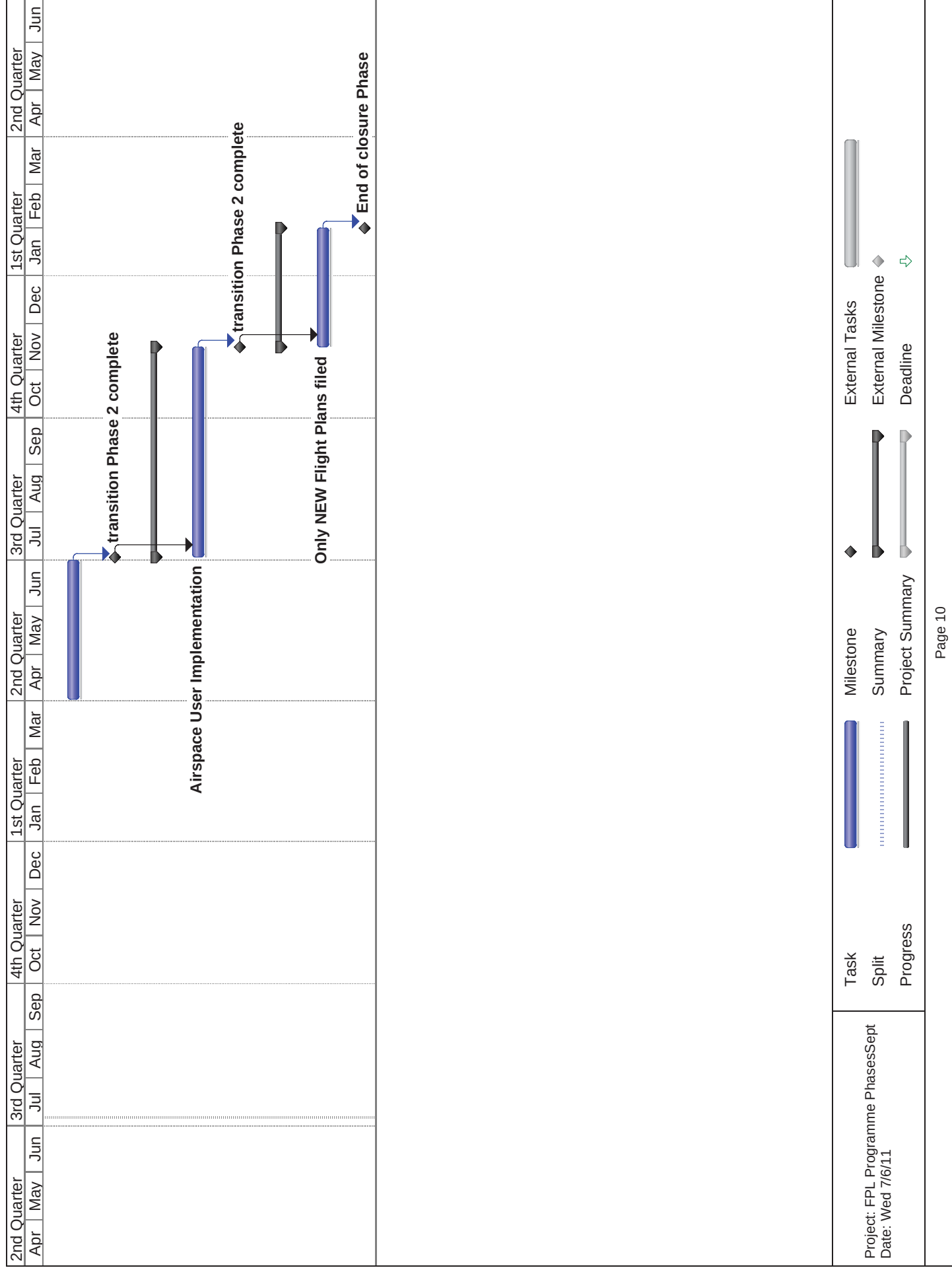
External Milestone

Deadline

Page 4







3. Reference Document

3.1. The Amendment



International
Civil Aviation
Organization

Organisation
de l'aviation civile
internationale

Organización
de Aviación Civil
Internacional

Международная
организация
гражданской
авиации

منظمة الطيران
المدني الدولي

国际民用
航空组织

Tel.: +1 (514) 954-6711

25 June 2008

Ref.: AN 13/2.1-08/50

Subject: Approval of Amendment 1 to the PANS-ATM

Action required: a) Implementation of the amendment on 15 November 2012; b) Publication of any differences as of 15 November 2012

Sir/Madam,

1. I have the honour to inform you that the Air Navigation Commission, acting under delegated authority, at the first and second meetings of its 177th Session, on 22 and 24 January 2008, approved Amendment 1 to the *Procedures for Air Navigation Services — Air Traffic Management*, Fifteenth Edition (PANS-ATM, Doc 4444) for applicability on 15 November 2012. The amendment was approved on 27 May 2008 by the President of the Council on behalf of the Council in accordance with established procedure.

2. Amendment 1 stems from the work of the Flight Plan Study Group (FPLSG). The nature and scope of the amendment is to update the ICAO model flight plan form in order to meet the needs of aircraft with advanced capabilities and the evolving requirements of automated air traffic management (ATM) systems, while taking into account compatibility with existing systems, human factors, training, cost and transition aspects.

3. Copies of the interim edition of the amendment are available as attachments to the electronic version of this State letter on the ICAO-NET (www.icao.int/icao/net). The interim edition contains the text as it was approved by the Council and provided to you pending the issue of the replacement pages for the PANS-ATM in which the amendment will be incorporated. Please note that the attached amendment consists solely of a change to the ICAO model flight plan form, related ATS messages and procedures and has an applicability date of 15 November 2012. As the existing ICAO flight plan will remain in use during the interim period it is deemed premature for ICAO to distribute the blue cover State letter containing the replacement pages associated with the amendment. Therefore, the replacement pages will be distributed in October 2012. In the meantime, you may wish to use the amendment contained in this letter to begin updating your flight data processing systems to meet the new requirements which will be applicable in 2012.

4. In accordance with the decision of the 26th Session of the Assembly, I would like to bring to your attention the Organization's long-standing practice of providing documentation to States upon request. In this regard, I wish to refer you to the ICAO-NET website (www.icao.int/icaonet) where you can access all relevant documentation. The practice of dispatching printed copies of such documentation has now been discontinued.

5. Your Government is invited by the Council to implement the provisions of PANS-ATM as amended. In this connection, I draw your attention to the decision taken by the Council, on 1 October 1973, to discontinue the publication of differences in Supplements to the PANS documents and, instead, to request States to publish up-to-date lists of significant differences from PANS documents in their Aeronautical Information Publications.

6. May I, therefore, invite your Government to publish in your Aeronautical Information Publication a list of any significant differences which will exist on 15 November 2012 between the amended provisions of PANS-ATM and your national regulations and practices.

Accept, Sir/Madam, the assurances of my highest consideration.

Taïeb Chérif
Secretary General

Enclosure:

Amendment to the Foreword of the PANS-ATM

AMENDMENT TO THE FOREWORD OF THE PANS-ATM, FIFTEENTH EDITION

Add the following at the end of Table A:

<i>Amendment</i>	<i>Source(s)</i>	<i>Subject</i>	<i>Approved Applicable</i>
1	Flight Plan Study Group (FPLSG)	Update the ICAO model flight plan form.	27 May 2008 15 November 2012

— END —

AMENDMENT NO. 1
TO THE
PROCEDURES
FOR
AIR NAVIGATION SERVICES

AIR TRAFFIC MANAGEMENT

(Doc 4444)

INTERIM EDITION

The text of Amendment No. 1 to the PANS-ATM (Doc 4444) was approved by the President of the Council of ICAO on behalf of the Council on **27 May 2008** for applicability on **15 November 2012**. This interim edition is distributed to facilitate implementation of the amendment by States. Replacement pages incorporating Amendment No. 1 are expected to be distributed in October 2012. (State letter AN 13/2.1-08/50 refers.)

MAY 2008
INTERNATIONAL CIVIL AVIATION ORGANIZATION

**PROPOSED AMENDMENT TO THE *PROCEDURES FOR AIR
NAVIGATION SERVICES — AIR TRAFFIC MANAGEMENT*
(PANS-ATM, DOC 4444)**

NOTES ON THE PRESENTATION OF THE PROPOSED AMENDMENT

The text of the amendment is arranged to show deleted text with a line through it and new text highlighted with grey shading, as shown below:

1. ~~Text to be deleted is shown with a line through it~~ text to be deleted
2. New text to be inserted is highlighted with grey shading new text to be inserted
3. ~~Text to be deleted is shown with a line through it~~ followed new text to replace existing text
by the replacement text which is highlighted with grey
shading.

**PROCEDURES FOR AIR NAVIGATION SERVICES — AIR
TRAFFIC MANAGEMENT (PANS-ATM, DOC 4444)**

...

CHAPTER 4. GENERAL PROVISIONS FOR AIR TRAFFIC SERVICES

...

4.4 FLIGHT PLAN

4.4.1 Flight plan form

Note.— Procedures for the use of repetitive flight plans are contained in Chapter 16, Section 16.4.

...

4.4.1.3 Operators and air traffic services units should comply with:

- a) the instructions for completion of the flight plan form and the repetitive flight plan listing form given in Appendix 2; and
- b) any constraints identified in relevant Aeronautical Information Publications (AIPs).

Note 1.— Failure to adhere to the provisions of Appendix 2 or any constraint identified in relevant AIPs may result in data being rejected, processed incorrectly or lost.

Note 2.— The instructions for completing the flight plan form given in Appendix 2 may be conveniently printed on the inside cover of flight plan form pads, or posted in briefing rooms.

...

4.4.2 Submission of a flight plan

4.4.2.1 PRIOR TO DEPARTURE

4.4.2.1.1 Flight plans shall not be submitted more than 120 hours before the estimated off-block time of a flight.

4.4.2.1.2 Except when other arrangements have been made for submission of repetitive flight plans, a flight plan submitted prior to departure should be submitted to the air traffic services reporting office at the departure aerodrome. If no such unit exists at the departure aerodrome, the flight plan should be submitted to the unit serving or designated to serve the departure aerodrome.

4.4.2.1.3 In the event of a delay of 30 minutes in excess of the estimated off-block time for a controlled flight or a delay of one hour for an uncontrolled flight for which a flight plan has been submitted, the flight plan should be amended or a new flight plan submitted and the old flight plan cancelled, whichever is applicable.

CHAPTER 11. AIR TRAFFIC SERVICES MESSAGES

...

11.4 MESSAGE TYPES AND THEIR APPLICATION

...

11.4.2 Movement and control messages

...

11.4.2.2 MOVEMENT MESSAGES

...

11.4.2.2.2 FILED FLIGHT PLAN (FPL) MESSAGES

Note.— Instructions for the transmission of an FPL message are contained in Appendix 2.

...

11.4.2.2.2.5 FPL messages ~~shall normally~~ **should** be transmitted immediately after the filing of the flight plan. ~~However, if a flight plan is filed more than 24 hours in advance of the estimated off-block time of the flight to which it refers, that flight plan shall be held in abeyance until at most 24 hours before the flight begins so as to avoid the need for the insertion of a date group into that~~ the date of the flight departure shall be inserted in Item 18 of the flight plan. ~~In addition, if a flight plan is filed early and the provisions of 11.4.2.2.2.2 b) or e) or 11.4.2.2.2.3 apply, transmission of the FPL message may be withheld until one hour before the estimated off block time, provided that this will permit each air traffic services unit concerned to receive the information at least 30 minutes before the time at which the aircraft is estimated to enter its area of responsibility.~~

...

11.4.2.2.4 MODIFICATION (CHG) MESSAGES

A CHG message shall be transmitted when any change is to be made to basic flight plan data contained in previously transmitted FPL or RPL data. The CHG message shall be sent to those recipients of basic flight plan data which are affected by the change. **Relevant revised basic flight plan data shall be provided to such affected entities not previously having received this.**

Note.— See 11.4.2.3.4 concerning notification of a change to coordination data contained in a previously transmitted current flight plan or estimate message.

...

APPENDIX 2. FLIGHT PLAN

...

2. Instructions for the completion of the flight plan form

...

2.2 Instructions for insertion of ATS data

Complete Items 7 to 18 as indicated hereunder.

Complete also Item 19 as indicated hereunder, when so required by the appropriate ATS authority or when otherwise deemed necessary.

Note 1.— Item numbers on the form are not consecutive, as they correspond to Field Type numbers in ATS messages.

Note 2.— Air traffic services data systems may impose communications or processing constraints on information in filed flight plans. Possible constraints may, for example, be limits with regard to item length, number of elements in the route item or total flight plan length. Significant constraints are documented in the relevant Aeronautical Information Publication.

ITEM 7: AIRCRAFT IDENTIFICATION (MAXIMUM 7 CHARACTERS)

INSERT one of the following aircraft identifications, not exceeding 7 alphanumeric characters and without hyphens or symbols:

a) the nationality or common mark and registration marking of the aircraft (e.g. EIAKO, 4XBCD, N2567GA), when:

- 1) in radiotelephony the call sign to be used by the aircraft will consist of this identification alone (e.g. ~~OO~~TEK CGAJS), or preceded by the ICAO telephony designator for the aircraft operating agency (e.g. ~~SABENA~~ ~~OO~~TEK BLIZZARD CGAJS);
- 2) the aircraft is not equipped with radio;

OR b) the ICAO designator for the aircraft operating agency followed by the flight identification (e.g. KLM511, NGA213, JTR25) when in radiotelephony the call sign to be used by the aircraft will consist of the ICAO telephony designator for the operating agency followed by the flight identification (e.g. KLM511, NIGERIA 213, ~~HERBIE~~ JESTER 25);

Note 1.— Standards for nationality, common and registration marks to be used are contained in Annex 7, Chapter 2.

Note 2.— Provisions for the use of radiotelephony call signs are contained in Annex 10, Volume II, Chapter 5. ICAO designators and telephony designators for aircraft operating agencies are contained in Doc 8585 — Designators for Aircraft Operating Agencies, Aeronautical Authorities and Services.

ITEM 8: FLIGHT RULES AND TYPE OF FLIGHT (ONE OR TWO CHARACTERS)

Flight rules

INSERT one of the following letters to denote the category of flight rules with which the pilot intends to comply:

- I if it is intended that the entire flight will be operated under the IFR
- V if it is intended that the entire flight will be operated under the VFR
- Y if the flight initially will be operated under the IFR (first) and specify in Item 15 the point, followed by one or more subsequent changes of flight rules or
- Z if the flight initially will be operated under the VFR (first), followed by one or more subsequent changes of flight rules

Specify in Item 15 the point or points at which a change of flight rules is planned.

Type of flight

INSERT one of the following letters to denote the type of flight when so required by the appropriate ATS authority:

- S if scheduled air service
- N if non-scheduled air transport operation
- G if general aviation
- M if military
- X if other than any of the defined categories above.

Specify status of a flight following the indicator STS in Item 18, or when necessary to denote other reasons for specific handling by ATS, indicate the reason following the indicator RMK in Item 18.

...

ITEM 10: EQUIPMENT AND CAPABILITIES

Capabilities comprise the following elements:

- a) presence of relevant serviceable equipment on board the aircraft;
- b) equipment and capabilities commensurate with flight crew qualifications; and
- c) where applicable, authorization from the appropriate authority.

Radio communication, navigation and approach aid equipment and capabilities

INSERT one letter as follows:

N if no COM/NAV/approach aid equipment for the route to be flown is carried, or the equipment is unserviceable,

OR S if standard COM/NAV/approach aid equipment for the route to be flown is carried and serviceable (see Note 1),

AND/OR

INSERT one or more of the following letters to indicate the serviceable COM/NAV/approach aid equipment and capabilities available and serviceable:

A	(Not allocated) GBAS landing system	J7	CPDLC FANS 1/A SATCOM (Iridium)
B	(Not allocated) LPV (APV with SBAS)	K	(MLS)
C	LORAN C	L	ILS
D	DME	M1	Omega ATC RTF SATCOM (INMARSAT)
E1	(Not allocated) FMC WPR ACARS	M2	ATC RTF (MTSAT)
E2	D-FIS ACARS	M3	ATC RTF (Iridium)
E3	PDC ACARS	O	VOR
F	ADF	P1-P9	(Not allocated) Reserved for RCP
G	(GNSS) (See Note 2)	Q	(Not allocated)
H	HF RTF	R	RNP type certification PBN approved (see Note 54)
I	Inertial Navigation	T	TACAN
J1	(Data Link) CPDLC ATN VDL Mode 2 (See Note 3)	U	UHF RTF
J2	CPDLC FANS 1/A HFDL	V	VHF RTF
J3	CPDLC FANS 1/A VDL Mode A	W	RVSM approved
J4	CPDLC FANS 1/A VDL Mode 2	X	MNPS approved
J5	CPDLC FANS 1/A SATCOM (INMARSAT)	Y	when prescribed by ATS VHF with 8.33 kHz channel spacing capability
J6	CPDLC FANS 1/A SATCOM (MTSAT)	Z	Other equipment carried or other capabilities (see Note 25)

Any alphanumeric characters not indicated above are reserved.

Note 1.— If the letter S is used, standard equipment is considered to be VHF RTF, ~~ADF~~, VOR and ILS, unless another combination is prescribed by the appropriate ATS authority.

Note 2.— If the letter G is used, the types of external GNSS augmentation, if any, are specified in Item 18 following the indicator NAV/ and separated by a space.

Note ~~25~~ 4.— If the letter Z is used, specify in Item 18 the other equipment carried or other capabilities, preceded by COM/ ~~and/or~~, NAV/ and/or DAT, as appropriate.

Note 3.— ~~If the letter J is used, specify in Item 18 the equipment carried, preceded by DAT/ followed by one or more letters as appropriate. See RTCA/EUROCAE Interoperability Requirements Standard For ATN Baseline 1 (ATN B1 INTEROP Standard – DO-280B/ED-110B) for data link services air traffic control clearance and information/air traffic control communications management/air traffic control microphone check.~~

Note ~~46~~ 5.— Information on navigation capability is provided to ATC for clearance and routing purposes.

Note ~~54~~ 4.— ~~Inclusion of~~ If the letter R is used, the performance based navigation levels that can be met are specified in Item 18 following the indicator PBN/. Guidance material on the application of performance based navigation to a specific ~~indicates that an aircraft meets the RNP type prescribed for the route segment(s), route(s) and/or area concerned~~ is contained in the Performance-Based Navigation Manual (Doc 9613).

Surveillance equipment and capabilities

INSERT N if no surveillance equipment for the route to be flown is carried, or the equipment is unserviceable,

OR

INSERT one or ~~two~~ more of the following letters/descriptors, to a maximum of 20 characters, to describe the serviceable surveillance equipment ~~carried~~ and/or capabilities on board:

~~SSR equipment~~ SSR Modes A and C

— N Nil

A Transponder — Mode A (4 digits — 4 096 codes)

C Transponder — Mode A (4 digits — 4 096 codes) and Mode C

SSR Mode S

— ~~X Transponder — Mode S without both aircraft identification and pressure-altitude transmission~~

E Transponder — Mode S, including aircraft identification, pressure-altitude and extended squitter (ADS-B) capability

H Transponder — Mode S, including aircraft identification, pressure-altitude and enhanced surveillance capability

I Transponder — Mode S, including aircraft identification, but no pressure-altitude capability

L Transponder — Mode S, including aircraft identification, pressure-altitude, extended squitter (ADS-B) and enhanced surveillance capability

P Transponder — Mode S, including pressure-altitude, but no aircraft identification

~~transmission capability~~	
~~I~~	~~Transponder — Mode S, including aircraft identification transmission, but no pressure altitude transmission~~
S	Transponder — Mode S, including both pressure altitude and aircraft identification transmission capability
X	Transponder — Mode S with neither aircraft identification nor pressure-altitude capability

Note.— Enhanced surveillance capability is the ability of the aircraft to down-link aircraft derived data via a Mode S transponder.

ADS-B

B1	ADS-B with dedicated 1090 MHz ADS-B “out” capability
B2	ADS-B with dedicated 1090 MHz ADS-B “out” and “in” capability
U1	ADS-B “out” capability using UAT
U2	ADS-B “out” and “in” capability using UAT
V1	ADS-B “out” capability using VDL Mode 4
V2	ADS-B “out” and “in” capability using VDL Mode 4

ADS-C

D1	ADS-C with FANS 1/A capabilities
G1	ADS-C with ATN capabilities

ADS equipment

~~— D —~~ ADS capability

Alphanumeric characters not indicated above are reserved.

Example: ADE3RV/HB2U2V2G1

Note.— Additional surveillance application should be listed in Item 18 following the indicator SUR/ .

ITEM 13: DEPARTURE AERODROME AND TIME (8 CHARACTERS)

INSERT the ICAO four-letter location indicator of the departure aerodrome as specified in Doc 7910, Location Indicators,

OR, if no location indicator has been assigned,

INSERT ZZZZ and *SPECIFY*, in Item 18, the name and location of the aerodrome preceded by DEP/ ,

OR, the first point of the route or the marker radio beacon preceded by DEP/..., if the aircraft has not taken off from the aerodrome,

OR, if the flight plan is received from an aircraft in flight,

INSERT AFIL, and *SPECIFY*, in Item 18, the ICAO four-letter location indicator of the location of the ATS unit from which supplementary flight plan data can be obtained, preceded by DEP/ .

THEN, WITHOUT A SPACE,

INSERT for a flight plan submitted before departure, the estimated off-block time (EOBT),

OR, for a flight plan received from an aircraft in flight, the actual or estimated time over the first point of the route to which the flight plan applies.

ITEM 15: ROUTE

INSERT the *first cruising speed* as in (a) and the *first cruising level* as in (b), without a space between them.

THEN, following the arrow, *INSERT* the route description as in (c).

(a) Cruising speed (maximum 5 characters)

INSERT the *True Air Speed* for the first or the whole cruising portion of the flight, in terms of:

Kilometres per hour, expressed as K followed by 4 figures (e.g. K0830), *or*

Knots, expressed as N followed by 4 figures (e.g. N0485), *or*

True Mach number, when so prescribed by the appropriate ATS authority, to the nearest hundredth of unit Mach, expressed as M followed by 3 figures (e.g. M082).

(b) Cruising level (maximum 5 characters)

INSERT the planned cruising level for the first or the whole portion of the route to be flown, in terms of:

Flight level, expressed as F followed by 3 figures (e.g. F085; F330), *or*

**Standard Metric Level in tens of metres*, expressed as S followed by 4 figures (e.g. S1130), *or*

Altitude in hundreds of feet, expressed as A followed by 3 figures (e.g. A045; A100), *or*

Altitude in tens of metres, expressed as M followed by 4 figures (e.g. M0840), *or*

for uncontrolled VFR flights, the letters VFR.

*When so prescribed by the appropriate ATS authorities.

(c) Route (including changes of speed, level and/or flight rules)

Flights along designated ATS routes

INSERT, if the departure aerodrome is located on or connected to the ATS route, the designator of the first ATS route,

OR, if the departure aerodrome is not on or connected to the ATS route, the letters DCT followed by the point of joining the first ATS route, followed by the designator of the ATS route.

THEN

INSERT each point at which either a change of speed and/or level is planned to commence, or a change of ATS route, and/or a change of flight rules is planned,

Note.— When a transition is planned between a lower and upper ATS route and the routes are oriented in the same direction, the point of transition need not be inserted.

FOLLOWED IN EACH CASE

OR by the designator of the next ATS route segment, even if the same as the previous one, by DCT, if the flight to the next point will be outside a designated route, unless both points are defined by geographical coordinates.

Flights outside designated ATS routes

INSERT points normally not more than 30 minutes flying time or 370 km (200 NM) apart, including each point at which a change of speed or level, a change of track, or a change of flight rules is planned.

OR, when required by appropriate ATS authority(ies),

DEFINE the track of flights operating predominantly in an east-west direction between 70°N and 70°S by reference to significant points formed by the intersections of half or whole degrees of latitude with meridians spaced at intervals of 10 degrees of longitude. For flights operating in areas outside those latitudes the tracks shall be defined by significant points formed by the intersection of parallels of latitude with meridians normally spaced at 20 degrees of longitude. The distance between significant points shall, as far as possible, not exceed one hour's flight time. Additional significant points shall be established as deemed necessary.

For flights operating predominantly in a north-south direction, define tracks by reference to significant points formed by the intersection of whole degrees of longitude with specified parallels of latitude which are spaced at 5 degrees.

INSERT DCT between successive points unless both points are defined by geographical coordinates or by bearing and distance.

USE ONLY the conventions in (1) to (5) below and SEPARATE each sub-item by a space.

(1)

The coded designator assigned to the route or route segment including, where appropriate, the coded designator assigned to the standard departure or arrival route (e.g. BCN1, BI, R14, UB10, KODAP2A).

Note.— Provisions for the application of route designators are contained in Annex 11, Appendix 1; whilst guidance material on the application of an RNP type to a specific route segment(s), route(s) or area is contained in the Manual on Required Navigation Performance (RNP) (Doc 9613).

(2) Significant point (2 to 11 characters)

The coded designator (2 to 5 characters) assigned to the point (e.g. LN, MAY, HADDY), or, if no coded designator has been assigned, one of the following ways:

— *Degrees only* (7 characters):

2 figures describing latitude in degrees, followed by “N” (North) or “S” (South), followed by 3 figures describing longitude in degrees, followed by “E” (East) or “W” (West). Make up the correct number of figures, where necessary, by insertion of zeros, e.g. 46N078W.

— *Degrees and minutes* (11 characters):

4 figures describing latitude in degrees and tens and units of minutes followed by “N” (North) or “S” (South), followed by 5 figures describing longitude in degrees and tens and units of minutes, followed by “E” (East) or “W” (West). Make up the correct number of figures, where necessary, by insertion of zeros, e.g. 4620N07805W.

— *Bearing and distance from a navigation aid significant point:*

The identification of the navigation aid (normally a VOR) significant point, in the form of 2 or 3 characters, THEN followed by the bearing from the aid point in the form of 3 figures giving degrees magnetic, THEN followed by the distance from the aid point in the form of 3 figures expressing nautical miles. In areas of high latitude where it is determined by the appropriate authority that reference to degrees magnetic is impractical, degrees true may be used. Make up the correct number of figures, where necessary, by insertion of zeros — e.g. a point 180° magnetic at a distance of 40 nautical miles from VOR “DUB” should be expressed as DUB180040.

(3) Change of speed or level
(maximum 21 characters)

The point at which a change of speed (5% TAS or 0.01 Mach or more) or a change of level is planned to commence, expressed exactly as in (2) above, followed by an oblique stroke and both the cruising speed and the cruising level, expressed exactly as in (a) and (b) above, without a space between them, even when only one of these quantities will be changed.

Examples: LN/N0284A045
MAY/N0305F180
HADDY/N0420F330
4602N07805W/N0500F350
46N078W/M082F330
DUB180040/N0350M0840

(4) Change of flight rules
(maximum 3 characters)

The point at which the change of flight rules is planned, expressed exactly as in (2) or (3) above as appropriate, followed by a space and one of the following:

VFR if from IFR to VFR

IFR if from VFR to IFR

Examples: LN VFR

LN/N0284A050 IFR

(5) Cruise climb (maximum 28 characters)

The letter C followed by an oblique stroke; THEN the point at which cruise climb is planned to start, expressed exactly as in (2) above, followed by an oblique stroke; THEN the speed to be maintained during cruise climb, expressed exactly as in (a) above, followed by the two levels defining the layer to be occupied during cruise climb, each level expressed exactly as in (b) above, or the level above which cruise climb is planned followed by the letters PLUS, without a space between them.

Examples: C/48N050W/M082F290F350

C/48N050W/M082F290PLUS

C/52N050W/M220F580F620.

**ITEM 16: DESTINATION AERODROME AND
TOTAL ESTIMATED ELAPSED TIME,
DESTINATION ALTERNATE AERODROME(S)**

Destination aerodrome and total
estimated elapsed time (8 characters)

INSERT the ICAO four-letter location indicator of the destination aerodrome followed, without a space, by the total estimated elapsed time as specified in Doc 7910, *Location Indicators*,

OR , if no location indicator has been assigned,

INSERT ZZZZ followed, without a space, by the total estimated elapsed time, and *SPECIFY* in Item 18 the name and location of the aerodrome, preceded by DEST/ .

THEN WITHOUT A SPACE

INSERT the total estimated elapsed time.

Note.— For a flight plan received from an aircraft in flight, the total estimated elapsed time is the estimated time from the first point of the route to which the flight plan applies to the termination point of the flight plan.

Destination Alternate aerodrome(s) (4 characters)

INSERT the ICAO four-letter location indicator(s) of not more than two destination alternate aerodromes, as specified in Doc 7910, *Location Indicators*, separated by a space,

OR, if no location indicator has been assigned to the destination alternate aerodrome(s),

INSERT ZZZZ and *SPECIFY* in Item 18 the name and location of the destination alternate aerodrome(s), preceded by ALTN/ .

ITEM 18: OTHER INFORMATION

Note.— Use of indicators not included under this item may result in data being rejected, processed incorrectly or lost.

Hyphens or oblique strokes should only be used as prescribed below.

INSERT 0 (zero) if no other information,

OR, any other necessary information in the preferred sequence shown hereunder, in the form of the appropriate indicator selected from those defined hereunder followed by an oblique stroke and the information to be recorded:

STS/ Reason for special handling by ATS, e.g. a search and rescue mission, as follows:

ALTRV: for a flight operated in accordance with an altitude reservation;

ATFMX: for a flight approved for exemption from ATFM measures by the appropriate ATS authority;

FFR: fire-fighting;

FLTCK: flight check for calibration of nav aids;

HAZMAT: for a flight carrying hazardous material;

HEAD: a flight with Head of State status;

HOSP: for a medical flight declared by medical authorities;

HUM: for a flight operating on a humanitarian mission;

MARSA: for a flight for which a military entity assumes responsibility for separation of military aircraft;

MEDEVAC: for a life critical medical emergency evacuation;

NONRVSM: for a non-RVSM capable flight intending to operate in RVSM airspace;

SAR: for a flight engaged in a search and rescue mission; and

STATE: for a flight engaged in military, customs or police services.

Other reasons for special handling by ATS shall be denoted under the designator RMK/.

PBN/ Indication of RNAV and/or RNP capabilities. Include as many of the descriptors below, as apply to the flight, up to a maximum of 8 entries, i.e. a total of not more than 16 characters.

	RNAV SPECIFICATIONS
A1	RNAV 10 (RNP 10)
B1	RNAV 5 all permitted sensors
B2	RNAV 5 GNSS
B3	RNAV 5 DME/DME
B4	RNAV 5 VOR/DME
B5	RNAV 5 INS or IRS
B6	RNAV 5 LORANC
C1	RNAV 2 all permitted sensors
C2	RNAV 2 GNSS

C3	RNAV 2 DME/DME
C4	RNAV 2 DME/DME/IRU
D1	RNAV 1 all permitted sensors
D2	RNAV 1 GNSS
D3	RNAV 1 DME/DME
D4	RNAV 1 DME/DME/IRU
	RNP SPECIFICATIONS
L1	RNP 4
O1	Basic RNP 1 all permitted sensors
O2	Basic RNP 1 GNSS
O3	Basic RNP 1 DME/DME
O4	Basic RNP 1 DME/DME/IRU
S1	RNP APCH
S2	RNP APCH with BARO-VNAV
T1	RNP AR APCH with RF (special authorization required)
T2	RNP AR APCH without RF (special authorization required)

Combinations of alphanumeric characters not indicated above are reserved.

~~EET/ — Significant points or FIR boundary designators and accumulated estimated elapsed times to such points or FIR boundaries, when so prescribed on the basis of regional air navigation agreements, or by the appropriate ATS authority.~~

~~Examples: EET/CAP0745 XYZ0830
EET/EINN0204~~

~~RIF/ — The route details to the revised destination aerodrome, followed by the ICAO four letter location indicator of the aerodrome. The revised route is subject to reclearance in flight.~~

~~Examples: RIF/DTA HEC KLAX
Examples: RIF/ESP G94 CLA YPPH
Examples: RIF/LEMD~~

~~REG/ — The registration markings of the aircraft, if different from the aircraft identification in Item 7.~~

~~SEL/ — SELCAL Code, if so prescribed by the appropriate ATS authority.~~

~~OPR/ — Name of the operator, if not obvious from the aircraft identification in Item 7.~~

~~STS/ — Reason for special handling by ATS, e.g. hospital aircraft, one engine inoperative, e.g. STS/HOSP, STS/ONE ENG INOP.~~

~~TYP/ — Type(s) of aircraft, preceded if necessary by number(s) of aircraft, if ZZZZ is inserted in Item 9.~~

~~PER/ — Aircraft performance data, if so prescribed by the appropriate ATS authority.~~

~~COM/ Significant data related to communication equipment as required by the appropriate ATS authority, e.g. COM/UHF only.~~

~~DAT/ Significant data related to data link capability, using one or more of the letters S, H, V and M, e.g. DAT/S for satellite data link, DAT/H for HF data link, DAT/V for VHF data link, DAT/M for SSR Mode S data link.~~

NAV/ Significant data related to navigation equipment, other than specified in PBN/, as required by the appropriate ATS authority. Indicate GNSS augmentation under this indicator, with a space between two or more methods of augmentation, e.g. NAV/GBAS SBAS.

COM/ Indicate communications applications or capabilities not specified in Item 10a.

DAT/ Indicate data applications or capabilities not specified in 10a.

SUR/ Include surveillance applications or capabilities not specified in Item 10b.

DEP/ Name and location of departure aerodrome, if ZZZZ is inserted in Item 13, or the ICAO four-letter location indicator of the location of the ATS unit from which supplementary flight plan data can be obtained, if AFIL is inserted in Item 13. For aerodromes not listed in the relevant Aeronautical Information Publication, indicate location as follows:

With 4 figures describing latitude in degrees and tens and units of minutes followed by “N” (North) or “S” (South), followed by 5 figures describing longitude in degrees and tens and units of minutes, followed by “E” (East) or “W” (West). Make up the correct number of figures, where necessary, by insertion of zeros, e.g. 4620N07805W (11 characters).

OR, Bearing and distance from the nearest significant point, as follows:

The identification of the significant point followed by the bearing from the point in the form of 3 figures giving degrees magnetic, followed by the distance from the point in the form of 3 figures expressing nautical miles. In areas of high latitude where it is determined by the appropriate authority that reference to degrees magnetic is impractical, degrees true may be used. Make up the correct number of figures, where necessary, by insertion of zeros, e.g. a point of 180° magnetic at a distance of 40 nautical miles from VOR “DUB” should be expressed as DUB180040.

OR, The first point of the route (name or LAT/LONG) or the marker radio beacon, if the aircraft has not taken off from an aerodrome.

DEST/ Name and location of destination aerodrome, if ZZZZ is inserted in Item 16. For aerodromes not listed in the relevant Aeronautical Information Publication, indicate location in LAT/LONG or bearing and distance from the nearest significant point, as described under DEP/ above.

DOF/ The date of flight departure in a six figure format (YYMMDD, where YY equals the year, MM equals the month and DD equals the day).

REG/ The nationality or common mark and registration mark of the aircraft, if different from the aircraft identification in Item 7.

EET/ Significant points or FIR boundary designators and accumulated estimated elapsed times from take-off to such points or FIR boundaries, when so prescribed on the basis of regional air navigation agreements, or by the appropriate ATS authority.

Examples: EET/CAP0745 XYZ0830
EET/EINN0204

SEL/ SELCAL Code, for aircraft so equipped.

TYP/ Type(s) of aircraft, preceded if necessary without a space by number(s) of aircraft and separated by one space, if ZZZZ is inserted in Item 9.

Example: TYP/2F15 5F5 3B2

~~ALTN/ Name of destination alternate aerodrome(s), if ZZZZ is inserted in Item 16.~~

~~RALT/ Name of en-route alternate aerodrome(s).~~

CODE/ Aircraft address (expressed in the form of an alphanumeric code of six hexadecimal characters) when required by the appropriate ATS authority. Example: "F00001" is the lowest aircraft address contained in the specific block administered by ICAO.

DLE/ Enroute delay or holding, insert the significant point(s) on the route where a delay is planned to occur, followed by the length of delay using four figure time in hours and minutes (hhmm).

Example: DLE/MDG0030

OPR/ ICAO designator or name of the aircraft operating agency, if different from the aircraft identification in item 7.

ORGN/ The originator's 8 letter AFTN address or other appropriate contact details, in cases where the originator of the flight plan may not be readily identified, as required by the appropriate ATS authority.

Note.— In some areas, flight plan reception centres may insert the ORGN/ identifier and originator's AFTN address automatically.

PER/ Aircraft performance data, indicated by a single letter as specified in the *Procedures for Air Navigation Services — Aircraft Operations* (PANS-OPS, Doc 8168), *Volume I — Flight Procedures*, if so prescribed by the appropriate ATS authority.

ALTN/ Name of destination alternate aerodrome(s), if ZZZZ is inserted in Item 16. For aerodromes not listed in the relevant Aeronautical Information Publication, indicate location in LAT/LONG or bearing and distance from the nearest significant point, as described in DEP/ above.

RALT/ ICAO four letter indicator(s) for en-route alternate(s), as specified in Doc 7910, *Location Indicators*, or name(s) of en-route alternate aerodrome(s), if no indicator is allocated. For aerodromes not listed in the relevant Aeronautical Information Publication, indicate location in LAT/LONG or bearing and distance from the nearest significant point, as described in DEP/ above.

TALT/ ICAO four letter indicator(s) for take-off alternate, as specified in Doc 7910, *Location Indicators*, or name of take-off alternate aerodrome, if no indicator is allocated. For aerodromes

not listed in the relevant Aeronautical Information Publication, indicate location in LAT/LONG or bearing and distance from the nearest significant point, as described in DEP/ above.

RIF/ The route details to the revised destination aerodrome, following by the ICAO four-letter location indicator of the aerodrome. The revised route is subject to reclearance in flight.

Examples: RIF/DTA HEC KLAX
RIF/ESP G94 CLA YPPH

RMK/ Any other plain language remarks when required by the appropriate ATS authority or deemed necessary.

ITEM 19: SUPPLEMENTARY INFORMATION

...

4. Instructions for the transmission of a supplementary flight plan (SPL) message

Items to be transmitted

Transmit items as indicated hereunder, unless otherwise prescribed:

- a) AFTN Priority Indicator, Addressee Indicators <<≡, Filing Time, Originator Indicator <<≡ and, if necessary, specific identification of addressees and/or originator;
- b) commencing with <<≡ (SPL:

all symbols and data in the unshaded areas of boxes 7, 13, 16 and 18, except that the ‘)’ at the end of box 18 is *not* to be transmitted, and then the symbols in the unshaded area of box 19 down to and including the)<<≡ of box 19,

additional alignment functions as necessary to prevent the inclusion of more than 69 characters in any line of Items 18 and 19. The alignment function is to be inserted only in lieu of a space, so as not to break up a group of data,

letter shifts and figure shifts (not pre-printed on the form) as necessary;

- c) the AFTN Ending, as described below:

End-of-Text Signal

- a) one LETTER SHIFT
- b) two CARRIAGE RETURNS, one LINE FEED

Page-feed Sequence

Seven LINE FEEDS

End-of-Message Signal

Four of the letter N.

...

**7. Instructions for the completion of
the repetitive flight plan (RPL) listing form**

...

7.4 Instructions for insertion of RPL data

...

ITEM G: SUPPLEMENTARY DATA AT

INSERT name and appropriate contact details of contact entity where information normally provided under Item 19 of the FPL is kept readily available and can be supplied without delay.

...

APPENDIX 3. AIR TRAFFIC SERVICES MESSAGES

1. Message contents, formats and data conventions

...

1.2 The standard types of field

...

The standard fields of data permitted in ATS messages are as shown in the following table. The numbers in column 1 correspond with those in the reference table on page A3-30.

<i>Field type</i>	<i>Data</i>
3	Message type, number and reference data
5	Description of emergency
7	Aircraft identification and SSR Mode and Code
8	Flight rules and type of flight
9	Number and type of aircraft and wake turbulence category
10	Equipment and capabilities
13	Departure aerodrome and time
14	Estimate data
15	Route
16	Destination aerodrome and total estimated elapsed time, destination alternate aerodrome(s)
17	Arrival aerodrome and time
18	Other information
19	Supplementary information
20	Alerting search and rescue information
21	Radio failure information
22	Amendment

...

1.6 Data conventions

...

1.6.3 The expression of position or route

The following alternative data conventions shall be used for the expression of position or route:

- from 2 to 7 characters, being the coded designator assigned to an ATS route to be flown;
- from 2 to 5 characters, being the coded designator assigned to an en-route point;

- c) 4 numerics describing latitude in degrees and tens and units of minutes, followed by “N” (meaning “North”) or “S” (South), followed by 5 numerics describing longitude in degrees and tens and units of minutes, followed by “E” (East) or “W” (West). The correct number of numerics is to be made up, where necessary, by the insertion of zeros, e.g. “4620N07805W”;
- d) 2 numerics describing latitude in degrees, followed by “N” (North) or “S” (South), followed by 3 numerics describing longitude in degrees, followed by “E” (East) or “W” (West). Again, the correct number of numerics is to be made up, where necessary, by the insertion of zeros, e.g. “46N078W”;
- e) 2 or 3 to 5 characters being the coded identification of a ~~navigation aid (normally a VOR)~~ significant point, followed by 3 decimal numerics giving the bearing from the point in degrees magnetic followed by 3 decimal numerics giving the distance from the point in nautical miles. The correct number of numerics is to be made up, where necessary, by the insertion of zeros, e.g. a point at 180° magnetic at a distance of 40 nautical miles from VOR “FOJ” would be expressed as “FOJ180040”.

...

Field Type 8 — Flight rules and type of flight

Format:— ^{*}
a b

SINGLE HYPHEN

(a)	<i>Flight Rules</i> 1 LETTER as follows: I if ~~IFR~~ it is intended that the entire flight will be operated under the IFR V if ~~VFR~~ it is intended that the entire flight will be operated under the VFR Y if ~~IFR first~~ the flight initially will be operated under the IFR, followed by one or more subsequent changes of flight rules Z if ~~VFR first~~ the flight initially will be operated under the VFR, followed by one or more subsequent changes of flight rules <i>Note.— If the letter Y or Z is used, the point or points at which a change of flight rules is planned is to be shown as indicated in Field Type 15.</i>

- * This field shall be terminated here unless indication of the type of flight is required by the appropriate ATS authority.

...

Field Type 10 — Equipment and Capabilities

Format:— a / b

SINGLE HYPHEN

(a) Radio Communication, Navigation and Approach Aid Equipment and Capabilities	
	1 LETTER as follows:
N	no COM/NAV/approach aid equipment for the route to be flown is carried, or the equipment is unserviceable
OR	S Standard COM/NAV/approach aid equipment for the route to be flown is carried and serviceable (<i>See Note 1</i>)
AND/OR	ONE OR MORE OF THE FOLLOWING LETTERS to indicate the serviceable COM/NAV/approach aid equipment serviceable and capabilities
A	(Not allocated) GBAS landing system J7 CPDLC FANS 1/A SATCOM (Iridium)
B	(Not allocated) LPV (APV with SBAS) K (MLS) L ILS
C	LORAN C M1 Omega ATC RTF SATCOM
D	DME (INMARSAT)
E1	(Not allocated) FMC WPR M2 ATC RTF (MTSAT)
	ACARS M3 ATC RTF (Iridium)
E2	D-FIS ACARS O VOR
E3	PDC ACARS P1-P9 (Not allocated) Reserved for RCP
F	ADF Q
G	(GNSS) (<i>See Note 2</i>) R (Not allocated)
H	HF RTF RNP type certification PBN approved
I	Inertial Navigation (see Note 54)
J1	(Data link) CPDLC ATN VDL T TACAN
	Mode 2 (see Note 3) U UHF RTF
J2	CPDLC FANS 1/A HF DL V VHF RTF
J3	CPDLC FANS 1/A VDL W RVSM approved
	Mode A X MNPS approved
J4	CPDLC FANS 1/A VDL Y when prescribed by ATS VHF with 8.33 kHz channel spacing capability
J5	CPDLC FANS 1/A SATCOM Z Other equipment carried or other capabilities (see Note 25)
J6	CPDLC FANS 1/A SATCOM (MTSAT)
<i>Note 1.— If the letter S is used, standard equipment is considered to be VHF RTF, ADF, VOR and ILS, unless another combination is prescribed by the appropriate ATS authority.</i> <i>Note 2.— If the letter G is used, the types of external GNSS augmentation, if any, are specified in Item 18 following the indicator NAV/ separated by a space.</i> <i>Note 25.— If the letter Z is used, specify in Item 18 the other the equipment carried or other capabilities is to be specified in Item 18, preceded by COM/ , and/or NAV/ and/or DAT, as appropriate.</i> <i>Note 3.— If the letter J is used, specify in Item 18 the equipment carried, preceded by DAT/ followed by one or more letters as appropriate. See RTCA/EUROCAE Interoperability Requirements Standard For ATN Baseline 1 (ATN B1 INTEROP Standard – DO-280B/ED-110B) for data link services air traffic control clearance and information/air traffic control communications management/air traffic control microphone check.</i>	

~~Note 46.~~— Information on navigation capability is provided to ATC for clearance and routing purposes.

~~Note 54.~~— ~~Inclusion of~~ If the letter R is used, the performance based navigation levels that can be met are specified in Item 18 following the indicator PBN/. Guidance material on the application of performance-based navigation to a specific ~~indicates that an aircraft meets the RNP type prescribed for the route segment(s), route(s) and/or area concerned is contained in the Performance-Based Navigation Manual (Doc 9613).~~

OBLIQUE STROKE

(b) *Surveillance Equipment and capabilities*

ONE OR ~~TWO LETTERS~~ MORE of the following descriptors, to a maximum of 20 characters, to describe the serviceable surveillance equipment ~~carried~~ and/or capabilities on board:

SSR equipment Modes A and C

~~N Nil~~

A Transponder — Mode A (4 digits — 4 096 codes)

C Transponder — Mode A (4 digits — 4 096 codes) and Mode C

SSR Mode S

~~X Transponder — Mode S without both aircraft identification and pressure-altitude transmission~~

E Transponder — Mode S, including aircraft identification, pressure-altitude and extended squitter (ADS-B) capability

H Transponder — Mode S, including aircraft identification, pressure-altitude and enhanced surveillance capability

I Transponder — Mode S, including aircraft identification, but no pressure-altitude capability

L Transponder — Mode S, including aircraft identification, pressure-altitude, extended squitter (ADS-B) and enhanced surveillance capability

P Transponder — Mode S, including pressure-altitude, but no aircraft identification ~~transmission~~ capability

~~I Transponder — Mode S, including aircraft identification transmission, but no pressure-altitude transmission~~

S Transponder — Mode S, including both pressure altitude and aircraft identification ~~transmission~~ capability

X Transponder — Mode S with neither aircraft identification nor pressure-altitude capability

Note.— Enhanced surveillance capability is the ability of the aircraft to down-link aircraft derived data via a Mode S transponder.

ADS-B

B1 ADS-B with dedicated 1090 MHz ADS-B “out” capability

B2 ADS-B with dedicated 1090 MHz ADS-B “out” and “in” capability

U1	ADS-B “out” capability using UAT
U2	ADS-“out” and “in” capability using UAT
V1	ADS-B “out” capability using VDL Mode 4
V2	ADS-B “out” and “in” capability using VDL Mode 4

ADS-C

D1	ADS-C with FANS I/A capabilities
G1	ADS-C with ATN capabilities

ADS equipment

D — ADS capability

Alphanumeric characters not indicated above are reserved.

Note.— Additional surveillance application should be listed in Item 18 following the indicator SUR/ .

Examples: –S/A

–SCHJ/CDB1

–SAFJR/SØV1

...

Field Type 13 — Departure aerodrome and time

Format:–

	a				b		

SINGLE HYPHEN**(a) Departure Aerodrome**

4 LETTERS, being

the ICAO four-letter location indicator allocated to the departure aerodrome as specified in Doc 7910, *Location Indicators*, or

ZZZZ if no ICAO location indicator has been allocated (*see Note 1*) or if the departure aerodrome is not known, or

AFIL if the flight plan has been filed in the air (*see Note 2*).

Note 1.— If ZZZZ is used, the name and location of the departure aerodrome is to be shown in the Other Information Field (see Field Type 18) if this Field Type is contained in the message.

Note 2.— If AFIL is used, the ATS unit from which supplementary flight data can be obtained is to be shown in the Other Information Field (Field Type 18).

- * This field shall be terminated here in message types ~~CHG, CNL, ARR, CPL, EST, CDN, and ACP and RQS~~. It shall be terminated here in message type RQP if the estimated off-block time is not known.

(b) *Time*

4 NUMERICS giving

the estimated off-block time (EOBT) at the aerodrome in (a) in FPL, ARR, CHG, CNL, ~~and DLA and RQS~~ messages transmitted before departure and in RQP message, if known, or

the actual time of departure from the aerodrome in (a) in ALR, DEP and SPL messages, or

the actual or estimated time of departure from the first point shown in the Route Field (see Field Type 15) in FPL messages derived from flight plans filed in the air, as shown by the letters AFIL in (a).

Examples: –EHAM0730

–AFIL1625

...

Field Type 14 — Estimate data

Format:–

a

 /

b					

^{*}

c

d

e

SINGLE HYPHEN

(a) *Boundary Point (see Note 1)*

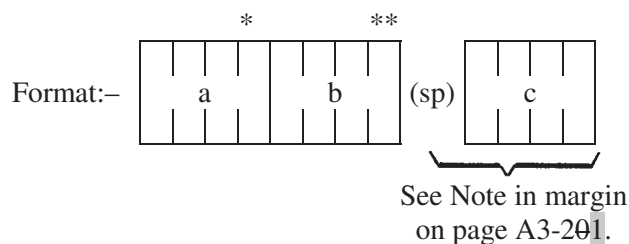
The BOUNDARY POINT expressed either by a designator consisting of 2 to 5 characters, in Geographical Coordinates, in Abbreviated Geographical Coordinates, or by bearing and distance from a ~~designated significant point (e.g. a VOR)~~.

Note 1.— This point may be an agreed point located close to, rather than on, the FIR boundary.

Note 2.— See 1.6 for data conventions.

...

Field Type 16 — Destination aerodrome and total estimated elapsed time, destination alternate aerodrome(s)



FIELD TYPE 16

<i>Previous type of field or symbol</i>	<i>This type of field is used in</i>	<i>Next type of field or symbol</i>
15	ALR	18
15	FPL	18
13	CHG	~~22~~ 18
13	CNL	~~18~~
13	DLA	~~18~~
13	DEP	~~18~~
13	ARR***	17
15	CPL	18
14	EST	)
13	CDN	22
13	ACP	)
13	RQS	~~18~~
13	SPL	18

*** Only in case of a diversionary landing.

SINGLE HYPHEN

(a) *Destination Aerodrome*

4 LETTERS, being

the ICAO four-letter location indicator allocated to the destination aerodrome as specified in Doc 7910, *Location Indicators*, or

ZZZZ if no ICAO location indicator has been allocated.

Note.— If ZZZZ is used, the name and location of the destination aerodrome is to be shown in the Other Information Field (see Field Type 18).

* This field is to be terminated here in all message types other than ALR, FPL and SPL.

...

SPACE

(c) <i>Destination Alternate Aerodrome(s)</i> 4 LETTERS, being the ICAO four-letter location indicator allocated to an alternate aerodrome, as specified in Doc 7910, <i>Location Indicators</i> or ZZZZ if no ICAO location indicator has been allocated. <i>Note.— If ZZZZ is used, the name and location of the destination alternate aerodrome is to be shown in the Other Information Field (see Field Type 18).</i>

Note.— One further element of (c) should be added, as necessary, preceded by a space

Examples: –EINN0630
 –EHAM0645 EBBR
 –EHAM0645 EBBR EDDL

Field Type 17 — Arrival aerodrome and time

Format:–

	a				b		

^{*} (sp)

	c	

SINGLE HYPHEN

(a) <i>Arrival Aerodrome</i> 4 LETTERS, being the ICAO four-letter location indicator allocated to the arrival aerodrome as specified in Doc 7910, <i>Location Indicators</i>, or ZZZZ if no ICAO location indicator has been allocated. <i>Note.— If ZZZZ is used, the name or location of the arrival aerodrome is to be shown in the Other Information Field (see Field Type 18).</i>
(b) <i>Time of Arrival</i> 4 NUMERICS, giving the actual time of arrival.

* This field is to be terminated here if an ICAO location indicator has been allocated to the arrival aerodrome.

Field Type 18 — Other information

Note.— Use of indicators not included under this item may result in data being rejected, processed incorrectly or lost.

Hyphens or oblique strokes should only be used as prescribed below.

Format:—

a

$$- \begin{matrix} or \\ \left[\quad \right] \end{matrix} \text{ (sp)} \begin{matrix} \left[\quad \right] \end{matrix} \text{ (sp)} * \text{ (sp)} \begin{matrix} \left[\quad \right] \end{matrix}$$

(* additional elements as necessary)

SINGLE HYPHEN

- (a) 0 (zero) if no other information,

OR,

Any other necessary information in the preferred-sequence shown hereunder, in the form of the appropriate indicator selected from those defined hereunder followed by an oblique stroke and the information to be recorded:

STS/	Reason for special handling by ATS, e.g. a search and rescue mission, as follows:

ALTRV: for a flight operated in accordance with an altitude reservation;

ATFMX: for a flight approved for exemption from ATFM measures by the appropriate ATS authority;

FFR: fire-fighting;

FLTCK: flight check for calibration of nav aids;

HAZMAT: for a flight carrying hazardous material;

HEAD: a flight with Head of State status;

HOSP: for a medical flight declared by medical authorities;

HUM: for a flight operating on a humanitarian mission;

MARSA: for a flight for which a military entity assumes responsibility for separation of military aircraft;

MEDEVAC: for a life critical medical emergency evacuation;

NONRVSM: for a non-RVSM capable flight intending to operate in RVSM airspace;

SAR: for a flight engaged in a search and rescue mission; and

STATE: for a flight engaged in military, customs or police services.

Other reasons for special handling by ATS shall be denoted under the designator RMK/.

PBN/	Indication of RNAV and/or RNP capabilities. Include as many of the descriptors below, as apply to the flight, up to a maximum of 8 entries, i.e. a total of not more than 16 characters.

	RNAV SPECIFICATIONS
A1	RNAV10 (RNP 10)
B1	RNAV 5 all permitted sensors
B2	RNAV 5 GNSS
B3	RNAV 5 DME/DME
B4	RNAV 5 VOR/DME
B5	RNAV 5 INS or IRS
B6	RNAV 5 LORANC
C1	RNAV 2 all permitted sensors
C2	RNAV 2 GNSS
C3	RNAV 2 DME/DME
C4	RNAV 2 DME/DME/IRU
D1	RNAV 1 all permitted sensors
D2	RNAV 1 GNSS
D3	RNAV 1 DME/DME
D4	RNAV 1 DME/DME/IRU
	RNP SPECIFICATIONS
L1	RNP 4
O1	Basic RNP 1 all permitted sensors
O2	Basic RNP 1 GNSS
O3	Basic RNP 1 DME/DME
O4	Basic RNP 1 DME/DME/IRU
S1	RNP APCH
S2	RNP APCH with BAR-VNAV
T1	RNP AR APCH with RF (special authorization required)
T2	RNP AR APCH without RF (special authorization required)

Combinations of alphanumeric characters not indicated above are reserved.

~~EET/~~ — Significant points or FIR boundary designators and accumulated estimated elapsed times to such points or FIR boundaries, when so prescribed on the basis of regional air navigation agreements, or by the appropriate ATS authority.

Examples: ~~EET/CAP0745 XYZ0830~~
~~EET/EINN0204~~

~~RIF/~~ — The route details to the revised destination aerodrome, followed by the ICAO four letter location indicator of the aerodrome. The revised route is subject to reclearance in flight.

Examples: ~~RIF/DTA HEC KLAX~~
~~RIF/ESP G94 CLA YPPH~~
~~RIF/LEMD~~

- ~~REG/ — The registration markings of the aircraft, if different from the aircraft identification in Item 7.~~
- ~~SEL/ — SELCAL Code, if so prescribed by the appropriate ATS authority.~~
- ~~OPR/ — Name of the operator, if not obvious from the aircraft identification in Item 7.~~
- ~~STS/ — Reason for special handling by ATS, e.g. hospital aircraft, one engine inoperative, e.g. STS/HOSP, STS/ONE ENG INOP.~~
- ~~TYP/ — Type(s) of aircraft, preceded if necessary by number(s) of aircraft, if ZZZZ is inserted in Item 9.~~
- ~~PER/ — Aircraft performance data, if so prescribed by the appropriate ATS authority.~~
- ~~COM/ — Significant data related to communication equipment as required by the appropriate ATS authority, e.g. COM/UHF only.~~
- ~~DAT/ — Significant data related to data link capability, using one or more of the letters S, H, V and M, e.g. DAT/S for satellite data link, DAT/H for HF data link, DAT/V for VHF data link, DAT/M for SSR Mode S data link.~~
- NAV/ Significant data related to navigation equipment, other than specified in PBN/, as required by the appropriate ATS authority. Indicate GNSS augmentation under this indicator, with a space between two or more methods of augmentation, e.g. NAV/GBAS SBAS.
- COM/ Indicate communications applications or capabilities not specified in Item 10a.
- DAT/ Indicate data applications or capabilities not specified in Item 10a.
- SUR/ Include surveillance applications or capabilities not specified in Item 10b.
- DEP/ Name and location of departure aerodrome, if ZZZZ is inserted in Item 13, or the ~~ICAO four-letter location indicator of the location of the~~ ATS unit from which supplementary flight plan data can be obtained, if AFIL is inserted in Item 13. For aerodromes not listed in the relevant Aeronautical Information Publication, indicate location as follows:
- With 4 figures describing latitude in degrees and tens and units of minutes followed by “N” (North) or “S” (South), followed by 5 figures describing longitude in degrees and tens and units of minutes, followed by “E” (East) or “W” (West). Make up the correct number of figures, where necessary, by insertion of zeros, e.g. 4620N07805W (11 characters).
- OR Bearing and distance from the nearest significant point, as follows:
- The identification of the significant point followed by the bearing from the point in the form of 3 figures giving degrees magnetic, followed by the distance from the point in the form of 3 figures expressing nautical miles. In areas of high latitude where it is determined by the appropriate authority that reference to degrees magnetic is impractical, degrees true may be used. Make up the correct number of figures, where necessary, by insertion of zeros, e.g. a point of 180° magnetic at a distance of 40 nautical miles from VOR “DUB” should be expressed as DUB180040.

OR The first point of the route (name or LAT/LONG) or the marker radio beacon, if the aircraft has not taken off from an aerodrome.

DEST/ Name and location of destination aerodrome, if ZZZZ is inserted in Item 16. For aerodromes not listed in the relevant Aeronautical Information Publication, indicate location in LAT/LONG or bearing and distance from the nearest significant point, as described under DEP/ above.

DOF/ The date of flight departure in a six figure format (YYMMDD, where YY equals the year, MM equals the month and DD equals the day).

REG/ The nationality or common mark and registration mark of the aircraft, if different from the aircraft identification in Item 7.

EET/ Significant points or FIR boundary designators and accumulated estimated elapsed times from take-off to such points or FIR boundaries, when so prescribed on the basis of regional air navigation agreements, or by the appropriate ATS authority.

Examples: EET/CAP0745 XYZ0830
EET/EINN0204

SEL/ SELCAL Code, for aircraft so equipped.

TYP/ Type(s) of aircraft, preceded if necessary without a space by number(s) of aircraft and separated by one space, if ZZZZ is inserted in Item 9.

Example: –TYP/2F15, 5F5, 3B2

~~ALTN/ Name of destination alternate aerodrome(s), if ZZZZ is inserted in Item 16.~~

~~RALT/ Name of en route alternate aerodrome(s).~~

CODE/ Aircraft address (expressed in the form of an alphanumeric code of six hexadecimal characters) when required by the appropriate ATS authority. Example: “F00001” is the lowest aircraft address contained in the specific block administered by ICAO.

DLE/ Enroute delay or holding, insert the significant point(s) on the route where a delay is planned to occur, followed by the length of delay using four figure time in hours and minutes (hhmm).

Example: –DLE/MDG0030

OPR/ ICAO designator or name of the aircraft operating agency, if different from the aircraft identification in item 7.

ORGN/ The originator’s 8 letter AFTN address or other appropriate contact details, in cases where the originator of the flight plan may not be readily identified, as required by the appropriate ATS authority.

Note.— In some areas, flight plan reception centres may insert the ORGN/ identifier and originator’s AFTN address automatically.

PER/ Aircraft performance data, indicated by a single letter as specified in the *Procedures for Air Navigation Services — Aircraft Operations* (PANS-OPS, Doc 8168), *Volume I — Flight Procedures*, if so prescribed by the appropriate ATS authority.

ALTN/ Name of destination alternate aerodrome(s), if ZZZZ is inserted in Item 16. For aerodromes not listed in the relevant Aeronautical Information Publication, indicate location in LAT/LONG or bearing and distance from the nearest significant point, as described in DEP/ above.

RALT/ ICAO four letter indicator(s) for en-route alternate(s), as specified in Doc 7910, *Location Indicators*, or name(s) of en-route alternate aerodrome(s), if no indicator is allocated. For aerodromes not listed in the relevant Aeronautical Information Publication, indicate location in LAT/LONG or bearing and distance from the nearest significant point, as described in DEP/ above.

TALT/ ICAO four letter indicator(s) for take-off alternate, as specified in Doc 7910, *Location Indicators*, or name of take-off alternate aerodrome, if no indicator is allocated. For aerodromes not listed in the relevant Aeronautical Information Publication, indicate location in LAT/LONG or bearing and distance from the nearest significant point, as described in DEP/ above.

RIF/ The route details to the revised destination aerodrome, following by the ICAO four-letter location indicator of the aerodrome. The revised route is subject to reclearance in flight.

Examples:–RIF/DTA HEC KLAX
–RIF/ESP G94 CLA YPPH

RMK/ Any other plain language remarks when required by the appropriate ATS authority or deemed necessary.

Examples:–0
–STS/MEDEVAC
–EET/015W0315 020W0337 030W0420 040W0502
–STS/ONE ENG INOP
–DAT/S

...

Field Type 22 — Amendment

FIELD TYPE 22

<i>Previous type of field or symbol</i>	<i>This type of field is used in</i>	<i>Next type of field or symbol</i>
~~4618~~	CHG	*22 or)
16	CDN	*22 or)

* Indicates that further fields of this type may be added

...

RULES FOR THE COMPOSITION OF ATS MESSAGES

(See Sections 1.3 to 1.8 of this Appendix)

...

STANDARD ATS MESSAGES AND THEIR COMPOSITION

DESIGNATOR	...		...	Other information
MESSAGE TYPE				18
Alerting		ALR		
Radiocommunication failure		RCF		
Filed flight plan		FPL		
Delay		DLA		18
Modification		CHG		18
Flight plan cancellation		CNL		18
Departure		DEP		18
Arrival		ARR		
Current flight plan		CPL		
Estimate		EST		
Coordination		CDN		
Acceptance		ACP		
Logical acknowledgement message		LAM		
Request flight plan		RQP		18
Request supplementary flight plan		RQS		18
Supplementary flight plan		SPL		

...

The expression of position or route

The following alternative data conventions shall be used for the expression of position or route:

...

- (e) 2 or 3 to 5 characters being the coded identification of a ~~navigation aid (normally a VOR)~~ significant point, followed by 3 decimal numerics giving the bearing from the point in degrees magnetic followed by 3 decimal numerics giving the distance from the point in nautical miles. The correct number of numerics is to be made up, where necessary, by insertion of zeros, e.g. a point at 180° magnetic at a distance of 40 nautical miles from VOR “FOJ” would be expressed as “FOJ180040”.

...

2. Examples of ATS messages

...

2.2 Emergency messages

2.2.1 Alerting (ALR) message

2.2.1.1 Composition

...

–	9 Type of aircraft and wake turbulence category	–	10 Equipment and capabilities

...

16 Destination aerodrome and total estimated elapsed time, destination alternate aerodrome(s)

...

2.2.1.2 Example

The following is an example of an alerting message relating to an uncertainty phase, sent by Athens Approach Control to Belgrade Centre and other ATS units, in respect of a flight from Athens to Munich.

(ALR-INCERFA/LGGGZAZX/OVERDUE
 –FOX236/A360024-IM
 –C141/H-S/CD
 –LGAT1020
 –N0430F220 B9 3910N02230W/N0415F240 B9 IVA/N0415F180 B9
 –EDDM0227 EDDF
 –REG/A43213 EET/LYBE0020 EDM10133 REG/A43213-OPR/USAF RMK/NO
 POSITION REPORT SINCE DEP PLUS 2 MINUTES
 –E/0720 P/12 R/UV J/LF D/02 014 C ORANGE A/SILVER C/SIGGAH
 –USAF LGGGZAZX 1022 126.7 GN 1022 PILOT REPORT OVER NDB ATS
 UNITS ATHENS FIR ALERTED NIL)

2.2.1.2.1 Meaning

Alerting message — uncertainty phase declared by Athens due no position reports and no radio contact since two minutes after departure — aircraft identification FOX236 — IFR, military flight — Starlifter, heavy wake turbulence category, equipped with standard communications, navigation and approach aid equipment for the route, SSR transponder with Modes A (4 096 code capability) and C — ADS capability — last assigned Code 3624 — departed Athens 1020 UTC — cruising speed for first portion of route 430 knots, first requested cruising level FL 220 — proceeding on airway Blue 9 to 3910N2230W where TAS would be changed to 415 knots and FL240 would be requested — proceeding on airway Blue 9 to Ivanic Grad VOR where FL 180 would be requested, maintaining TAS of 415 knots and FL240 would be requested — proceeding on airway Blue 9 to Munich, total estimated elapsed time 2 hours and 27 minutes — destination alternate is Frankfurt — aircraft registration A43213 — accumulated estimated elapsed

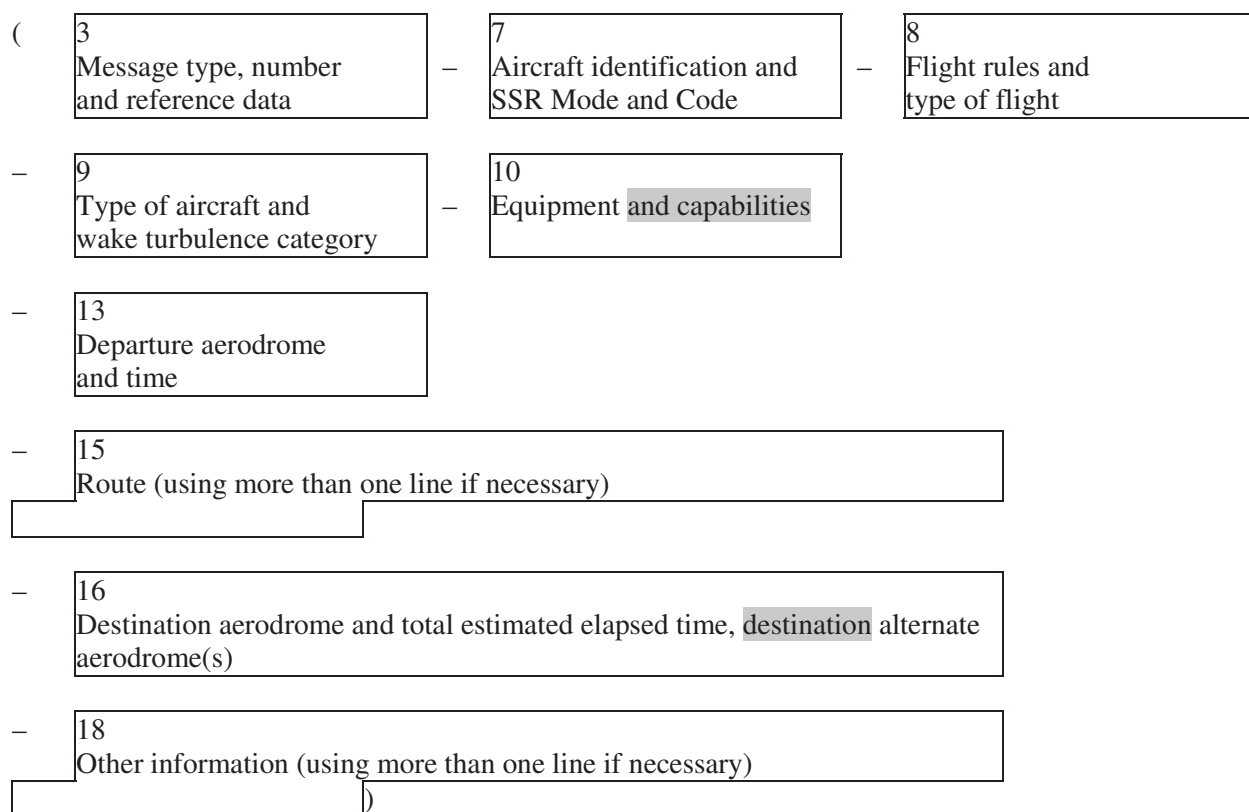
times at the Belgrade and Munich FIR boundaries 20 minutes and 1 hour and 33 minutes respectively — aircraft registration ~~A43213~~ — the aircraft is operated by the USAF — no position report has been received since 2 minutes after departure — endurance 7 hours and 20 minutes after take-off — 12 persons on board — portable radio equipment working on VHF 121.5 MHz and UHF 243 MHz is carried — life jackets fitted with lights and fluorescein are carried — 2 dinghies with orange covers are carried, have a total capacity for 14 persons — aircraft colour is silver — pilot's name is SIGGAH — operator is USAF — Athens approach control was the last unit to make contact at 1022 UTC on 126.7 MHz when pilot reported over GN runway locator beacon — Athens approach control have alerted all ATS units within Athens FIR — no other pertinent information.

...

2.3 Filed flight plan and associated update messages

2.3.1 Filed flight plan (FPL) message

2.3.1.1 Composition



2.3.1.2 Example

The following is an example of a filed flight plan message sent by London Airport to Shannon, Shanwick and Gander Centres. The message may also be sent to the London Centre or the data may be passed to that centre by voice.

(FPL-TPRACA101-IS
~~B707MB773/H~~-CHOPV/CD
 -EGLL1400
 -N0450F310 G1-UG1L9 UL9 STU285036/M082F310 UG1UL9 52N015W LIMRI

52N020W 52N030W 50N040W 49N050W

–CYQX0455 CYYR

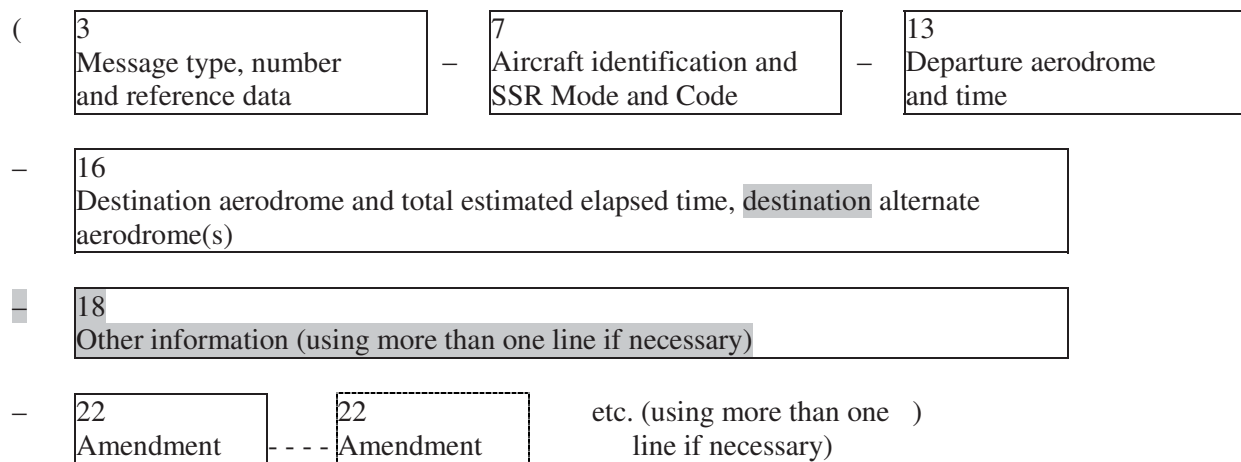
–EET/EISNN0026 EGGX0111 020W0136 CYQX0228 040W0330 050W0415 SEL/FJEL)

2.3.1.2.1 *Meaning*

Filed flight plan message — aircraft identification ~~TPR~~ACA101 — IFR, scheduled flight — a Boeing 707, ~~medium~~ 777-300, heavy wake turbulence category equipped with Loran C, HF RTF, VOR, ~~Doppler~~, VHF RTF and SSR transponder with Modes A (4 096 code capability) and C — ~~ADS capability~~ — departure aerodrome is London, estimated off-block time 1400 UTC — cruising speed and requested flight level for the first portion of the route are 450 knots and FL 310 — the flight will proceed on Airways ~~Green-1~~Lima 9 and Upper ~~Green-1~~Lima 9 to a point bearing 285 degrees magnetic and 36 NM from the Strumble VOR. From this point the flight will fly at a constant Mach number of .82, proceeding on Upper ~~Green-1~~Lima 9 to 52N15W LIMRI; then to 52N20W; to 52N30W; to 50N40W; to 49N50W; to destination Gander, total estimated elapsed time 4 hours and 55 minutes — ~~destination~~ alternate is Goose Bay — captain has notified accumulated estimated elapsed times at significant points along the route, they are at the Shannon FIR boundary 26 minutes, at the Shanwick Oceanic FIR boundary 1 hour and 11 minutes, at 20W 1 hour and 36 minutes, at the Gander Oceanic FIR boundary 2 hours and 28 minutes, at 40W 3 hours and 30 minutes and at 50W 4 hours and 15 minutes — SELCAL code is FJEL.

2.3.2 *Modification (CHG) message*

2.3.2.1 *Composition*



2.3.2.2 *Example*

The following is an example of a modification message sent by Amsterdam Centre to Frankfurt Centre correcting information previously sent to Frankfurt in a filed flight plan message. It is assumed that both centres are computer-equipped.

(CHGA/F016A/F014-GABWE/A2173-EHAM0850-EDDF-DOF/080122-8/I-16/EDDN)

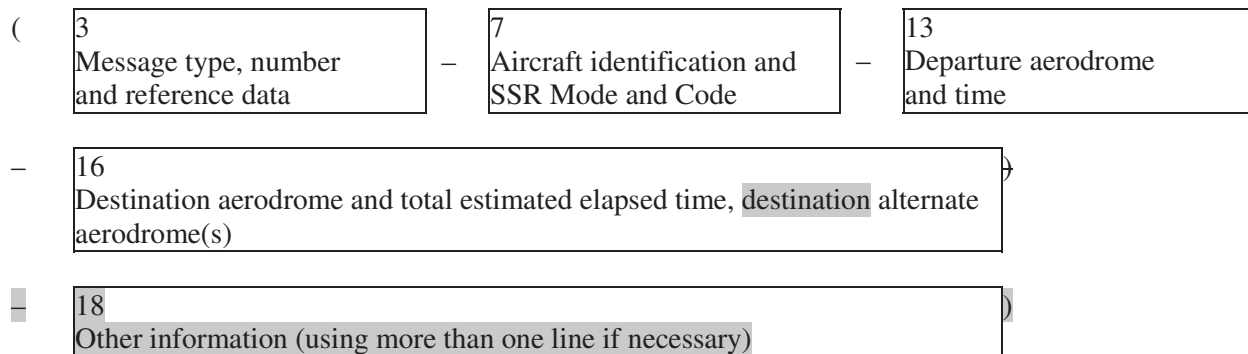
2.3.2.2.1 *Meaning*

Modification message – Amsterdam and Frankfurt computer unit identifiers A and F, followed by serial number (016) of this message sent by Amsterdam, repeat of computer unit identifiers followed by serial number (014) of the related filed flight plan message – aircraft identification GABWE, SSR Code 2173

operating in Mode A, en route from Amsterdam **EOBT0850** to Frankfurt **date of flight 22 Jan 2008** – Field Type 8 of the related filed flight plan message is corrected to IFR – Field Type 16 of the related filed flight plan is corrected, the new destination is Nürnberg.

2.3.3 *Flight plan cancellation (CNL) message*

2.3.3.1 *Composition*



2.3.3.2 *Example 1*

The following is an example of a flight plan cancellation message sent by an ATS unit to all addressees of a filed flight plan message previously sent by that unit.

(CNL-DLH522-EDBB**0900**-LFPO-0)

2.3.3.2.1 *Meaning*

Flight plan cancellation message – cancel the flight plan of aircraft identification DLH522 – flight planned from Berlin **EOBT0900** to Paris – **no other information**.

2.3.3.3 *Example 2*

The following is an example of a flight plan cancellation message sent by a centre to an adjacent centre. It is assumed that both centres are equipped with ATC computers.

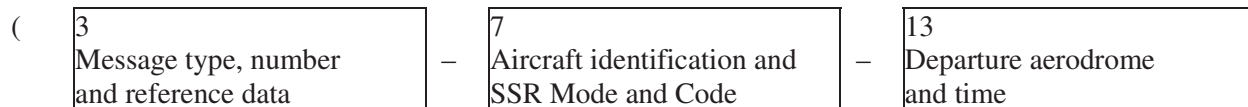
(CNLFB127F/B055-BAW580-EDDF**1430**-EDDW-0)

2.3.3.3.1 *Meaning*

Flight plan cancellation message – identifiers of sending and receiving ATC computer units F and B, followed by serial number (127) of this message, repeat of computer unit identifiers followed by serial number (055) of current flight plan message previously transmitted – cancel the flight plan of aircraft identification BAW580 – flight planned from Frankfurt **EOBT1430** to Bremen – **no other information**.

2.3.4 *Delay (DLA) message*

2.3.4.1 *Composition*



- 16
Destination aerodrome and total estimated elapsed time, destination alternate aerodrome(s)
- 18
Other information (using more than one line if necessary)

2.3.4.2 Example

The following is an example of a delay message from a departure aerodrome, or from a parent unit handling communications for a departure aerodrome, to each addressee of a filed flight plan message.

(DLA-KLM671-LIRF0900-LYDU-0)

2.3.4.2.1 Meaning

Delay message – aircraft identification KLM671 – revised estimated off-block time Fiumicino 0900 UTC destination Dubrovnik – no other information.

2.3.5 Departure (DEP) message

2.3.5.1 Composition

- (3
Message type, number and reference data – 7
Aircraft identification and SSR Mode and Code – 13
Departure aerodrome and time
- 16
Destination aerodrome and total estimated elapsed time, destination alternate aerodrome(s)
- 18
Other information (using more than one line if necessary)

2.3.5.2 Example

The following is an example of a departure message from a departure aerodrome, or from a parent unit handling communications for a departure aerodrome, to each addressee of a filed flight plan message.

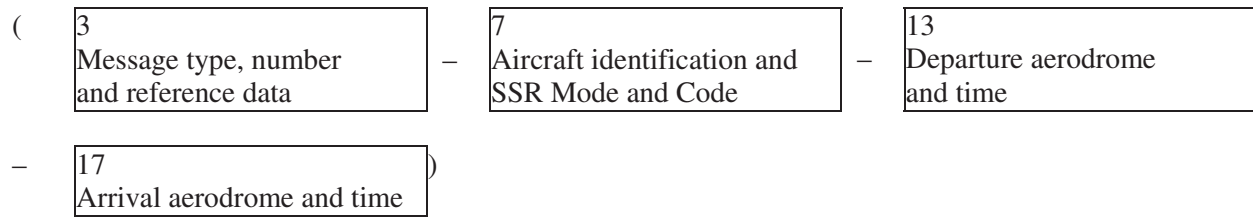
(DEP-CSA4311-EGPD1923-ENZV-0)

2.3.5.2.1 Meaning

Departure message – aircraft identification CSA4311 – departed from Aberdeen at 1923 UTC – destination Stavanger – no other information.

2.3.6 *Arrival (ARR) message*

2.3.6.1 *Composition*



2.3.6.2 *Example 1*

The following is an example of an arrival message sent from the arrival aerodrome (= destination) to the departure aerodrome.

(ARR-CSA406-LHBP-LKPR0913)

2.3.6.2.1 *Meaning*

Arrival message — aircraft identification CSA406 — departed from Budapest/Ferihegy — landed at Prague/Ruzyne Airport at 0913 UTC.

2.3.6.3 *Example 2*

The following is an example of an arrival message sent for an aircraft which has landed at an aerodrome for which no ICAO location indicator has been allocated. The SSR Code would not be meaningful.

(ARR-~~HELH3~~HHE13-EHAM-1030 DEN HELDER)

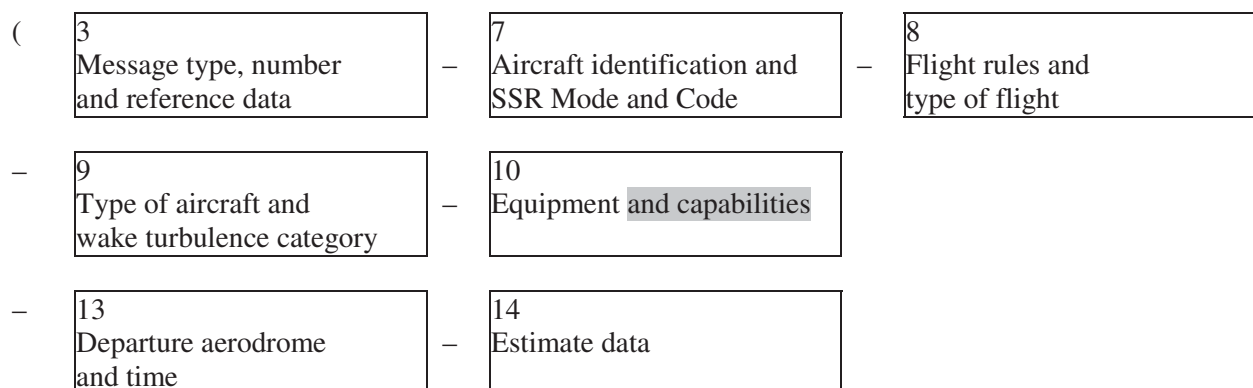
2.3.6.3.1 *Meaning*

Arrival message aircraft identification ~~HELH3~~HHE13 — departed from Amsterdam — landed at Den Helder heliport at 1030 UTC.

2.4 Coordination messages

2.4.1 *Current flight plan (CPL) message*

2.4.1.1 *Composition*



- 15
Route (using more than one line if necessary)
- 16
Destination aerodrome and total estimated elapsed time, **destination** alternate aerodrome(s)
- 18
Other information (using more than one line if necessary)

2.4.1.2 Example 1

The following is an example of a current flight plan message sent from Boston Centre to New York Centre on a flight which is en route from Boston to La Guardia Airport.

(CPL-UAL621/A5120-IS
~~DC9A320~~/M-S/CØ
 -KBOS-HFD/1341A220A200A
 -N0420A220 V3 AGL V445
 -KLGA
 -0)

2.4.1.3 Example 2

The following is an example of the same current flight plan message, but in this case the message is exchanged between ATC computers.

(CPLBOS/LGA052-UAL621/A5120-IS
~~DC9A320~~/M-S/CØ
 -KBOS-HFD/1341A220A200A
 -N0420A220 V3 AGL V445
 -KLGA
 -0)

Note.— The messages in Examples 1 and 2 are identical except that the Message Number of Example 2 does not appear in Example 1.

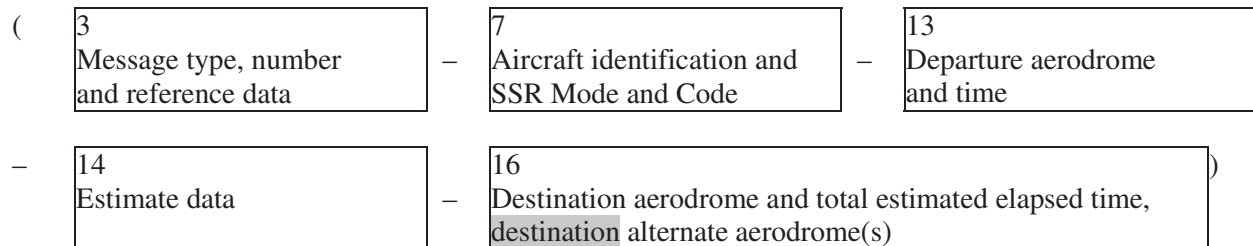
2.4.1.4 Meaning

Current flight plan message [with sending unit identity (BOS) and receiving unit identity (LGA), followed by the serial number of this message (052)] — aircraft identification UAL621, last assigned SSR Code 5120 in Mode A — IFR, scheduled flight — one ~~DC9A320~~, medium wake turbulence category, equipped with standard communications, navigation and approach aid equipment for the route and SSR transponder with Modes A (4 096 code capability) and C — ~~ADS-capability~~ — departed Boston — the flight is estimated to cross the Boston/New York “boundary” at point HFD at 1341 UTC, cleared by the Boston Centre at altitude 22 000 feet but to be at or above altitude 20 000 feet at HFD — TAS is 420 knots, requested cruising level is altitude 22 000 feet — the flight will proceed on airway V3 to

reporting point AGL thence on airway V445 — destination is La Guardia Airport — no other information.

2.4.2 *Estimate (EST) message*

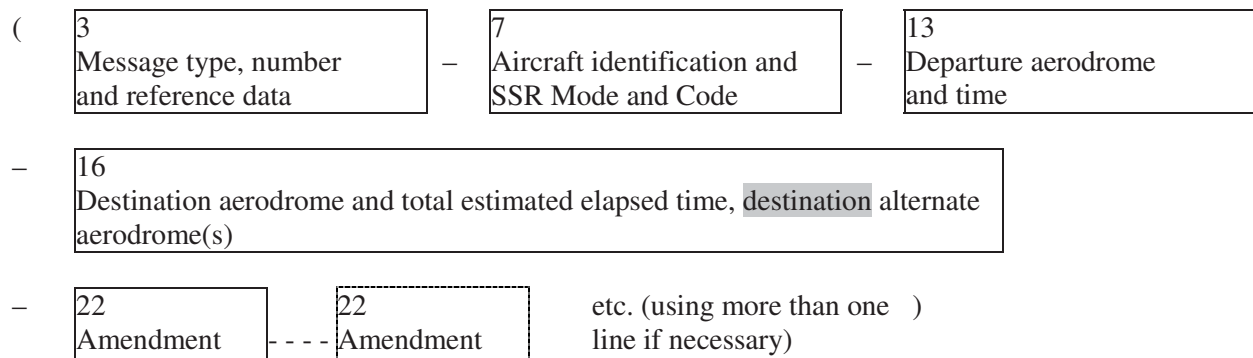
2.4.2.1 *Composition*



...

2.4.3 *Coordination (CDN) message*

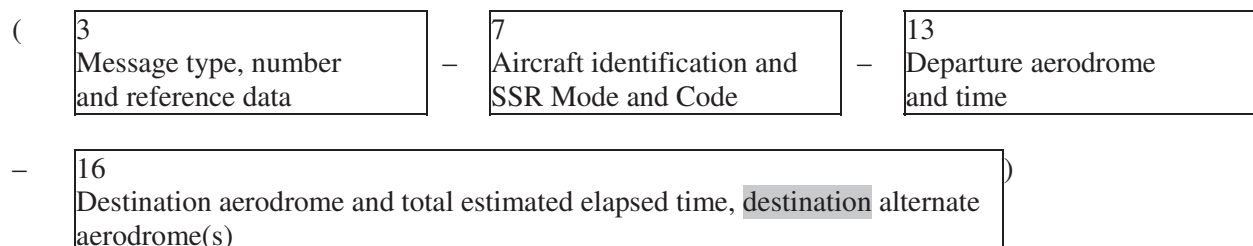
2.4.3.1 *Composition*



...

2.4.4 *Acceptance (ACP) message*

2.4.4.1 *Composition*

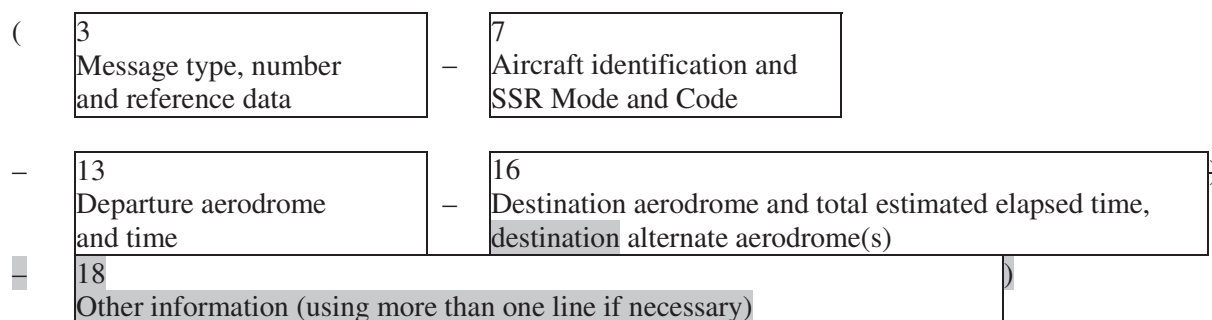


...

2.5 Supplementary messages

2.5.1 Request flight plan (RQP) message

2.5.1.1 Composition



2.5.1.2 Example

The following is an example of a request flight plan message sent by a centre to an adjacent centre after receipt of an estimate message, for which no corresponding filed flight plan message had been received previously.

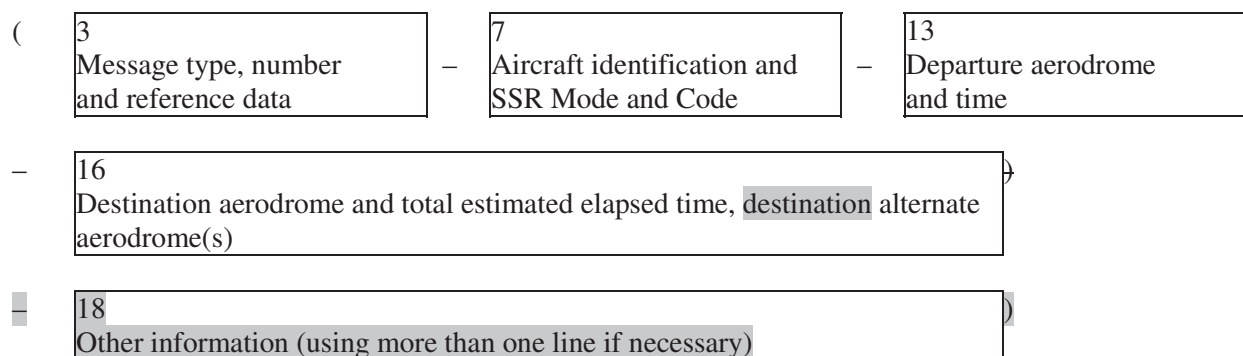
(RQP-PHOEN-EHRD-EDDL-0)

2.5.1.2.1 Meaning

Request flight plan message – aircraft identification PHOEN departed from Rotterdam – destination Düsseldorf – no other information.

2.5.2 Request supplementary flight plan (RQS) message

2.5.2.1 Composition



2.5.2.2 Example

The following is an example of a request flight plan message sent by an ATS unit to the ATS unit serving the departure aerodrome requesting information contain in the flight plan form, but not transmitted in the filed or current filed flight plan messages.

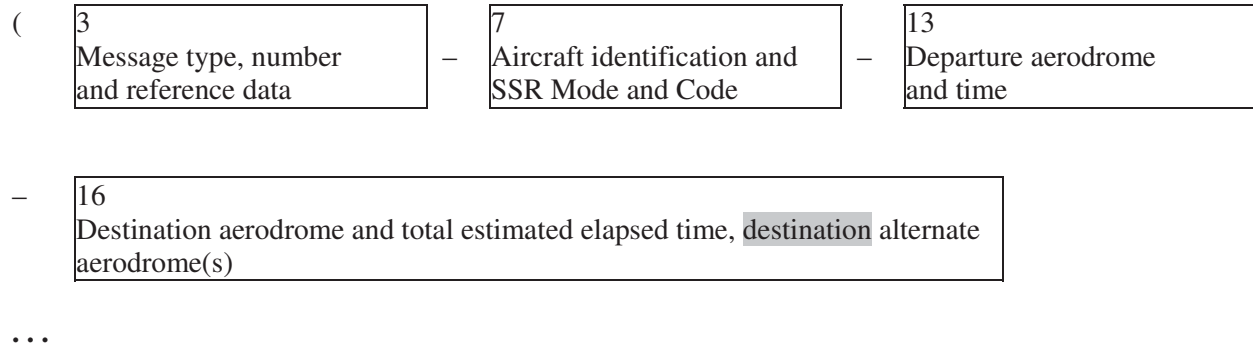
(RQS-KLM405/A4046-EHAM-CYMX-0)

2.5.2.2.1 *Meaning*

Request supplementary flight plan message – aircraft identification KLM405/SSR Code 4046 operating in Mode A – departure aerodrome is Amsterdam – destination aerodrome is Mirabel – no other information.

2.5.3 *Supplementary flight plan (SPL) message*

2.5.3.1 *Composition*



3.2. Global Guidance for Implementation



International
Civil Aviation
Organization

Organisation
de l'aviation civile
internationale

Organización
de Aviación Civil
Internacional

Международная
организация
гражданской
авиации

منظمة الطيران
المدني الدولي

国际民用
航空组织

Tel.: +1 (514) 954-8219 ext. 6711

Ref.: AN 13/2.1-09/9

6 February 2009

Subject: Guidance for implementation of flight plan information to support Amendment 1 of the *Procedures for Air Navigation Services — Air Traffic Management*, Fifteenth Edition (PANS-ATM, DOC 4444)

Action required: Coordinate the transition to the new ICAO flight plan

Sir/Madam,

1. I have the honour to draw your attention to the content of Amendment 1 to the *Procedures for Air Navigation Services — Air Traffic Management*, Fifteenth Edition (PANS-ATM, Doc 4444) related to the amended flight plan form and new flight planning procedures.
2. The nature and scope of the amendment, as described in State letter AN 13/2.1-08/50, is to update the ICAO model flight plan form in order to meet the needs of aircraft with advanced capabilities and the evolving requirements of automated air traffic management (ATM) systems, while taking into account compatibility with existing systems, human factors, training, cost and transition aspects.
3. Considering that the transition from the current flight plan form and associated requirements to the new flight plan may present challenges for States and organizations involved in the processing of flight plans, ICAO has developed the guidance contained in the Attachment. The primary purpose of this guidance is to support a coordinated global effort during the transition period so that a successful and coordinated transition is achieved by the applicability date of 15 November 2012.
4. To support the transition, a public website is being developed by ICAO where States, Air Navigation Service Providers (ANSPs) and airspace users will be able to find information regarding the implementation status of the Amendment and where the most common issues and difficulties encountered will be discussed. States will be notified as soon as the site is available.

5. May I, therefore, request that all efforts be made to ensure a smooth transition to the new flight plan and that particular attention be paid to the pages referring to the conversion of new items 10 and 18 to the present items 10 and 18, which concern aircraft equipment and capabilities.

Accept, Sir/Madam, the assurances of my highest consideration.

Taïeb Chérif
Secretary General

Enclosure:

Guidance for implementation of flight plan information to support Amendment 1 of the *Procedures for Air Navigation Services — Air Traffic Management*, Fifteenth Edition (PANS-ATM, DOC 4444)

**Guidance for implementation of flight plan information to support Amendment 1 of the *Procedures for Air Navigation Services — Air Traffic Management*, Fifteenth Edition
(PANS-ATM, DOC 4444)**

1. INTRODUCTION

1.1. The guidance contained herein is provided to assist airspace users and Air Navigation Service Providers (ANSP) to implement the flight planning changes incorporated by Amendment 1 to Procedures for Air Navigation Services – Air Traffic Management (PANS-ATM, Doc 4444) Fifteenth Edition.

1.2. Amendment 1 stems from the work of the Flight Plan Study Group (FPLSG). The nature and scope of the amendment is to update the ICAO model flight plan form in order to meet the needs of aircraft with advanced capabilities and the evolving requirements of automated air traffic management (ATM) systems, while taking into account compatibility with existing systems, human factors, training, cost and transition aspects.

1.3. The changes were announced by ICAO in State letter AN 13/2.1-08/50 dated 25 June 2008 and will become applicable on 15 November 2012.

1.4. The changes have considerable consequences on ANSP flight data processing systems that check and accept flight plans and related messages, use flight plan data in displays for controller reference, use data in ANSP automation and which support communication between ANSPs as the flight progresses. Preparation for the changes should therefore be made well in advance of the applicable date.

1.5. The changes also have consequences for airspace users. If a flight plan with new content is sent to an ANSP that has not prepared to accept the new content then it is likely that some information will be lost, misinterpreted or cause a rejection of the flight plan.

1.6. No start date has been given for implementation of the flight planning changes to commence; however, one reason for the State letter is to support the updating of flight plan data processing systems. The transition period for the changes is therefore from 25 June 2008 until 15 November 2012.

1.7. It is recognized that changes will be implemented by airspace users and ANSPs on individual schedules due to individual needs, however some coordination will occur.

1.8. It is essential to the success of this implementation that all airspace users and ANSPs be able to submit and process flight information in accordance with Amendment 1 to the PANS-ATM by 15 November 2012, as processing via present methods is not assured after that date.

1.9. This guidance does not change any provision in Annex 2 — *Rules of the Air* or the PANS-ATM regarding completion and acceptance of a flight plan.

2. OBJECTIVE

2.1. The purpose of the guidance contained herein is to support a coordinated global effort during the transition period so that a successful transition is achieved by the applicability date of 15 November 2012.

3. APPLICABILITY

3.1. This guidance applies to airspace users, ANSPs and Planning and Implementation Regional Groups (PIRGs). Note that flight planning services and related organizations involved in the processing of flight plans are considered part of the airspace user community and, as such, are covered under this guidance.

3.2. This document presents guidelines which should be considered when developing implementation plans for this amendment. Adherence to these guidelines will mitigate risks associated with the technical challenges inherent during the transition period and assure that users are able to meet flight planning requirements as individual ANSPs implement changes.

3.3. This document applies with immediate effect and continues until implementation of Amendment 1 to the PANS-ATM is complete.

4. SCOPE

4.1. This guidance is limited to transitioning to flight planning and Air Traffic Services (ATS) message changes defined in Amendment 1 to the PANS-ATM, including message content and submission instructions.

5. FLIGHT PLANNING ENVIRONMENT

5.1. PRESENT is defined as the present flight planning and ATS message formats as defined in the current version of the PANS-ATM.

5.2. NEW is defined as the flight planning and ATS message formats as specified in Amendment 1 to the PANS-ATM.

5.3. In order to allow performance case considerations to drive individual airspace user and ANSP implementation schedules, the ATM system will need to simultaneously support both PRESENT and NEW for a period of time.

5.4. Amendment 1 to the PANS-ATM contains changes to the length and content of items. The changes to content are as follows:

- Change the way aircraft equipment and capabilities are communicated to provide more details;
- Provide additional means of describing route way points (specifically bearing and distance from points other than navigation aids); and
- Permit specification of the date of flight in a standardised manner.

5.5. The present flight planning environment supports a variety of means of filing flight plans. For example flight plans can be filed directly by the airspace user to each ANSP individually or flight

plans can be filed by the airspace user at one location and then the ATM system distributes the flight plan. Amendment 1 does not specifically change these options; however the means of transitioning to Amendment 1 may impose some requirements during the transition.

5.6. The present ATM system supports a variety of means of ANSPs communicating flight plan data between ANSP systems, for example use of coordination messages where Amendment 1 implies changes of content.

6. IMPLEMENTATION GUIDELINES

6.1. These guidelines have been developed to facilitate concurrent use of both PRESENT and NEW by airspace user and ANSP flight data processing systems during the transition period.

6.2. Guideline 1

- a) As each ANSP transitions to NEW, it is essential that they also support PRESENT until the applicability date of 15 November 2012.
- b) There is no requirement for ANSPs to accept and process PRESENT after the applicability date, unless specified by the appropriate authority.
- c) This guideline relates to the situation when some ANSPs and/or airspace users do not implement the flight planning changes until the end of the transition period.

6.3. Guideline 2

- a) PIRGs are encouraged to plan and publish regional implementations sufficiently in advance of the applicability date so that airspace users and ANSPs can respond to and resolve any unforeseen operational issues.
- b) It is anticipated that implementation will occur progressively as each PIRG works with their member States/international organizations and airspace users to coordinate a regional transition prior to 15 November 2012.
- c) Transition plans should encourage all ANSPs to transition to NEW a certain period of time prior to 15 November 2012 to allow airspace users a transition period to NEW before the applicability date.
- d) Transition plans should take into account that the airspace user may not be able to make use of the new opportunities provided by NEW until an ANSP has transitioned. Even then, use of NEW may be restricted in its application if the flight still involves ANSPs who have not yet transitioned.

6.4. Guideline 3

- a) During the transition period and after an ANSP has advised that they can accept NEW, the determination to file NEW or PRESENT with that ANSP is the choice of the airspace user.

- b) It is expected that airspace users will make the decision on what format to file based on performance gains which may be achieved through capability information in Items 10 and/or 18 of NEW.
- c) It is intended that all airspace users will file NEW from the applicability date forward, as using PRESENT is not assured after that date.

Note – The following guidelines apply only to situations where ANSPs affected by a flight have not all transitioned to NEW.

6.5. **Guideline 4**

- a) During the transition period when not all ANSPs affected by a flight have transitioned to NEW, the airspace user must ensure that PRESENT is filed with ANSPs who have not yet transitioned.
- b) This can be achieved by the airspace user filing only PRESENT with all ANSPs (as ANSPs supporting NEW will also support PRESENT during transition).
- c) ANSPs using PRESENT may misinterpret, and may reject, flight plan information that is filed more than 24 hours in advance of flight. Filing more than 24 hours in advance of flight cannot be used if one or more ANSPs affected by a flight have not transitioned (unless those ANSPs already support filing more than 24 hours in advance of flight). Although ANSPs using NEW could accept the flight plan they may not be able to pass essential coordination to ANSPs using PRESENT.
- d) The airspace user may choose to file NEW to ANSPs that have transitioned and PRESENT to ANSPs that have not transitioned. However, without special transitional procedures, a situation can occur where the NEW would only be useable until the first ANSP along route of flight using PRESENT. This is because the ANSP using NEW will not be able to coordinate NEW with ANSPs using PRESENT.

6.6. **Guideline 5**

- a) To facilitate user decisions on whether to file PRESENT, NEW or a combination of PRESENT and NEW, ICAO will maintain a website listing each ANSP's ability to accept PRESENT or NEW.
- b) This information which will be publicly available is in addition to the normal methods of communication between an ANSP and its airspace users.
- c) Each ANSP will communicate, via State and ICAO Regional Offices, their ability to accept NEW to ICAO as soon as possible so that ICAO can ensure that complete and updated information is posted on the website. An ANSP advising of having completed transition to NEW is also indicating that they can coordinate with other ANSPs who have transitioned to NEW.

6.7.

Guideline 6

- a) During the transition period, ANSPs who accept NEW may need to convert flight information to PRESENT for coordination with adjacent ANSPs who have not yet transitioned.
- b) It is strongly recommended for consistency that all ANSPs utilize the conversion table provided below so that airspace users and ANSPs have a common understanding of how NEW will be converted to PRESENT.
- c) PIRGs, States and ANSPs should be aware that valuable planning information may be lost during the conversion process, as shown in the conversion table.
- d) There is no intent for PRESENT to be converted to NEW during the transition period.

7. CONVERSION OF NEW ITEMS 10 and 18 TO PRESENT ITEMS 10 and 18

It is strongly recommended that all ANSPs utilize the table below to convert NEW Items 10 and 18 to the PRESENT for coordination with adjacent ANSPs which only accept PRESENT.

- Different agreements may be worked out between ANSPs for Item 18 information if the conversion would cause the message to be rejected by an ANSP which only accepts PRESENT.
- **CAUTION:** Some information will be lost from NEW during conversion, including certain information about capabilities, and information held in Item 18 indicators which do not exist in PRESENT such as DOF, DLE and TALT. As a partial mitigation, any information which would otherwise be lost from NEW may be translated into a single free text following RMK/ in Item 18 of PRESENT.

	NEW data in these columns		Converts to PRESENT data in these columns	
Com-Nav	Item 10	Item 18	Item 10	Item 18
	N		N	
	S		VOL	
	SF		S	
	A		Z	NAV/GBAS
	B		Z	NAV/LPV
	C		C	
	D		D	
	E1		J	DAT/n
	E2		J	DAT/n
	E3		J	DAT/n
	F		F	
	G	NAV/nnnn	G	
	H		H	
	I		I	
	J1		J	DAT/V
	J2		J	DAT/H
	J3		J	DAT/V

	J4		J	DAT/V
	J5		J	DAT/S
	J6		J	DAT/S
	J7		J	DAT/S
	K		K	
	L		L	
	M1		Z	COM/INMARSAT
	M2		Z	COM/MTSAT
	M3		Z	COM/IRIDIUM
	O		O	
	P1-P9(Reserved)			
	R	PBN/nn	Z	NAV/nnnn

Com-Nav	NEW data in these columns		Converts to PRESENT data in these columns	
	Item 10	Item 18	Item 10	Item 18
	T		T	
	U		U	
	V		V	
	W		W	
	X		X	
	Y		Y	
	Z	COM/NAV/DAT	Z	COM/ NAV/

Sur	N		N	
	A		A	
	C		C	
	E		S	
	H		S	
	I		I	
	L		S	
	P		P	
	S		S	
	X		X	
	B1			
	B2			
	U1			
	U2			
	V1			
	V2			
	D1		D	
	G1		D	

4. Status of Implementation in the MID Region

STATUS OF INFPL IMPLEMENTATION IN THE MID REGION

	Focal point	Manf. cont / Budget	Internal Testing	ANSP to ANSP Testing	Milestone	Date of Acceptance of both present and new format	Date of Submission of Implem. Plan	Contingency 1/2/3	User Testing	Vendors involved	Remarks
Bahrain	√	√ / √	1 April 2012	1 March – 15 May	4	1July2012	1 Mar 2010	Almost ready	20- 25 April - 2012	Avitech Thales	
Egypt	√	√ / √	30 May 2012	10 – 30 June	3	1July2012	28 Feb 2012		August September	Comsoft Thales	Only converter will be installed
Iran	√	√ / √			3					Avitech	Letter sent to Thales Local converter
Iraq	√	√ / √	15 April	20 June October	2	September			August	Uptec Canadian	Contract
Jordan	√	√ / √	1January	June October	3	1 June 2012			June	Avitech	Converter will be used for the backup ATM system
Kuwait	√	√ / √	15 April 2012	1 June 2012	3	August	28 Feb 2012		1 August 2012	Indra Comsoft	
Lebanon	√				2					Raytheon Thales Sofrevia	
Libya	√				3					INDRA	
Oman	√	√/√	25 May 2012	25 July 2012	3	1 September			15 July 2012	Comsoft Raytheon	
Qatar	√	√/√	31 March	23 Feb April	5	1 July 2012	21Mar 2010		15 April	Comsoft Selex	

				June							
Saudi Arabia	√	√/√	June	June July	4	1 August 2012			July	Thales Comsoft	Contract with comsoft
Sudan	√	√/√			3					Thales Contract in process	Will use converter from other State
Syria	√				2					Selex vitrociset	Contact initiated Contract was done via TCB 30424 (2004)
UAE	√	√/√	30 September 2010	23 Feb March, April July	5	1 July	28 Feb 2012		20 Feb and 02 – 29 March	Thales Comsoft	ACC Abudhabi waiting proposal
Yemen	√	√/√			2	26 September			October	ECIL ALES	

Mile Stone:

- 1- Empty
- 2- Analysis of the draft amendment
- 3- Evaluation of current system
- 4- Introduction of capability to pass new information
- 5- Check of AIDC / OLDI compatibility
- 6- Coordination with neighboring ANSP and airspace users
- 7- Implementation of new system

Contingency

- 1- No contingency all systems will be upgraded
- 2- converter will be used
- 3- ready to support neighbouring states for conversion

5. Strategy for Implementation

MID REGION STRATEGY FOR THE IMPLEMENTATION OF ICAO NEW FLIGHT PLAN FORMAT AND SUPPORTING ATS MESSAGES

Recognizing that:

- 1) Dynamic information management will assemble the best possible integrated picture of the historical, real-time and planned or foreseen future state of the ATM situation and provide the basis for improved decision making by all ATM community members, further more for the ATM system to operate at its full potential, pertinent information will be available when and where required;
- 2) The *Global Air Traffic Management Operational Concept* (Doc 9854) requires information management arrangements that provide accredited, quality-assured and timely information to be used to support ATM operations and will use globally harmonized information attributes;
- 3) ATM Requirement 87 in the *Manual of Air Traffic Management System Requirements* (Doc 9882) provides that 4-D trajectories be used for traffic synchronization applications to meet ATM system performance targets, explaining that automation in the air and on the ground will be used fully in order to create an efficient and safe flow of traffic for all phases of flight;
- 4) The amended ICAO Flight Plan and associated ATS Message formats contained in Amendment 1 to the Fifteenth Edition of the PANS ATM (Doc 4444, applicable 15 November 2012) have been formulated to meet the needs of aircraft with advanced capabilities and the evolving requirements of automated air traffic management systems, while taking into account compatibility with existing systems, human factors, training, and cost;
- 5) The ICAO new flight plan Format introduces considerable changes related, inter-alia, to Performance Based Navigation (PBN), Automatic Dependent Surveillance - Broadcast (ADS-B) and Global Navigation Satellite Systems (GNSS), while maintaining a high degree of commonality with the existing flight plan format;
- 6) The complexities inherent in automated computer systems preclude the adoption of a single regional transition date and transitions to the new flight plan provisions will therefore occur throughout the declared transition period;
- 7) The risk of not updating all MID States automated systems as planned and before the implementation date of 15 November 2012; and
- 8) The risk of all users simultaneously commencing “NEW” on the common implementation date without proper testing with the States.

The MID Region implementation of Amendment 1 to the PANS-ATM shall:

- 1) Ensure that all States and airspace users implement the full provisions of Amendment 1 to PANS-ATM 15th Edition with applicability date of 15 November 2012, not just selected aspects of the provisions;
- 2) Acknowledge that States not implementing the full provisions of Amendment 1 are obligated to publish the non compliance in State AIP as a ‘significant difference’ well in advance of the 15

November 2012 applicability date and will be included on the MIDANPIRG List of Deficiencies in the CNS/ATM Fields; and

- 3) Ensure that, from 15 November 2012, all States and airspace users accept and disseminate 'NEW' flight plan and associated ATS message formats only and capabilities for 'PRESENT' flight plan provisions are discontinued.

The MID Regional transition to the PANS-ATM Amendment 1 provisions shall:

- 1) Comply with the guidance provided by ICAO as described in the ICAO guidance material in State Letter AN 13/2.1-09/9, dated 6 February 2009; titled "Guidance for implementation of flight plan information to support Amendment 1 of the Procedures for Air Navigation Services — Air Traffic Management, Fifteenth Edition (PANS-ATM, DOC 4444)";
- 2) States must ensure coordination with adjacent States for testing and transition and inform other interested stakeholders as appropriate;
- 3) Ensure that the INFPL SG undertakes coordination to facilitate harmonization with implementations in neighboring regions;
- 4) Eliminate or minimize State specific constraints and, if constraints continued to be ~~are~~ identified as necessary, implementation of such constraints should be agreed on a regional basis or sub regional basis in preference to an individual State basis;
- 5) Declare a preparation transition period from 1 January 2012 until 14 November 2012, comprising;
 - Before 31 March 2012 - ANSPs software delivery and internal testing,
 - 1 April to 30 June 2012 – ANSPs external testing and implementation; and
 - 1 July to 14 November 2012 – airspace users testing and implementation.
- 6) Encourage ANSPs and airspace users to coordinate appropriate implementation methodologies in order to ensure that migration to 'NEW' could be done without problems on the agreed and declared implementation date;
- 7) Encourage States and users to immediately commence preparations to implement Amendment 1 provisions preferably not later than declared preparation period and report progress to the INFPL SG periodic meetings;
- 8) States Implementing NEW Format should have the capability to process both PRESENT and NEW formats during the transition period;
- 9) MID States shall not support PRESENT format after 15 November 2012;
- 10) Strategic Support Teams (SST) to be identified and resourced to support those States who are behind the regional Implementation Plan, and;
- 11) Establish State and Regional coordination cells. Guidelines will be provided to align with the joint ICAO and IATA management center in ICAO HQ Montreal planned around the applicability date.

- 12) To mitigate Date Of Flight (DOF) complexities, adopt a regional approach that does not require processing of flight plans more than 24 hours prior to Estimated Off Blocks Time (EOBT) during the declared transition period;

6. Administrative aspects

1- MIDANPIRG/11 agreed to following Conclusion:

CONCLUSION 11/60: IMPLEMENTATION OF THE NEW ICAO MODEL FLIGHT PLAN FORM

That, MID States,

a) in order to comply with Amendment No. 1 to the 15th Edition of the PANS-ATM (Doc 4444), establish a Study Group to develop the technical audit guidance material and prepare a Regional Strategy for the transition;

b) the Study Group follow the ICAO Guidance for implementation of flight plan information to support Amendment 1 of the PANS-ATM and PFF implementation check list which are at Appendices 5.5B and 5.5C to the Report on Agenda Item 5.5; and

c) implement the new ICAO Flight Plan model by applicability date.

2- ICAO MID Regional Office sent State Letter AN 7/33 – 09/254, dated 4 August 2009 requesting all MID States to provide focal points of contact and an initial assessment of the expected impact that the use of the revised flight plan format could have on the procedures and systems in their State(s).

3- The Third Inter-Regional Co-ordination Meeting (IRCM/3) on Interface Issues between the Asia/Pacific (APAC), Eastern and Southern African (ESAF), European and North Atlantic (EUR/NAT) and Middle East (MID) Regional Offices of ICAO held at the Middle East Regional Office in Cairo from 24 to 26 March 2009, recognized the complexity of the subject and highlighted the need for a worldwide harmonization for a successful implementation. In this regard, the meeting recognized the valuable role to be played by ICAO HQ in assisting the global implementation. Considering the importance of a homogeneous and harmonized implementation, the Air Navigation Commission (ANC) requested the Air Navigation Bureau (ANB) to develop a system that could monitor the implementation of the amendment and also help States with the implementation. In this respect, the ANB developed a web tool called Flight Plan Implementation Tracking System (FITS), which is dedicated to monitor the implementation around the world and to serve as a forum to clarify issues related to the implementation, besides helping States or Organizations on the implementation. In particular, the website indicates the transition status by FIR.

4- MIDANPIRG/12 agreed to following Conclusions and Decisions

DECISION 12/50: TERMS OF REFERENCE OF THE INFPL STUDY GROUP

*That, the Terms of Reference and Work Programme of the INFPL Study Group be updated as at **Appendix 5.5G** to the Report on Agenda Item 5.5.*

CONCLUSION 12/51: INFPL IMPLEMENTATION DIFFICULTIES

That, MID States be urged to complete the impact studies and file any difficulties arising in the implementation of INFPL to the ICAO MID Regional Office for posting on FITS.

CONCLUSION 12/52: ICAO NEW FLIGHT PLAN FORMAT IMPLEMENTATION

That, MID States be urged to:

- a) secure necessary budget for the implementation of the ICAO New FPL Format;*
- b) initiate necessary negotiation with their ATC systems manufacturers/ vendors for the implementation of necessary hardware/software changes, as soon as possible;*
- c) develop National PFF related to the ICAO new FPL format project with clearly established milestones with timelines; and*
- d) take all necessary measures to comply with the applicability date of 15 November 2012.*

Conclusion 12/53: Questionnaire on the Status of INFPL Implementation

*That, MID States be urged to reply to the Questionnaire on the Status of Implementation of Amendment 1 to the Procedures for Air Navigation Services-Air Traffic Management, Fifteenth Edition (PANS-ATM, Doc 4444) as at **Appendix 5.5J** to the Report on Agenda Item 5.5, by 20 February 2011.*

Conclusion 12/54: Strategy for the Implementation of INFPL

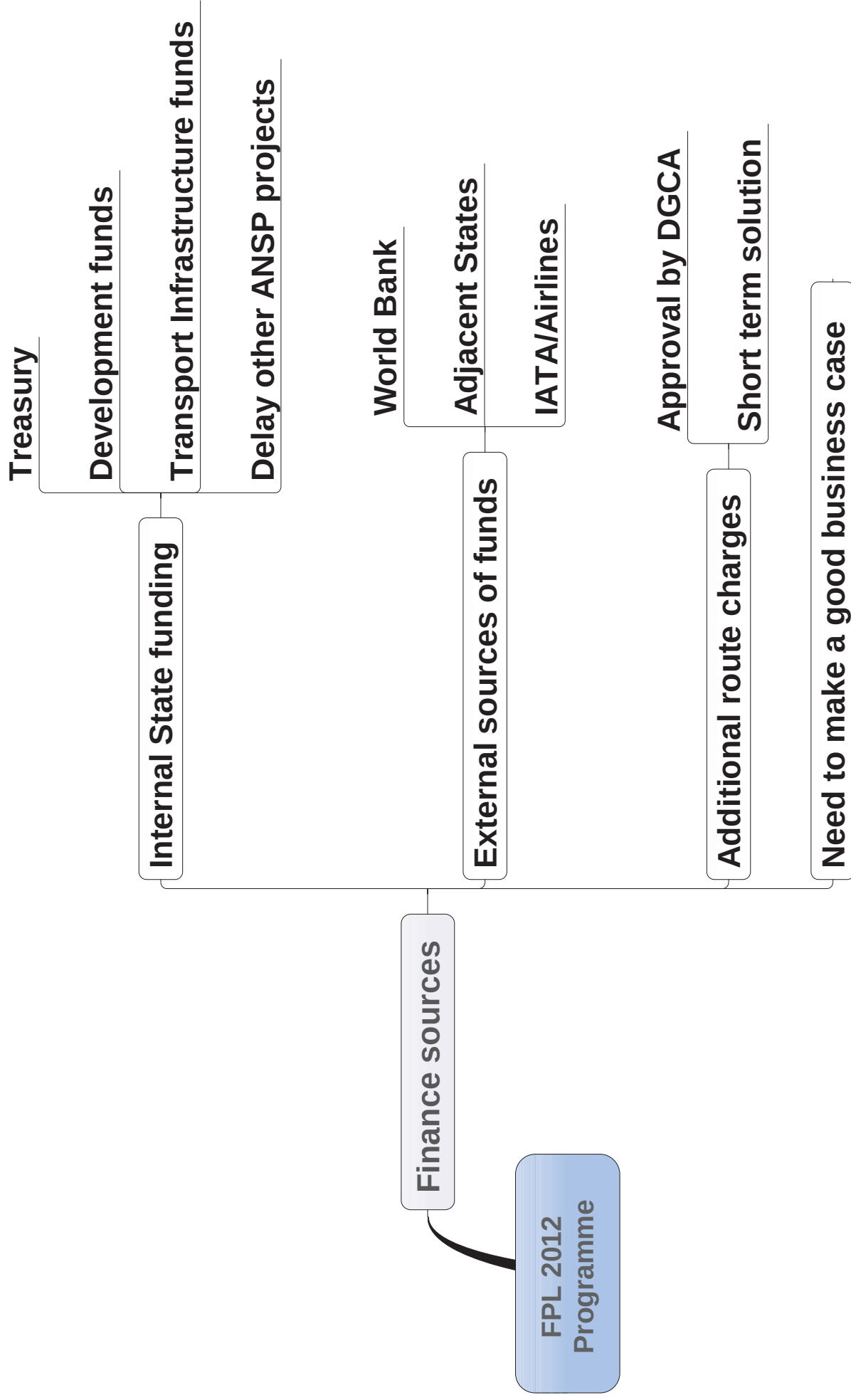
*That, MID Region Strategy for the implementation of INFPL be adopted as at **Appendix 5.5K** to the Report on Agenda Item 5.5.*

Conclusion 12/55: INFPL Implementation plans and progress report

That, MID States be urged to send INFPL Implementation plans and progress report on the preparation for the implementation of INFPL to the ICAO MID Regional Office every (3) three months and whenever major progress is achieved.

7. Financial Aspects

Individual organizations, departments and sections are responsible for their own costs incurred to implement the changes required by Amendment 1. This includes systems, administration/organizational, documentation and training.



8. Regional PFF for INFPL

IMPLEMENTATION OF THE NEW ICAO FPL FORM	
Benefits	
Safety	enhance safety by use of modern capabilities onboard aircraft
Environment	reductions in fuel consumption and CO₂ emission utilizing proper flight planning and aircraft capabilities are known in advance to ANSP
Capacity	- ability of air navigation service providers to make maximum use of aircraft capabilities - ability of aircraft to conduct flights more closely to their preferred trajectories - optimized demand and capacity balancing through the efficient exchange of information
Cost effectiveness	facilitate utilization of advanced technologies thereby increasing efficiency
Performance Measurement	
Performance Metrics:	- status of implementation of ICAO new FPL provisions - status of updates in the FITS - number of States meeting the deadline for implementation of the ICAO new FPL provisions - number of States providing the focal points and initiated impact studies

	Strategy			
ATM Operational Concept Components	Projects/Tasks	Timeframe Start/End	Responsibility	Status
SDM	Planning and implementation of transition elements	2009-2012	INFPL SG	valid
	States to assign focal points and form and internal nucleus team	2009 - 2010	States	valid
	ensure that enabling regulatory (regulations procedures, AIP etc..) provisions are developed	2009- 2012	States	valid
	ensure that the automation and software requirements of local systems are fully adaptable to the changes envisaged in the new FPL form	2009 - 2012	States	valid
	ensure that issues related to the ability of all system to pass information correctly and to correctly identify the order in which messages are received, to ensure that misinterpretation of data	2009- 2012	States	valid

	<i>Strategy</i>			
ATM Operational Concept Components	Projects/Tasks	Timeframe Start/End	Responsibility	Status
	does not occur			
	analyze each individual data item within the various fields of the new flight plan form, comparing the current values and the new values to verify any problems with regard to applicability of service provided by the facility itself or downstream units	2009 – 2011	INFPL SG States	valid
	ensure that there are no individual State peculiarities or deviations from the flight plan provisions	2009- 2012	States	valid
	ensure that the accepting ATS Reporting Office accepts and disseminates all aircraft capabilities and flight intent to all the downstream ACCs as prescribed by the PANS-ATM provisions	2009 – 2012	INFPL SG States	valid
	plan the transition arrangements to ensure that the changes from the current to the new ICAO FPL form occur in a timely and seamless manner and with no loss of service	2009-2012	States INFPL SG	valid
	in order to reduce the chance of double indications it is important that any State having published a specific requirement(s) which are now addressed by the amendment should withdraw those requirements in sufficient time to ensure that aircraft operators and flight plan service providers, after 15 November 2012, use only the new flight plan indications.	2009- 2012	States	valid
	internal testing	2009 – June 2012	States	valid
	external testing and transition into operation	1 April to 30 June 2012	States	valid
	airspace users validation and filling of NEW FPLs if appropriate	1 July to 14 November 2012	States and users	valid

	<i>Strategy</i>			
ATM Operational Concept Components	Projects/Tasks	Timeframe Start/End	Responsibility	Status
	Plan and ensure the training of relevant stakeholders (air traffic controllers, etc)	2009 - 2012	States	valid
	develop and make available, guidance material for users, including but not limited to ANSP personnel	2009 - 2011	INFPL SG	valid

	<i>Strategy</i>			
ATM Operational Concept Components	Projects/Tasks	Timeframe Start/End	Responsibility	Status
	establish and enhance as appropriate a central depository (FITS) in order to track the implementation status	Ongoing	ICAO	Completed
	inform the ICAO regional offices on an ongoing basis	Ongoing- Dec 2012	States	Valid
linkage to GPIs	GPI/5 RNAV and RNP (Performance-based- navigation, GPI/9 Situational awareness, GPI/16 Decision Support systems and alerting systems, GPI/17 Data link application, GPI/18 Aeronautical Information GPI/21 Navigation systems and GPI/23 Aeronautical radio spectrum.			

9. National PFFs for INFPL

IMPLEMENTATION OF THE NEW ICAO FPL FORM Kingdom of Bahrain				
Benefits				
Environment	• reductions in fuel consumption and CO₂ emission utilizing proper flight planning and aircraft capabilities are known in advance to ANSP			
Efficiency	• ability of air navigation service providers to make maximum use of aircraft capabilities • ability of aircraft to conduct flights more closely to their preferred trajectories • facilitate utilization of advanced technologies thereby increasing efficiency • optimized demand and capacity balancing through the efficient exchange of information			
Safety	• enhance safety by use of modern capabilities onboard aircraft			
KPI	• status of implementation of ICAO new FPL provisions			
Proposed Metrics:	• number of Airlines meeting the deadline for implementation of the ICAO new FPL provisions • number of States meeting the deadline for implementation of the ICAO new FPL provisions • number of FPLs in the Error Queue in the AIM System.			
Strategy Short term (2010-2012) Medium term (2013 - 2016)				
ATM OC COMPONENTS	TASKS	TIMEFRAME START-END	RESPONSIBILITY	STATUS
SDM	• Studying present system and assess its capability.	2009-2010	IT	Completed
	• assign focal points to ICAO and form and internal team	2009 - 2010	Director Air Navigation	Completed
	• ensure that enabling regulatory (regulations procedures, AIP etc..) provisions are developed	2009- 2012	Head AIS	valid
	• Allocating sufficient funds	2011	Director Air Navigation	Completed
	• ensure that the automation and software requirements of ATM systems are fully adaptable to the changes envisaged in the new FPL form	2009 - 2012	Euro CAT-C Project Manager	valid
	• ensure that issues related to the ability of all system to pass information correctly and to correctly identify the order in which messages are received, to ensure that misinterpretation of data does not occur	2009- 2012	Head AIS	valid
		March 2012	Head AIS	

Strategy Short term (2010-2012) Medium term (2013 - 2016)				
ATM OC COMPONENTS	TASKS	TIMEFRAME START-END	RESPONSIBILITY	STATUS
	trained and aware of the expected changes.			
	inform the ICAO regional offices on post implementation	On-going - Dec 2012	Head AIS	valid
linkage to GPIs	GPI/5 RNAV and RNP (Performance-based- navigation, GPI/9 Situational awareness, GPI/16 Decision Support systems and alerting systems, GPI/17 Data link application, GPI/18 Aeronautical Information GPI/21 Navigation systems and GPI/23 Aeronautical radio spectrum.			

NANSC INFPL Implementation PFF

IMPLEMENTATION OF THE NEW ICAO FPL FORM				
Benefits				
Environment	☐ reductions in fuel consumption and CO2 emission utilizing proper flight planning and aircraft capabilities are known in advance to ANSP			
Efficiency	☐ ability of air navigation service providers to make maximum use of aircraft capabilities ☐ ability of aircraft to conduct flights more closely to their preferred trajectories ☐ facilitate utilization of advanced technologies thereby increasing efficiency ☐ optimized demand and capacity balancing through the efficient exchange of information			
Safety	☐ enhance safety by use of modern capabilities onboard aircraft			
KPI	☐ status of implementation of ICAO new FPL provisions ☐ status of updates in the FITS			
Proposed Metrics:	☐ upgrading the systems of (ACC – AIS – FDPS – AMHS) ☐ installing the converter			
Strategy				
Short term (2010-2012)				
Medium term (2013 - 2016)				
ATM OC COMPONENTS	TASKS	TIMEFRAME START-END	RESPONSIBILITY	STATUS
SDM	☐ plan the transition arrangements to ensure that the changes from the current to the new ICAO FPL form occur in a timely and seamless manner and with no loss of service according to MID region strategy	2009-2012	NANSC	valid
	☐ assign focal points and form and internal nucleus team	Sep.2010	NANSC	Done
	☐ ensure that enabling regulatory (regulations procedures, AIP etc..) provisions are developed ☐ in order to reduce the change of double indications it is important that any State having published a specific requirement(s) which are now addressed by the amendment should withdraw those requirements in sufficient time to ensure that aircraft operators and flight plan service providers, after 15 November 2012, use only the new FPL indications	Feb.-JUN 2012	NANSC ECAA	ongoing
	☐ ensure that the automation and software requirements of local systems are fully adaptable to the changes envisaged in the new FPL Provisions	MAY 2012	COMSOFT NANSC	ongoing
	☐ ensure that issues related to the ability of all system to pass information correctly and to correctly identify the order in which messages are received, to ensure that misinterpretation of data does not occur	JUN 2012	COMSOFT NANSC	ongoing
	☐ analyze each individual data item within the various fields of the new flight plan form, comparing the current	JUN 2011	INFPL SG NANSC	valid

	values and the new values to verify any problems with regard to applicability of service provided by the facility itself or downstream units			

Strategy Short term (2010-2012) Medium term (2013 - 2016)				
ATM OC COMPONENTS	TASKS	TIMEFRAME START-END	RESPONSIBILITY	STATUS
	☐ ensure that the accepting ATS Reporting Office accepts and disseminates all aircraft capabilities and flight intent to all the downstream ACCs as prescribed by the PANS-ATM provisions	July2012	NANSC	valid
	☐ develop National Contingency Plan	SEP.2012	NANSC	Ongoing
	☐ internal testing: AMHS AFTN ATALIS FDPS	June 2012	NANSC	Ongoing
	☐ external testing 1. JEDDAH FIR 10/6 2. AMMAN 20/6 3. TEL AVIV 4. CYPRUS 5. GREEC 6. LYBIA 25/6 7. SUDAN 30/6	June 2012	NANSC STATES	Ongoing
	☐ airspace users testing: 1. Egypt air 2. Air Cairo 3. Express 4. SAMA	1 July to 14 November 2012	Airline operators. ATM/Technical Engineering	Ongoing
	☐ ensure the training of relevant stakeholders (air traffic controllers, etc)	march 2012	NANSC	Ongoing
	☐ develop and make available, guidance material for users, including but not limited to ANSP personnel	Feb.2012	NANSC	completed
	☐ Arrange awareness campaign	April2012	NANSC	ongoing
	☐ inform the ICAO regional offices on an ongoing basis every 3 month	Ongoing- Dec 2012	NANSC	Ongoing
linkage to GPIs	GPI/18 Aeronautical Information			

JORDAN INFPL Implementation PFF

IMPLEMENTATION OF NEW ICAO FLIGHT PLAN PROVISIONS				
BENEFITS				
Environment	Reductions in fuel consumption.			
Safety	Enhance safety by use of modern capabilities on board aircraft			
Efficiency	• Ability of air navigation services providers to make maximum use of aircraft capabilities. • Ability of aircraft to conduct flights more closely to their preferred destinations. • Facilitate utilization of advanced technologies.			
Short term Strategy (2010-2012)				
ATM OC COMPONENTS	TASKS	TIME FRAME	RESPONSIBILITY	STATUS
	Take all necessary measures to implement the provisions of amendment 1 to the 15 th edition of the PANS-ATM Doc 4444 with applicability date 15 November 2012.			
	CARC established a national working group and assigned a focal point.	2010	CARC	Completed
	Perform the automation/ procedural impact study, and identify the required upgrade for affected systems.	2010	INFPL WG	Completed
	Develop a training and awareness plan for air traffic controller, flight data units, AIS and other relevant personnel.	Q4 2010	INFPL WG	Completed
	Develop a national implementation plan for the new changes of ICAO flight plan.	Ongoing	INFPL WG	Valid
	Develop a national contingency plan to ensure seamless transition with no loss of service.	Ongoing	INFPL WG	Valid

	Procure the needed hardware and software to facilitate the conversion from new to present FPL format.	Ongoing	Technical support Dept. INFPL WG	Valid
	Software delivery and Internal testing	Q4 2011	INFPL WG	Valid
	Develop information for incorporation into publication (AIP, AIC, Doc 7030)	Q1 2012	INFPL WG	Valid
	Testing with Airspace user	Q2 2012	INFPL WG Airlines	Valid
	Testing with Adjacent (External Testing)	Q2 2012	INFPL WG	Valid
	Inform the ICAO MID office on an ongoing basis. To keep Flight Information tracking system (FITS) updated.	Ongoing	INFPL WG	Valid
References:	• Amendment 1 to 15th edition of PANS-ATM Doc 4444. • ICAO guidance material for implementation. • MID region-interim strategy for the implementation of INFPL format.			

IMPLEMENTATION OF THE NEW ICAO FPL FORM	
State Of Kuwait	
Benefits	
Environment	- reductions in fuel consumption and CO ₂ emission utilizing proper flight planning and aircraft capabilities are known in advance to ANSP
Efficiency	- ability of air navigation service providers to make maximum use of aircraft capabilities - ability of aircraft to conduct flights more closely to their preferred trajectories - facilitate utilization of advanced technologies thereby increasing efficiency - optimized demand and capacity balancing through the efficient exchange of information
Safety	- enhance safety by use of modern capabilities onboard aircraft
KPI	- status of implementation of ICAO new FPL provisions
Proposed Metrics:	- number of Airlines meeting the deadline for implementation of the ICAO new FPL provisions - number of States meeting the deadline for implementation of the ICAO new FPL provisions - number of FPLs in the Error Queue in the AIM System.

Strategy				
Short term (2010-2012)				
Medium term (2013 - 2016)				
ATM OC COMPONENTS	TASKS	TIMEFRAME START-END	RESPONSIBILITY	STATUS
SDM	- Studying present system and assess its capability	2009-2010	NED , AND & PCD	Completed
	- assign focal points to ICAO and form and internal team	2009 - 2010	NED	Completed
	- ensure that enabling regulatory (regulations procedures, AIP etc..) provisions are developed	2009- 2012	Head AIS	valid
	- Allocating sufficient funds	2011	PCD	Completed
	- ensure that the automation and software requirements of ATM systems are fully adaptable to the changes envisaged in the new FPL form	2009 - 2012	ATM Project Team	valid
	- ensure that issues related to the ability of all system to pass information correctly and to correctly identify the order in which messages are received, to ensure that misinterpretation of data does not occur	2009- 2012	ATM Project Team	valid
	- Procure Flight Planning software, (part of new AFTN system) - Re evaluate Software - Validate FPL 2012 Software	October 2010 June 2011 January 2012	PCD/NEDAND ATM Project Team ATM Project Team/NED	Completed Completed Completed

Strategy Short term (2010-2012) Medium term (2013 - 2016)				
ATM OC COMPONENTS	TASKS	TIMEFRAME START-END	RESPONSIBILITY	STATUS
	- Develop a national contingency plan to ensure seamless transition with no loss of service	NOV 2012	Head AIS& ATM Project Team	valid
	- Install the Software in all Briefing Units	April 2012	ATM Project Team	valid
	- ensure that the AIM System accepts and disseminates all aircraft capabilities and flight intent to ATM System as prescribed by the PANS-ATM provisions	2009 - 2012	ATM Project Team	valid
	- plan the transition arrangements to ensure that the changes from the current to the new ICAO FPL form occur in a timely and seamless manner and with no loss of service	2009 - 2012	ATM Project Team & Head AIS	valid
	- Awareness phase. Inform all AIS & ATC personals about the new ICAO FPLs Form	April 2012	Head AIS	valid
	- Coordinate with Users, both Military and Civil about New ICAO FPL Forms	May 2012	Head AIS Military Coordination Team	valid
	- Determine a date for transition run	July 2012	Head AIS	valid
	- Validation of AIDC application in compliance with FPL Form 2012	August 2012	ATM Project Team & Head AIS	valid
	- Safety Assessment	October 2012	SMS Manager	valid
	- Perform a trail test on one of the stations before going country wide	April 2012	Head AIS	valid
	- internal testing on all Stations	June 2012	Head AFTN & COM	valid
	- external testing and transition into operation (Neighboring State)	1 April to 30 June 2012	Head AFTN & COM	valid
	- Regional Testing with Karachi	July 2012	Head AFTN & COM	valid
	- airspace users validation and filling of NEW FPLs (KAC, JZR „and AC Kuwait registration)	1 July to 14 November 2012	Head AFTN & COM	valid
	- Training phase. Ensuring all Briefing Offices & air traffic	Nov 2012	Head AIS	valid

Strategy Short term (2010-2012) Medium term (2013 - 2016)				
ATM OC COMPONENTS	TASKS	TIMEFRAME START-END	RESPONSIBILITY	STATUS
	controllers, are adequately trained and aware of the expected changes.			
	- inform the ICAO regional offices on post implementation	On-going - Dec 2012	Head AIS	valid
linkage to GPIs	GPI/5 RNAV and RNP (Performance-based- navigation, GPI/9 Situational awareness, GPI/16 Decision Support systems and alerting systems, GPI/17 Data link application, GPI/18 Aeronautical Information GPI/21 Navigation systems and GPI/23 Aeronautical radio spectrum.			

IMPLEMENTATION OF THE NEW ICAO FPL FORM Sultanate of Oman	
Benefits	
Environment • Reductions in fuel consumption and CO2 emission	
Efficiency • ability of air navigation service providers to make maximum use of aircraft capabilities • ability of aircraft to conduct flights more closely to their preferred trajectories • facilitate utilization of advance technologies thereby increasing efficiency • optimized demand and capacity balancing through the efficient exchange of information	
Safety • enhance safety by use of modern capabilities onboard aircraft	
KPI • Status of implementation of ICAO new FPL is under process and FITS will be update in May 2012.	
Proposed Metrics • software and hardware will be installed on 19th of May 2012 • training will start from 21st to 23rd of May 2012	

<i>Strategy</i> <i>Short term (2010-2012)</i>				
ATM OC COMPONENTS	TASKS	TIMEFRAME START-END	RESPONSIBILITY	STATUS
	plan the transition arrangements to ensure that the changes from the PRESENT to the NEW ICAO FPL form occur in a timely and seamless manner and with no loss of service	2009 - 2012	INFPL SG States	Done
	assign focal point to ICAO and form and internal nucleus team	2009 - 2010	State	Done
	Planning and implementation of transition Strategy	2009 - 2012	INFPL SG	Done
	ensure that enabling regulatory	2009 - 2012	State	

	(regulations procedures, AIP Etc...) provisions are developed			Valid
	Develop Regional contingency plans	July 2012	State	Valid
	Develop National contingency plans	July 2010- July 2011	States	
	ensure that the automation and software requirements of local systems are fully adaptable to the changes envisaged in the new Provisions	May 2012	States/Vendors	Under prose's
	ensure that issues related to the ability of all system to parse information correctly and to correctly identify the order in which messages are received, to ensure that misinterpretation of data does not occur	2009-2012	States/Vendors	valid
	ensure that there are no individual State peculiarities or deviations from the flight plan provisions	2009- 2012	INFPL SG States	valid
	ensure that the accepting ATS Reporting Office accepts and disseminates all aircraft capabilities and flight intent to all the downstream ACCs as prescribed by the PANS-ATM provisions	2009 - 2012	State	valid
ATM OC COMPONENTS	TASKS	TIMEFRAME START-END	RESPONSIBILITY	STATUS
	in order to reduce the change of double indications it is important that any State having published a specific requirement(s) which are now addressed by the amendment should withdraw those requirements in sufficient time to ensure that aircraft operators and flight plan service providers, after 15 November 2012, use only the new flight plan indications	2009- 2012	States	valid
	internal testing	25 th May to 24 th July 2012	States	valid
	external testing	25 th July to 14 th August 2012	States	valid
	Testing with Bahrain and UAE	July	States	valid
	Testing with India and Pakistan	August	States	valid
	Testing with Yemen	September	States	valid
	airspace users testing	15 th August to 14 th November	States and users	valid

		2012		
	To ensure all Briefing officers and ATC controllers are adequately trained.	21 st to 23 rd of May	States	valid
	inform the ICAO regional offices on an ongoing basis	Ongoing- Dec 2012	States	valid
linkage to GPIs	GPI/18 Aeronautical Information, GPI/5 RNAV and RNP (Performance-based navigation), GPI/9 Situational Awareness			

IMPLEMENTATION OF THE NEW ICAO FPL FORM STATE OF QATAR

Benefits

Environment	reductions in fuel consumption and CO₂ emission utilizing proper flight planning and aircraft capabilities are known in advance to ANSP
Efficiency	- ability of air navigation service providers to make maximum use of aircraft capabilities - ability of aircraft to conduct flights more closely to their preferred trajectories - facilitate utilization of advanced technologies thereby increasing efficiency - optimized demand and capacity balancing through the efficient exchange of information
Safety	enhance safety by use of modern capabilities onboard aircraft
KPI	status of implementation of ICAO new FPL provisions
Proposed Metrics:	- number of Airlines meeting the deadline for implementation of the ICAO new FPL provisions - number of States meeting the deadline for implementation of the ICAO new FPL provisions - number of FPLs in the Error Queue in the AIM System.

Strategy

Short term (2010-2012)

Medium term (2013 - 2016)

ATM OC COMPONENTS	TASKS	TIMEFRAME START-END	RESPONSIBILITY	STATUS
SDM	Studying present system and assess its capability.	2009-2010	IT	Completed
	assign focal points to ICAO and form and internal team	2009 - 2010	Director Air Navigation	Completed
	ensure that enabling regulatory (regulations procedures, AIP etc..) provisions are developed	2009- 2012	Head AIS	valid
	Allocating sufficient funds	2011	Director Air Navigation	Completed
	ensure that the automation and software requirements of ATM systems are fully adaptable to the changes envisaged in the new FPL form	2009 - 2012	SELEX Project Manager	valid
	ensure that issues related to the ability of all system to pass information correctly and to correctly identify the order in which messages are received, to ensure that misinterpretation of data does not occur	2009- 2012	Head AIS	valid
	Procure the software.	March 2012	Head AIS	Valid

Strategy Short term (2010-2012) Medium term (2013 - 2016)				
ATM OC COMPONENTS	TASKS	TIMEFRAME START-END	RESPONSIBILITY	STATUS
	Develop a national contingency plan to ensure seamless transition with no loss of service.	NOV 2011	Head AIS	Done
	Install the Software in all Briefing Units	April 2012	Head AIS	valid
	ensure that the AIM System accepts and disseminates all aircraft capabilities and flight intent to ATM System as prescribed by the PANS-ATM provisions	2009 – 2012	SELEX Project Manager	valid
	plan the transition arrangements to ensure that the changes from the current to the new ICAO FPL form occur in a timely and seamless manner and with no loss of service	2009-2012	SELEX Project Manager & Head AIS	valid
	Awareness phase. Inform all AIS & ATC personals about the new ICAO FPLs Form.	April 2012	Head of Training	valid
	Determine a date for transition run	July 2012	Head AIS	Valid
	Safety Assessment	October 2012	SMS Manager	Valid
	Perform a trail test on one of the stations before going country wide.	April 2012	Head AIS	Valid
	internal testing on all Stations	June 2012	Head AIS	valid
	external testing and transition into operation (Neighboring State)	1 April to 30 June 2012	Head AIS	valid
	Regional Testing with Singapore	July 2012	Head AIS	Valid
	airspace users validation and filling of NEW FPLs (GFA, BAB „and AC Bahrain registration)	1 July to 14 November 2012	Head AIS and users	valid
	Training phase. Ensuring all Briefing Offices & air traffic controllers, are adequately trained and aware of the expected changes.	October 2012	Head AIS & Head of Training	valid

Strategy Short term (2010-2012) Medium term (2013 - 2016)				
ATM OC COMPONENTS	TASKS	TIMEFRAME START-END	RESPONSIBILITY	STATUS
	inform the ICAO regional offices on post implementation	On-going - Dec 2012	Head AIS	valid
linkage to GPIs	GPI/5 RNAV and RNP (Performance-based- navigation, GPI/9 Situational awareness, GPI/16 Decision Support systems and alerting systems, GPI/17 Data link application, GPI/18 Aeronautical Information GPI/21 Navigation systems and GPI/23 Aeronautical radio spectrum.			

SAUDI ARABIAN PERFORMANCE OBJECTIVES TABLE
ATM PERFORMANCE OBJECTIVES

IMPLEMENTATION OF THE NEW ICAO FPL FORM Saudi Arabia				
Benefits				
Environmental Efficiency	• reductions in fuel consumption • ability of air navigation service providers to make maximum use of aircraft capabilities • ability of aircraft to conduct flights more closely to their preferred trajectories • facilitate utilization of advanced technologies thereby increasing efficiency • optimized demand and capacity balancing through the efficient exchange of information			
Safety	• enhance safety by use of modern capabilities onboard aircraft.			
KPI	• status of implementation of ICAO new FPL provisions • provision of updates for the FITS			
Proposed Metrics	• meeting the deadline for implementation of the ICAO new FPL provisions • provision of a focal point and relevant update studies.			
Strategy Short Term (2008 - 2012)				
ATM OC COMPONENTS	TASKS	TIMEFRAME START-END	RESPONSIBILITY	STATUS
ATM Systems	(a) Jeddah/Riyadh Thales – FDP will accept additional data, characters and field lengths without rejecting to Message Correction.	Mid - 2013	SED/ATM	Ongoing
	(b) Jeddah/Riyadh Thales – Generation of NEW format for ATS message types: CHG, DEP, CNL, RQP & RQS.	Mid – 2013	SED/ATM	Ongoing
	(c) Jeddah/Riyadh Thales – Generation of appropriate OLDI/ AIDC messages.	Mid - 2013	SED/ATM	Ongoing
	(d) Dammam new APP Thales – as for Jeddah/Riyadh systems above.	Mid - 2013	SED/ATM	Ongoing
	(e) Liaise with Performance Based Navigation (PBN) Implementation Group to	Done	Performance Based IMPL. Group	Ongoing

	ensure they are aware of the requirements of Amendment 1 and that they accept responsibility for any changes they require. (f) Jeddah, Riyadh, Madinah and Dammam MMI for electronic strips and printed strips have been modified to show additional characters in relevant boxes.	Mid - 2013	SED/ATM	Ongoing
2. Message Switching System	(a) Jeddah, Riyadh & Dammam – the CADAS application is compliant and that the syntax checking on both proforma and free text for FPL and other ATS messages is compliant.	APR - 2012	SED/AT	Ongoing
	(b) The AIT application used by several AFTN message recipients and originators is not compliant and cannot accept at message origination and display on receipt all relevant information in the original FPL. Change to CADAS	DONE	SED/AT	Ongoing
3. RSAF	Advise RSAF of the requirements of Amendment 1.	DONE JAN - 2011	ATM	Completed Latent FDP system
4. Airline Operators	(a) Saudia – coordinate as required to test the converter from IATA to AFTN format to ensure when SAUDIA wish to introduce the NEW format from their FOIS that the conversion functions correctly.	NOV 2011	SAUDIA/SED/AT	Ongoing Testing etc
	(b) Other airlines – no action required except for those who make use of the AIT application.	APR - 2012	Airline Ops/SED/ AT	Ongoing Terminals to change to CADAS
5. Documentation	(a) KSA AIP – Check and confirm any changes.	MAY 2012	ATM/AIS	Ongoing

	(b) ATSP 7300.1.1 – Check and confirm any changes. (c) ATSP 7300.1.2 (Centers) – Check and confirm any changes. (d) ATSP 7300.1-3 – Check and confirm any changes. (e) Flight Plan Form – Pads printed by GACA Print Shop – Check Field/Item size and change if necessary.	MAY 2012 MAY 2012 DONE FEB 2012 MAY 2012	ATM ATM/ATS Centers ATM/AT Section ATM/AT Section	Ongoing Ongoing Yet to be distributed Ongoing
6. Training	ATM – Letter to both ATC and Communication Centers & Units to ensure they are aware of changes and to take the necessary planning action for staff training.	DONE 2010 - 2011	ATM/AT Section	Complete
7. Testing	(a) Internal Testing (b) External Testing (c) User Testing	2010 – JUN 2012 1 APR – 30 JUN 2012 1 JUL – 14 NOV 2012	ATM/AT/SED/ System Vendor ATM/SED (System Vendor?) Airline Opr./ATM/ SED	Ongoing Ongoing Ongoing
8. KSA Contingency Plan (KSA INFPL Implementation Plan)	The Contingency Plan is incorporated in the KSA INFPL Implementation Plan document.	1 JUL – DEC 2011	KSA INFPL Group	Completed
9. Safety Assessment	Safety and Quality Assurance Dept. involved as required by Annex 11.	JUL – 2012	Safety & Quality Assurance Dept.	Ongoing
10. Removal of redundant software: (a) ATM (b) Message Systems	May not be a problem as new software will directly replace present. AIDA-NG CADAS	Mid - 2013 Not Known During 2013	SED/ATM	Ongoing

1.1.2 Abbreviations Used in KSA PFF Table

AFTN	Aeronautical Fixed Telecommunications Network
AIDC	ATS Inter-Center Data Communications
AIP	Aeronautical Information Publication
AIS	Aeronautical Information Service
AIT	AFTN Intelligent Terminal (AFTN software package)
APP	Approach
AT	Aeronautical Telecommunications
ATC	Air Traffic Control
ATM	Air Traffic Management
ATS	Air Traffic Services
ATSP	Air Traffic Services Procedures
CADAS COMSOFT	Aeronautical Data Access System
CHG	Modification Message
COMM	Communications
CNL	Cancellation Message
DEP	Departure Message
FDP	Flight Data Processor
FOIS	Flight Operations and Information System
FPL	Flight Plan
GACA	General Authority of Civil Aviation
KSA	Kingdom of Saudi Arabia
MMI	Man-Machine Interface
OLDI	Operational Link Data Interface
PBN	Performance Based Navigation
RQP	Request Plan
RQS	Request Supplementary Plan
SAUDIA	Saudi Arabian Airlines
SED	Systems Engineering Department

IMPLEMENTATION OF THE NEW ICAO FPL FORM United Arab Emirates - ACC	
Benefits	
Environment	reductions in fuel consumption and CO₂ emission utilizing proper flight planning and aircraft capabilities are known in advance to ANSP
Efficiency	- ability of air navigation service providers to make maximum use of aircraft capabilities - ability of aircraft to conduct flights more closely to their preferred trajectories - facilitate utilization of advanced technologies thereby increasing efficiency - optimized demand and capacity balancing through the efficient exchange of information
Safety	enhance safety by use of modern capabilities onboard aircraft
KPI	status of implementation of ICAO new FPL provisions
Proposed Metrics:	- number of Airlines meeting the deadline for implementation of the ICAO new FPL provisions - number of States meeting the deadline for implementation of the ICAO new FPL provisions - number of FPLs in the Error Queue in the AIM System.

Strategy Short term (2010-2012) Medium term (2013 - 2016)				
ATM OC COMPONENTS	TASKS	TIMEFRAME START-END	RESPONSIBILITY	STATUS
SDM	Studying present system and assess its capability.	2009-2010	Executive Director Air Navigation Services	Completed
	assign focal points to ICAO and form and internal team	2009 - 2010	Executive Director Air Navigation Services	Completed
	ensure that enabling regulatory (regulations procedures, AIP etc..) provisions are developed	2009- 2012	Director ATM	valid
	Allocating sufficient funds	2010	Director General	Completed
	ensure that the automation and software requirements of ATM systems are fully adaptable to the changes envisaged in the new FPL form	2009 - 2012	Director ATM	Completed
	ensure that issues related to the ability of all system to pass information correctly and to correctly identify the order in which messages are received, to ensure that misinterpretation of data does not occur	2009- 2012	Director ATM	Completed

Strategy Short term (2010-2012) Medium term (2013 - 2016)				
ATM OC COMPONENTS	TASKS	TIMEFRAME START-END	RESPONSIBILITY	STATUS
	Procure the software.	January 2010	Executive Director Air Navigation Services	Completed
	Develop a national contingency plan to ensure seamless transition with no loss of service.	NOV 2011	Director ATM	Completed
	Install the Software in relevant Briefing Units	January 2011	Head of Research and Dataset	Completed
	ensure that the message switch accepts and disseminates all aircraft capabilities and flight intent to ATM System as prescribed by the PANS-ATM provisions	2009 – 2012	Director ATM	Completed
	plan the transition arrangements to ensure that the changes from the current to the new ICAO FPL form occur in a timely and seamless manner and with no loss of service	2009-2012	Head of Research and Dataset	valid
	Determine a date for transition run	July 2012	Director ATM	Valid
	Safety Assessment	February 2012	Manager Safety & Quality	Valid
	Perform a trial test on one of the stations before going country wide.	September 2010	Head of Research and Dataset	Completed
	internal testing with relevant Stations	June 2012	Head of Research and Dataset	valid
	Tests with neighboring country – Qatar CAA	February 2012	Head of Research and Dataset	Completed
	Inter-regional tests – Pakistan CAA	February 2012	Head of Research and Dataset	Completed
	Oceanic tests – Eurocontrol	February 2012	Head of Research and Dataset	Completed
	airspace users validation and filling of NEW FPLs (National carriers)	01 March to 30 June 2012	Head of Research and Dataset	valid
	Training phase. Ensuring relevant all Briefing Offices, Flight Data Operators & Air Traffic Controllers, are	June 2012	Head of Research and Dataset	valid

Strategy Short term (2010-2012) Medium term (2013 - 2016)				
ATM OC COMPONENTS	TASKS	TIMEFRAME START-END	RESPONSIBILITY	STATUS
	adequately trained and aware of the expected changes.			
	inform the ICAO regional offices on post implementation	On-going - Dec 2012	Director ATM	valid
linkage to GPIs	GPI/5 RNAV and RNP (Performance-based- navigation, GPI/9 Situational awareness, GPI/16 Decision Support systems and alerting systems, GPI/17 Data link application, GPI/18 Aeronautical Information GPI/21 Navigation systems and GPI/23 Aeronautical radio spectrum.			

10. List of Focal Points

NEW FLIGHT PLAN IMPLEMENTATION STUDY GROUP FOCAL POINT

STATE	NAME	TITLE	ADDRESS	EMAIL	FAX	TEL	MOBILE
Bahrain	Salah Mohamed Alhumood	Head, Aeronautical Information & Airspace Planning	Civil Aviation Affairs Bahrain International Airport P.O. Box 586 KINGDOM OF BAHRAIN	shumood@caa.gov.bh	+97317321992	+973117 321 180	+9733640 0424
Egypt	Ashraf Mostafa Mohamed Korany	Director Fpt & Rpl	National Air Navigation Services Company, Aeronautical Information Centre, Cairo International Airport, T2, Cairo 11776 A..R.E.	Ashraf.korany64@yahoo.com	+22678882 +22678885	+22652460 +22652492	+012031043
Egypt	Mr. Mahmoud Mohammed Aly	Manager Of Research and Development	National Air Navigation Services Company, CANC building Airport road , Egypt.	redcoode@yahoo.com	+	+20237740809	+201006851155
Iran	Behzad Soheil	Expert in Charge of Radar Information and Flight Data	Tehran Area Control Center (Shahid Shahcheraghi) Central Bldg of Iran Airports Company, Mehrabad Int'l Airport, Tehran, I.R. of Iran P.O.Box 13445-1558, Postal Code 1387835283	Behzad.soheil@yahoo.com Behzad.soheil@gmail.com	+982144544114	+982144544115	+989125544193
Iraq	Adnan Mahmood Omar	Chief Briefing Officer	Baghdad International Airport	aldoor_adnan@yahoo.com			+9647901792154
Jordan	Mrs. Muna Al naddaf	Head of AFTN/AIS/AMHS Maintenance section	Civil Aviation Regulatory Commission P.O.Box 7547 Postal 11110 Amman - JORDAN	aftn_ais@carc.gov.jo	(962-6) 489 1653	(962-6) 489 1473	(962-77) 939 5224
Kuwait	Dawood A. Al Jarah	Head of AFTN Section	Navigational Equipment Department, Directorate General of Civil Aviation, Kuwait International Airport, P.O.Box 17 – Safat, 13001 – Safat – Kuwait	kudata3@hotmail.com	+96524732530	+96524721279	+96599088511
Lebanon	Elie Elkhoury	Head of AIS section	Hariri Int'l Airport Beirut -Lebanese DGCA	kelie@beirutairport.gov.lb ais@beirutairport.gov.lb	+9611629023	+9611629067	+9613897943

STATE	NAME	TITLE	ADDRESS	EMAIL	FAX	TEL	MOBILE
Libya	Abdurrahman Ben Yousef	Director Air Navigation Dept.	Civil Aviation Authority P.O. Box 14399 Tripoli Libya	benyousef581@yahoo.co.uk abdurrahman.benyousef@caa.ly	+21822632331	+218213605535	+218913223879
Libya			Civil Aviation Authority P.O. Box 14399 Tripoli Libya				
Oman	Jaffer Abdulla Amir Moosani	Assistant Chief AIS	Directorate General of Meteorology and Air Navigation (DGMAN) P.O.Box 1311 Code 111 Sultanate of Oman	aisaip@yahoo.com	+968 2451 9850	+968 2451 9350	+968 9931 6040
Qatar	Faisal Al-Qahtani	Head of AIS	Civil Aviation Authority P.O.Box 3000 Doha – QATAR	faisal.alqahtani@caa.gov.qa	+974 4656554	+974 4656221	+974 5537060
Saudi Arabia	Waleed M. Almadani	ATM operation and planning manager	General Authority of Civil Aviation P.O.Box 929 Jeddah 21421 - SAUDI ARABIA	almadani6@yahoo.com	+96626717717ext 1817	+96626717717ext 1818	+966505674867
Sudan	Mr. El Nour Ahmed Mohamed	AFTN Chief Engineer	Civil Aviation Authority Khartoum Airport Khartoum - SUDAN	elnour_ahmed@hotmail.com	(249) 83 777 121	(249) 83 777 121	(249) 91 355 2173
Syria	Ghadeer Ali Hossieno	Chief of AIP/Deputy Chief of AIS	Syrian Civil Aviation Authority Al Najmeh Square P.O Box 6257 Damascus-Syria	Ghadeer72@hotmail.com	+963 11 540 10191	+963 11 646 1208	+963 94 4405 877
UAE	Abdullah Al Hashmi	Director Air Traffic Management	General Civil Aviation Authority Sheikh Zayed Air Navigation Centre P.O. Box 66 Abu Dhabi- United Arab Emirates	ahashimi@szc.gcaa.ae	+971 2 599 6836	+971 2 599 6830	+ 97150442 0486
Yemen	Hussain Alsuraihi	Director AIS	Civil Aviation and Met Authority Sana'a	jaberais@yahoo.com	+9671 345 527 +9671 345 820	+9671346652/3 +9671 345 820	+967 777 776898

GUIDANCE FOR IMPLEMENTATION

TABLE OF CONTENT

Table of Contents	i
1. Background	1
2. Terminology	1
3. Transition Period & Phased Implementation	2
4. DOF/ - Five Day (120 hour) Advance FPL filing	2
5. Software Coding Considerations	3
6. Conversion from NEW format to PRESENT format	8
7. Differentiating between NEW format and PRESENT format	13
8. ATS Messages	14
9. Cutover to NEW format	17

MID REGION INFPL GUIDANCE FOR IMPLEMENTATION

1. Background

1.1 Amendment 1 to the 15th Edition of PANS-ATM relating to comprehensive changes to the ICAO Flight Plan and associated ATS Messages formats, this regional guidance material has been developed by MIDANPIRG's MID ICAO New Flight Plan and ATS Messages Study Group (INFPL SG).

1.2 MID States and Air Navigation Service Providers (ANSPs) are encouraged to use this material as general implementation guidance for the ICAO new flight plan and ATS messages formats required by Amendment 1 to PANS-ATM for applicability date 15th November 2012. The material is expected to be of specific assistance when coding software changes in automation systems needed to support the changes to flight plan and ATS message formats.

1.3 The INFPL SG considers that it is of critical importance to conduct validity checking of Filed Flight Plans (FPL) and Air Traffic Service (ATS) Messages filed with and between all MID States and ANSPs, and to ensure that Current Flight Plans (CPL) and other messages exchanged between States and ANSPs are likewise formatted and handled in a similar fashion. In this manner, users/filers are assured that FPLs and associated messages are checked with the same level of scrutiny independent of where the flight originates. Additionally, they are assured that critical flight data information is passed intact by each MID State and ANSP along the route of flight.

2. Terminology

2.1 In accordance with International Civil Aviation Organization (ICAO) transition guidance documents, the following terminology is used throughout this guidance material:

- **PRESENT** format is defined as ICAO flight planning and ATS message formats currently in use as specified in DOC 4444, 15th Edition.
- **NEW** format is defined as ICAO flight planning and ATS message formats specified in Amendment 1 to DOC 4444, 15th Edition.
- **Applicability Date** is the 15 November 2012 effective date of Amendment 1 to PANS-ATM (Doc 4444).

3. Transition Period & Phased Implementation

3.1 The INFPL SG considers that applying an implementation strategy whereby all user switchovers to NEW format occur on the same day (i.e. on Applicability Date) would result on an unmanageable impact on ANSPs systems with a very real risk of automation system crashes. As such, the pre-implementation ANSP safety case analyses are expected to identify this implementation scenario as a safety hazard that requires effective mitigation.

3.2 Under the phased arrangements agreed by the INFPL SG for application in the MID Region, ANSP implementation of NEW format (whilst simultaneously retaining PRESENT capability) would take place first, followed by a staggered user switchover to NEW capability.

3.3 The transition period is defined as the declared MID Region *Strategy for the Implementation of NEW ICAO Flight Plan Format and Supporting ATS Messages*, comprising the following phases:

- **Phase 1** - software delivery and internal testing
 - o 1 January to 31 March 2012,
- **Phase 2**– ANSP external testing and implementation
 - o 1 April to 30 June 2012, and
- **Phase 3** – Airspace users testing and implementation.
 - o 1 July to 15 November 2012

3.4 Under the phased approach, States will not implement NEW capability before the commencement of the ANSPs external testing and implementation period on 1 April 2012 and, in so far as possible, would complete implementation of NEW capability by the end of the ANSPs external testing and implementation period on 30 June 2012. Following this, airspace users would be invited by AIC, AIP supplement and/or NOTAM to commence testing with ANSPs from 1 July 2012. Importantly, ANSPs and users would be encouraged to coordinate appropriate implementation methodologies in order to ensure a staggered migration of airspace users to NEW during the airspace users testing and implementation period (i.e. 1 July – 15 November 2012).

3.5 The INFPL SG/4 meeting developed a comprehensive testing cases and scripts, which can be used by MID States to validate their new/upgraded systems. Further the INFPL SG/4 meeting developed and agreed on testing schedule which MID states and users are required to adhere to.

4. DOF/ - Five Day (120 hour) Advance FPL Filing

4.1 The Amendment 1 provisions enable flight plans to be filed up to 5 days (120 hours) prior to the Estimated Off Blocks Time (EOBT) for the flight, a significant change from the 24 hour requirement in the existing provisions.

4.2 Present experience in the MID region with FPLs submitted well in advance of EOBT (within the present 24 hour window) is that this practice precipitates a large number of CHG messages as operators change aircraft type, or tail number on a same type but with different equipage, or vary the ETD, or a variety of other modifications to what has originally been filed. As meteorological conditions change after the FPL has been filed, route changes and altitude changes also manifest, requiring modification messages as well. Overall, the existing 24 hour window generates a significant amount of message traffic that does not add apparent value to the aircraft operator and increases complexity for the many ATS units along the path of flight that have to process the extra modification messages. To address this existing problem, in one instance an MID State has already published a constraint in AIP under which flight plans are not accepted more than 8 hours prior to EOBT.

4.3 The extension of the filing period from 24 hours to 120 hours is expected to compound these effects, particularly in respect to meteorology factors as changes to the flight plan become necessary on the basis of updated weather reports received within the 5 day period before departure.

4.4 Investigations by the INFPL SG have been unable to identify required operational circumstances in the MID Region where FPL filing earlier than 24 hours was necessary to meet the medium term needs of States. A similar situation is reported by IATA in respect to MID operators.

4.5 Discussions during the INFPL SG meeting highlighted the difficulties being experienced by many States in terms of civil aviation funding. In the case of the 120 hour filing provision, it was difficult for States to justify a business case for changes to what was often a number of legacy systems within a State when there was no clear operational requirement driving the change. Such changes would, of course, be included by States in the specification for new system procurement but, in the absence of a clear operational need, the business case for retrofit by MID States does not appear sound.

4.6 Notwithstanding, some States already have some capacity for DOF, albeit disabled in their systems at the moment. In these cases, where financial impacts were much less, it was logical for such ANSPs to proceed with 120 hour filing capability. It is also possible that some States will prefer to proceed with a DOF retrofit to legacy systems in time for the November 2012 implementation. However, the potential impacts of the implementation of an 'island' airspace which was accepting 120 hour filing should be considered in terms of the impact of neighboring airspaces not accepting 120 hour filing, particularly in relation to AIDC configuration.

5. **Software Coding Considerations**

Date of Flight (DOF) and Early Filing

5.1 In Amendment 1, use of a DOF/ indicator in Item 18 is accompanied by the ability to file NEW format up to 120 hours in advance. As it is likely that not all ANSPs will implement the 120 hour requirement by the Applicability Date, the following guidelines regard use of DOF/:

- a) An ANSP that does not implement the 120 hour requirement should handle such messages in accordance with normal ANSP error message handling procedures if that message has a DOF/ that is beyond their implemented time frame (i.e. more than nnn hours in advance, often limited to 24 hours). This ensures such messages are processed for the intended day of flight.
- b) DOF/ is not necessary in AIDC messages since flight data is generally first coordinated after departure. The inclusion of DOF/ in AIDC messages is subject to bilateral agreement between States.

Use of P1-P9 in Field 10a

5.2 In relation to the use of P1-P9 in Field 10a (Radio communication, navigation and approach aid equipment and capabilities), Amendment 1 identifies alphanumeric entries P1-P9 in Field 10a as "Reserved for RCP." The following guidelines regard filing and processing P1-P9 in Item 18:

- a) Even though there is no need for this information now, ANSPs should accept P1- P9 if filed in an FPL and pass the information in AIDC messages, but with no interpretation or processing required. This will avoid transition issues and minimize necessary coordination when these items begin to be used in the future

Changed definition of “S” in Field 10a

5.3 Amendment 1 changes the definition of standard equipment in Field 10a (“S”) so that it no longer includes ADF. An FPL may have elements that uniquely identify it as being in either PRESENT or NEW format. However, it is also possible for an FPL to have no unique elements, and thus be valid as both PRESENT and NEW format. In such an FPL, use of “S” in Field 10a is ambiguous.

5.4 Therefore, it is essential to know whether an FPL is in NEW or PRESENT format before interpreting an “S” filed in Field 10a. The following guidelines regard filing and processing of “S” during Phases 2 and 3 of the transition period, respectively (i.e. 1 April to 30 June & 1 July to 15 November 2012).

- a) In conjunction with the beginning of Phase 2 of the transition period (i.e. 1 April 2012), ANSPs should not assume ADF capability when an “S” is filed, regardless of the perceived format of the filed FPL (NEW or PRESENT format). All FPLs received on or after 1 April 2012 with an “S” filed in Field 10a will be processed and/or interpreted as if “V O L” (VHF RTF, VOR and ILS) were filed; and
- b) States and ANSPs must provide instructions to their users to file an “F” for ADF in PRESENT format FPLs, beginning 1 April 2012

Consistency between Field 10a and PBN/ in Item 18

5.5 The PBN/ indicator introduced by Amendment 1 conveys not only navigational capability with respect to accuracy, but also information regarding what type of navigational equipment is used to achieve it. This introduces a relationship between PBN/ in Item 18 and Field 10a, and it is possible to file inconsistent data (i.e., capabilities in PBN/ that are not supported by data in Field 10a). Consequently, a consistency check should be coded to evaluate NEW FPLs per the following guidelines:

- If B1, B2, C1, C2, D1, D2, O1 or O2 are filed, then a “G” must be included in Field 10a;
- If B1, B3, C1, C3, D1, D3, O1 or O3 are filed, then a “D” must be included in Field 10a;
- If B1 or B4 is filed, then an “O” or “S” and a “D” must be included in Field 10a (i.e., “OD” or “SD” must appear in 10a);
- If B1, B5, or C1 are filed, then an “I” must be included in Field 10a; and
- If C1, C4, D1, D4, O1 or O4 are filed, then a “D” and an “I” must be included in Field 10a (i.e., “D I” must appear in 10a).



Consistency between Item 10a and STS/ in Item 18

5.6 Amendment 1 formalised flight plan filing of the mutually exclusive entries ‘W’ (in Item 10a) and “NONRVSM” (in Item 18 STS/). The use of NONRVSM in STS is to signify intent to operate as a Non-RVSM flight in RVSM airspace. To avoid contradictory RVSM indications and possible incorrect application of separation standards based on this, a consistency check should be coded to evaluate NEW FPL related messages per the following:

- If STS/NONRVSM is filed in Item 18 then ‘W’ should not exist in Item 10a.

Item 10b omission in Amendment 1

5.7 Amendment 1 omitted the Item 10b ‘N’ designator (i.e. no surveillance equipment for the route to be flown) in Appendix 3 whilst in Appendix 2 this was retained as a valid designator. This was

clarified as being an inadvertent omission and consequently ‘N’ remains a valid character for use in Item 10b.

Item 10b advice to filers

5.8 In relation to the use of surveillance equipment and capabilities, Amendment 1 identifies alphanumeric entries in Item 10b. States should consider including in their flight planning manuals and/or the flight planning section of their AIP, the following guidelines:

- a) ‘N’ or
- b) SSR Modes A and C and S
 - Maximum of one entry is expected from either ‘A’ or ‘C’ or ‘E’
- or ‘H’ or ‘I’ or ‘L’ or ‘P’ or ‘S’ or ‘X’ and/or
- c) ADS-B
 - Maximum of one entry is expected from either B1 or B2 and/or
 - Maximum of one entry is expected from either U1 or U2 and/or
 - Maximum of one entry is expected from either V1 or V2 and/or
- d) ADS-C
 - One or both of the entries ‘D1’ ‘G1’

Validity Checking & Processing of Item 18 Indicators

5.9 Amendment 1 indicates that only the specified indicators should be included in Item 18. Furthermore, it makes the order of the indicators mandatory as opposed to preferred. Finally, the rules for some items are quite explicit and could readily be subject to validity checking by automation systems. The following guidelines regard use of Item 18:

- a) Systems should not accept indicators in Item 18 which are not defined in the PANS-ATM. If internal requirements create the need to use a ‘local’ nonstandard indicator, measures must be taken to ensure that airspace users filing with multiple FIRs are not impacted.
- b) Airspace users should file indicators in the required order to ensure that systems applying truncation do not eliminate more important data. ANSPs should either enforce the required order, or ensure that AIDC messages contain the items in the required order regardless of the order filed.
- c) Airspace users should only file a single instance of each indicator. If duplicate indicators are detected, their contents will be concatenated within a single occurrence of the indicator but with a space inserted between the two data streams.

5.10 ANSPs should, at a minimum, perform a validity check of Item 18 indicator contents that are used for processing, and they are encouraged to check all items not listed as “free text field” in the Table 5-1, Item 18 Indicator Validity Check, below.

Indicator	Contents

STS/	One or more of the approved specified entries, separated by spaces
PBN/	A single string containing up to 8 of the approved alphanumeric descriptors No embedded spaces
NAV/	Free text field
COM/	Free text field
DAT/	Free text field
SUR/	Free text field
DEP/	Free text field
DEST/	Free text field
DOF/	A single string in the specified date format (YYMMDD). No embedded spaces
REG/	A single string. No embedded spaces
EET/	One or more strings. Each string is: 2-5 alphanumeric characters; or a LAT/LONG followed by a 4-digit elapsed time, from 0000 to 9959 (i.e., 0-99 hours followed by 0-59 minutes)
SEL/	A single string of four letters
TYP/	Free text <i>Note: Although the entry is structured when used for formation flights, it is also used when no designator is assigned and, therefore, may be any text description.</i>
CODE/	A single string of 6 hexadecimal characters.
DLE/	One or more strings Each string consists of a valid Significant Point followed by a 4-digit elapsed time.
OPR/	Free text field
ORGN/	Free text field
PER/	A single letter The letter must be one of those specified in PANS-OPS (Doc 8168), as below: • Category A: less than 169 km/h (91 kt) indicated airspeed (IAS) • Category B: 169 km/h (91 kt) or more but less than 224 km/h (121 kt) IAS • Category C: 224 km/h (121 kt) or more but less than 261 km/h (141 kt) IAS • Category D: 261 km/h (141 kt) or more but less than 307 km/h (166 kt) IAS • Category E: 307 km/h (166 kt) or more but less than 391 km/h (211 kt) IAS • Category H: Specific procedures for helicopters.
ALTN/	Free text field
RALT/	Free text field
TALT/	Free text field
RIF/	Route information consistent with the format of a valid Field 15c
RMK/	Free text field

Table 5-1: Item 18 Indicator Validity Check

Allowable Indicators and Mandated Order in Item 18

5.11 Systems should accept indicators in Item 18 which are defined in the PANS-ATM. Consideration should also be given to system acceptance/handling of legacy indicators, not included in PANS-ATM, but approved by ICAO for continued use. It is recommended that MID states either automatically:

- a) remove on reception any non-standard indicators not approved for use in MID without rejecting the original message; or
- b) automatically re-order these non-standard indicators on reception without rejecting the original message by inserting the non standard indicator and associated text as RMK/ and with the "/" removed between the non standard indicator and associated text.

Processing location information in the DEP/, DEST/, ALTN/, RALT/ and TALT/ indicators in Item 18.

5.12 Amendment 1 specifies that Item 18 entries for DEP/, DEST/, ALTN/, RALT/ and TALT/ should contain the name and location of the aerodrome. It also requires that "...For aerodromes not listed in the relevant Aeronautical Information Publication [AIP], indicate location as follows ...". The following guidelines will promote common interpretation and filing practices:

- c) If the aerodrome identifier is not in ICAO DOC 7910, Location Identifiers, but is an approved identifier per the AIP for the State where the aerodrome is located, the name of the aerodrome should be the identifier and no additional location information is needed.
- d) If the aerodrome is neither in DOC 7910 nor in a relevant AIP, the name of the airport should be included followed by a location as specified in the amendment. ANSPs should expect to be able to process the last text string provided as a location (Lat/Long, or bearing and distance from significant point, or fix name) to be usable in their flight plan route calculations.

Use of the DLE/ indicator in Item 18.

5.13 Amendment 1 defines a new DLE/ indicator for Item 18, after which a significant point and delay time at the significant point can be filed. The following guidelines regard filing and processing of this indicator:

- a) The significant point in the DLE/ indicator should be required to match a significant point in Field 15c (i.e. not an implied point along an ATS route). An FPL designating an unknown point in a DLE/ indicator should be handled in accordance with normal ANSP error message handling procedures.

Special handling (STS) indicator

5.14 MARSAs - It is recommended that state guidance be provided to filers (AIP) to ensure consistent application of MARSAs as follows:

- MARSAs when submitted in the flight plan is an indication of an intention to declare MARSAs, either:
 - o for the flight duration (requires more than one aircraft in Item 9 of the flight plan); or
 - o from a nominated point in the flight plan, to be stated in Item 18 RMK/ along with identification(s) of aircraft planned to participate in MARSAs operations (e.g. RMK/MARSAs COLT WIZZA240036).

5.15 ATFMX – States should consider including in their flight planning manuals and/or AIP flight planning section instructions to filers to, when intending to file ATFMX in STS/ for flights which cross more than one FIR, include in RMK/ the FIR (s) for which this exemption applies (e.g. RMK/ATFMX NZZO).

Use of ORGN

5.16 ORGN – It is recommended that ANSPs published specific guidance to filers for this Indicator. Other parts of the world have set character limits for this Indicator.

6. Conversion from NEW format to PRESENT format

6.1 As described in the ICAO material in the attachment to State letter AN 13/2/1-09/9, conversion from NEW to PRESENT format will be required during the transition period and will affect Field

10a, Field 10b, and Field 18. It is extremely important that such conversions from NEW format to PRESENT format are consistently applied by MID States.

6.2 Some States have indicated an intention to maintain their systems in PRESENT format post November 15th 2012 and to utilise retrofitted flight plan converters to accept NEW and convert NEW flight plans for their systems. Whilst not desirable, it is appreciated that for States using legacy systems with short term plans for replacement, this represents a viable option, however it must be understood this does not constitute compliance with the spirit of Amendment 1.

6.3 Amendment 1 mandates the order of Item 18 indicators (see 5.9 above). In order to reduce the degree of software development required it is acceptable for the order of both PRESENT and NEW format flight plan messages to be as per that defined in Amendment 1 for NEW format messages.

6.4 The guidelines contained in the Conversion Tables for respective fields included below record regionally agreed conversions from NEW to PRESENT format for consistent application by States. During the conversion process, duplication of entries should be avoided at all times. For example, if NEW flight plan contains PBN/B2B3 then the desired resulting Field 18 entry in the corresponding PRESENT plan should be NAV/RNAV5 B2 B3 and not NAV/RNAV5 B2 RNAV5 B3 as might be interpreted from the translation table. Conversion from PRESENT to NEW was never intended, nor recommended by ICAO. Up converting is considered high risk and should not be used in 'live' system operations.

Conversion of Field 10a

6.5 Table 6-1: Conversion of Field 10a, as shown below, is to be used for conversion of NEW Field 10a to PRESENT Field 10a. In using the Table, ensure a check is made for the presence of the information in both the "Field 10a" and "Item 18" NEW columns and convert it to the information in both the "Field 10a" and "Item 18" in PRESENT columns. If, when per the table text is to be inserted in Field 10 or Field 18, the text is already present, then it should not be inserted again. When inserting text in Field 18, if any information is already present due to having been filed or having been inserted by an earlier translation insertion, the text should be appended to the end of the existing text preceded by a space. For example, if PBN/B2 NAV/TCAS is filed in a NEW flight plan, then the resulting NAV/ entry in the corresponding PRESENT flight plan will be NAV/TCAS RNAV5 B2.

NEW data in these columns		Converts to PRESENT data in these columns	
Field 10a	Item 18	Field 10a	Item 18
N		N	
S		S	(refer para 5.4)
SF		S	(refer para 5.4)
A		Z	NAV/GBAS
B		Z	NAV/LPV
C		C	
D		D	
E1		Z	COM/FMC WPR ACARS E1
E2		Z	COM/DFIS ACARS E2
E3		Z	COM/PDC ACARS E3
F		F	
G		G	
H		H	
I		I	
J1		J	DAT/V COM/J1
J2		J	DAT/H COM/J2

J3		J	DAT/V COM/J3
J4		J	DAT/V COM/J4
J5		J	DAT/S COM/J5
J6		J	DAT/S COM/J6
J7		J	DAT/S COM/J7
K		K	
L		L	
M1		Z	COM/INMARSAT M1
M2		Z	COM/MTSAT M2
M3		Z	COM/IRIDIUM M3
O		O	
P1-P9		Reserved- should not be present. Remove items if present (i.e. do not make information part of the PRESENT format plan).	
R	PBN/A1	RZ	NAV/RNAV10 RNP10 A1
R	PBN/B1	RZ	NAV/RNAV5 B1
R	PBN/B2	RZ	NAV/RNAV5 B2
R	PBN/B3	RZ	NAV/RNAV5 B3
R	PBN/B4	RZ	NAV/RNAV5 B4
R	PBN/B5	RZ	NAV/RNAV5 B5
R	PBN/B6	RZ	NAV/RNAV5 B6
R	PBN/C1	RZ	NAV/RNAV2 C1
R	PBN/C2	RZ	NAV/RNAV2 C2
R	PBN/C3	RZ	NAV/RNAV2 C3
R	PBN/C4	RZ	NAV/RNAV2 C4
R	PBN/D1	PRZ	NAV/RNAV1 D1
R	PBN/D2	PRZ	NAV/RNAV1 D2
R	PBN/D3	PRZ	NAV/RNAV1 D3
R	PBN/D4	PRZ	NAV/RNAV1 D4
R	PBN/L1	RZ	NAV/RNP4 L1
R	PBN/O1	PRZ	NAV/RNP1O1
R	PBN/O2	PRZ	NAV/RNP1O2
R	PBN/O3	PRZ	NAV/RNP1O3
R	PBN/O4	PRZ	NAV/RNP1O4
R	PBN/S1	RZ	NAV/RNP APCH S1
R	PBN/S2	RZ	NAV/RNP APCH BARO VNAV S2
R	PBN/T1	RZ	NAV/RNP AR APCH RF T1
R	PBN/T2	RZ	NAV/RNP AR APCH T2
T		T	
U		U	
V		V	
W		W	
X		X	
Y		Y	
Z	COM/nnnn	Z	COM/nnnn
Z	NAV/nnnn	Z	NAV/nnnn
Z	DAT/nnnn	Z	COM/nnnn

Table 6-1: Conversion of Field 10a

Conversion of Field 10b

6.6 Table 6-2: Conversion of Field 10b, as shown below, is to be used for conversion of NEW Field 10b to PRESENT Field 10b. Ensure a check is made for the presence of the information in both the “Field 10b” and “Item 18” NEW columns and convert it to the information in both the “Field 10b” and “Item 18” in PRESENT columns.

NEW data in these columns		Converts to PRESENT data in these columns	
Field 10a	Item 18	Field 10a	Item 18
N		N	
A		A	
C		C	
E		SD	COM/E
H		S	COM/H
I		I	
L		SD	COM/L
P		P	
S		S	
X		X	
B1		D	COM/B1
B2		D	COM/B2
U1		D	COM/U1
U2		D	COM/U2
V1		D	COM/V1
V2		D	COM/V2
D1		D	COM/D1
G1		D	COM/G1

Table 6-2: Conversion of Field 10b

Conversion of Item 18

6.7 Table 6-3: Conversion of Item 18, as shown below, is to be used for Conversion of NEW Item 18 to PRESENT Item 18.

‘NEW’ Data Content	Conversion to ‘PRESENT’ Data Content
Item 18	Item 18
STS/	STS/ copy text over • Except change “ATFMX” to “ATFMEXEMPTAPPROVED
SUR/	RMK/ SUR <textafter SUR/>
DOF/	Maintain data in DOF/ if possible, otherwise remove. While not a documented PRESENT indicator, it is currently in wide use.
DAT/	COM/
DLE/	RMK/ DLE <text after DLE/>
ORGN/	RMK/ORGN <text after ORGN/>
TALT/	RMK/ TALT <text after TALT/>
PBN/	See Table 5-1 above
All other indicators copy over directly, with additions to NAV/, COM/, and DAT/ as specified in Tables 6-1 and 6-2 above.	

DAT conversion should therefore occur in two steps:

1. Any existing DAT/ entries in the NEW format flight plan (submitted for conversion) are transferred to the COM/ indicator in Field 18 of the converted PRESENT flight plan (or message) - prior to conversion of the 10a equipment qualifiers; then
2. Any equipment qualifiers in Field 10a requiring conversion to DAT/ in accordance with the conversion table 6.1 (i.e. J1-J7) are to be entered into the DAT/ indicator of the converted PRESENT flight plan (or message) in accordance with table 6.1.

Note; After conversion is possible that there will be duplicate entries in DAT/ and COM/.

Table 6-3: Conversion of Item 18

7. Differentiating between NEW format and PRESENT format

7.1 Although in most cases it will be evident when a FPL is in either the PRESENT or NEW format, situations can arise whereby the presentation of a particular FPL fully meets the parameters of both the PRESENT and NEW formats i.e. the same FPL is able to be interpreted using either of the PRESENT or NEW parameters. However, decoding the FPL using the PRESENT parameters could reach a different outcome than decoding the same FPL using the NEW format. For example, the letter “S” is used for standard equipment in Item 10 of both FPL formats, meaning V, F, O & L (i.e. VHF RTF, ADF, VOR and ILS) in PRESENT format but only V, O & L in NEW format (i.e. no ADF).

7.2 Accordingly, from the commencement of Phase 3 (1 July to 15 November 2012 - Airspace users testing and implementation) of the phased implementation strategy the following criteria should be used to determine if the filed FPL is in PRESENT or NEW format:

- a) If the FPL is filed prior to an ANSP accepting NEW, assume the Flight Plan is PRESENT.

7.3 Once an ANSP has announced it can accept NEW format, if any of the following is filed assume the filed Flight Plan is in PRESENT format:

- a) In Field 10a if the Qualifier E, J, M or P is filed without an associated numeric;
- b) In Field 10b if the Qualifier D is filed without an associated numeric;
- c) In Item 18 an entry used for STS/ is not in the allowed list for NEW; and
- d) In Item 18 an entry used for PER/ is more than a single letter in the allowed list.

7.4 Once an ANSP has announced it can accept NEW format, if any of the following is filed assume the filed Flight Plan is in NEW format:

- a) In Field 10a if any of the following qualifiers are filed: A, B, E1, E2, E3, J1, J2, J3, J4, J5, J6, J7, M1, M2, M3, P1, P2, P3, P4, P5, P6, P7, P8, P9.
- b) In Field 10b if any of the following qualifiers are filed: E, H, L, B1, B2, U1, U2, V1, V2, D1 or G1.
- c) In Item 18 if PBN/ is filed.
- d) In Item 18 if SUR/ is filed.

- e) In Item 18 if DLE/ is filed.
- f) In Item 18 if TALT/ is filed.

7.5 If there is a unique qualifier from the PRESENT list and another unique qualifier from the NEW list co-existing in the same FPL, this indicates that the FPL is inconsistent and therefore should be rejected by automation (e.g. to an 'error queue'). After November 15, 2012 all FPLs will be assumed to be in NEW format.

8. **ATS Messages**

Item 18 DOF

8.1 The INFPL SG considers that ambiguity exists in relation to Field Type 18 and DOF which has implications on the composition of ATS messages as published in Amendment 1. The clarification provided for the requirement to include Field Type 18 in CHG, CNL, DLA, DEP and RQS messages states "Field Type 18 with DOF specified is meant to uniquely identify the flight when the FPL is presented more than 24 hours in advance and there is no need to include all other Item 18 information". Consequently, states should be sending only the DOF element from field 18 or '0' (when no DOF is contained within the flight plan) in these message types. It is important to note that when the DOF/ element is modified by Field Type 22 in a CHG message, the complete Item 18 data must always be provided. If it is not, any elements omitted will be considered as modifications and they will be removed from the Item 18 content.

8.2 The clarification also offers an interpretation of the Field Type 16 Previous Field/Next Field Table. This clearly states that only the DOF indicator is included in these messages and only if filed with the original message. If DOF is not filed in the original message then Field Type 18 is omitted. However, this interpretation contradicts the composition and examples for the CHG, CNL, DLA, DEP, RQP and RQS messages detailed in the Amendment which refer to Item 18 "Other information (using more than one line if necessary)".

8.3 Accordingly, the following interpretation is applicable as an MID regional approach:

- a) Insert the last notified DOF/YMMMDD in Field Type 18 if that indicator has been previously specified; and
- b) If the DOF/ indicator has not been previously specified insert zero (0) in Field Type 18.

8.4 To avoid possible confusion of DOF caused by subsequent DLA messages, a CHG message (instead of a DLA message) should always be used if a flight is delayed over 0000 UTC, indicating in Field 22 the amendments to both Field 13b and Field 18 i.e. both the EOBT and DOF; regardless of the existence of DOF in Field 18 of previously transmitted ATS messages. Similarly, a CHG message with a new EOBT in Field 13b and new DOF in Field 18 should always be used if the flight EOBT is advanced over 0000 UTC.

8.5 If states do elect to use a DLA message for this purpose (per 8.7 example 2 below), their automated systems should have the capacity to add a DOF in cases where one did not previously exist, or to add a day to the DOF where one did exist within Item 18 of the flight plan. Likewise, recipients of DLA messages across 0000 UTC should modify DOF in their systems in the same manner.

8.6 Messages

Example ATS messages based on these interpretations are shown below: Reference FPL

(FPL-ABC123-IS
-B77W/H-SDE1GIRWZ/SB1D1
-NZAA2300
-M083F360 DCT PPTI A464 TN J251 DN B583 BRU M768 TSN R468
GOMES DCT DANNY1B
-VTBS1130
-PBN/A1B1C1D1L1 DOF/091120)

(FPL-ABC456-IS
-B77W/H-SDE1GIRWZ/SB1D1
-NZAA2300
-M083F360 DCT PPTI A464 TN J251 DN B583 BRU M768 TSN R468
GOMES DCT DANNY1B
-VTBS1130
-PBN/A1B1C1D1L1)

Modification (CHG) Messages

- o (CHG-ABC123-NZAA2300-VTBS-DOF/091120-16/VTBS1130 VTBD)
- o (CHG-ABC456-NZAA2300-VTBS-0-16/VTBS1130 VTBD)
- o Delaying the flight until the next day

(CHG-ABC123-NZAA2300-VTBS-DOF/091120-13/NZAA0045-
18/PBN/A1B1C1D1L1 DOF/091121)
(CHG-ABC456-NZAA2300-VTBS-0-13/NZAA0045-18/PBN/A1B1C1D1L1
DOF/091121)

Note:

1. When changing DOF insert the complete content of Item 18 in Field 22
2. CHG message (instead of DLA message) including the new EOBT and the new date of flight should be used if a flight is delayed over 0000 UTC.

Flight Plan Cancellation (CNL) Messages

- o (CNL-ABC123-NZAA2300-VTBS-DOF/091120)
- o (CNL-ABC456-NZAA2300-VTBS-0)

Delay (DLA) Messages

- o (DLA-ABC123-NZAA2345-VTBS-DOF/091120)
- o (DLA-ABC456-NZAA2345-VTBS-0)

Departure (DEP) Messages

- o (DEP-ABC123/A0254-NZAA2347-VTBS-DOF/091120)

- o (DEP-ABC456/A0254-NZAA2347-VTBS-0)

Request Flight Plan (RQP) Messages

- o (RQP-ABC123-NZAA2345-VTBS-DOF/091120)
- o (RQP-ABC456-NZAA2345-VTBS-0)
- o (RQP-ABC123-NZAA-VTBS-DOF/091120)
- o (RQP-ABC456-NZAA-VTBS-0)

Request Supplementary Flight Plan (RQS) Messages

- o (RQS-ABC123/A0254-NZAA2345-VTBS-DOF/091120)
- o (RQS-ABC456/A0254-NZAA2345-VTBS-0)

Arrival (ARR) Messages

- o (ARR-ABC123-NZAA-VTBS1115)
- o (ARR-ABC456-NZAA2345-VTBS1115)

8.6 It is now mandatory to insert in FPL Item 18 the date of flight departure if the flight plan is filed more than 24 hours in advance of the estimated off-block time of the flight. This also impacts on associated flight plan update messages (ARR, CHG, CNL, DLA, DEP).

8.7 The DOF provided in Field 18 of the update messages must always refer to the last notified Off Block Date (EOBD). This is very important and proper application of the rule may appear to result in information being presented in a counter-intuitive way as shown in the following examples:

- ☐ Field 18 in the original Flight Plan: STS/HOSP PBN/B3 DOF/100304
- ☐ **Field 13b in the original Flight Plan: 2230.**

Example 1: CHG message – Preferred Method

It is recommended to use a CHG message if a flight is delayed over 0000 UTC, indicating in Field 22 the amendments to both Field 13b and 18, the EOBT and the DOF.

(CHG-ABC123-NZAA2230-VTBS-DOF/100304-13/NZAA0200-18/STS/HOSP PBN/B3 DOF/100305)

Note that the first DOF reference in the CHG message is 04 March, which was the previous notified date; however the modification in Field 22 shows the correct, new Date of Flight which is 05 March.

If the flight is further delayed until 0400 on 05 March, the corresponding DLA message will look like this:

(DLA-ABC123-NZAA0400-VTBS-DOF/100305)

The DLA message refers to the DOF as 05 March since this is the EOBD last communicated by the previous CHG message.

Example 2: DLA message

A DLA message could also be used to communicate a delay over 0000 UTC but is ambiguous and subject to confusion. It is therefore strongly recommended that a CHG message is used to communicate a delay over 0000 UTC as per Example 1.

The new EOBT/EOBD advised in a DLA message must always be understood as a date/time that is later than previously notified.

(DLA-ABC123-NZAA0200-VTBS-DOF/100304)

Note that the DOF reference in the DLA message is 04 March which was the previous notified date; however it is implicit that the new EOBD is 05 March.

If the flight is further delayed to 0400 on 05 March; the corresponding DLA message will look like this:

(DLA-ABC123-NZAA0400-VTBS-DOF/100305)

The DLA message refers to the DOF as 05 March since this is the EOBD last communicated by the previous DLA message.

8.8 The use of the DLA message to communicate a delay over 0000 UTC (Example 2) is deceptive in that the new EOBD is not explicitly stated and the DOF in Field Type 18 does not correlate with the new EOBT.

8.9 Where multiple flight plans have been filed (same Aircraft Identification, Departure, Destination but different DOF) it is recommended that CHG messages, including DOF, are used to advise delays. This will enable automated systems to clearly identify which flight is being referenced.

9. Cutover to NEW format

9.1 States will be asked by ICAO to provide their exact cutover timing for promulgation on the FITS website. States should consider planning this timing in conjunction with neighboring states.

12. MID Region testing Schedule

MID REGION TESTING SCHEDULE

State	Software/ Hardware Delivery Before 31 March 2012	Internal Testing Before 31 March 2012	External Testing 1 April to 30 June 2012		Airspace Users Testing 1 July to 14 November 2012		Inter-Regional Testing		Type of Solution Converter or Upgrade	Date of Acceptanc of Both Present and New Format	Remarks
			State	Date	User	Date	State	Date			
Bahrain	Done	1 April 2012	UAE	15 Apr	GF Bahrain Air	20 Apr 25 Apr	Singapore	1 June	both	1 July	
			Qatar	16 Apr							
			Kuwait	3 Jun							
			Iran								
Egypt	1 - May	30 May	Saudi Arabia	10 June	Egypt Air Sama Airlines Air Cairo Express	15 Aug	Athens	Sep	Converter	1 July	Only converter will be installed
			Sudan	30 June		15 Sep	Israel	Sep			
			Jordan	17 June		20 Sep	Cyprus	Sep			
			Libya	25 June							
Iran											
Iraq	1 April	15 April	Kuwait Jordan	20 June October	Iraqi airways	August			Upgrade	Sep	
Jordan	1 May	1January	UAE	March	RJA, SITA, Royal Falcon, Jordan Aviation	July	Eurocontrol Israel Cyprus	20 Feb	Both	July	Converter will be used for the backup ATM system
			Egypt Saudi Syria Iraq	17 June 20 June October		July July July July		July July July			

[illegible]

State	Software/ Hardware Delivery Before 31 March 2012	Internal Testing Before 31 March 2012	External Testing 1 April to 30 June 2012		Airspace Users Testing 1 July to 14 November 2012		Inter-Regional Testing		Type of Solution Converter or Upgrade	Date of Acceptanc of Both Present and New Format	Remarks
			State	Date	User	Date	State	Date			
Syria											
UAE	30 Septembr 2010	30 September 2010	Qatar	23 Feb	Etihad Emirates	Feb Mar	Eurocontrol	20-24 Feb 12	Upgrade + Converter	01 July	
			Bahrain Iran Oman Jordan	15 April 25 July March			Pakistan	22 Feb 12			
Yemen			Saudi Arabia Oman	Sept Sept	Yemenia	Oct					

**ICAO New Flight Plan Format
Test cases and Script**

This page is left Blank Intentionally

Table of Contents

1. Introduction	4
2. Test Plan Objective.....	4
3. References... ..	4
4. Terminology.....	5
5. Test Strategy.....	5
6. Environment Requirements.....	5
7. Test Schedule	6
8. Control Procedures	6
9. Functions To Be Tested.....	6
10. Resources and Responsibilities.....	7
11. Deliverables	7
12. Documentation.....	8
13. Test Cases	9
14. Approvals.....	53

1. Introduction

Amendment 1 to edition 15 of DOC 4444 defines a number of changes to the standard items of a flight plan which affect the flight plan data and its validation. Since the items in question (items 7, 8, 10a, 10b, 13, 15, 16 and 18) are used in other ICAO flight-related messages as well as FPL messages, the format of these messages also changes.

The objectives of these changes are to:

- Mandate the inclusion of DOF in each flight plan filed more than 24 hours in advance of its EOBT;
- Allow flight plans to be filed up to 5 days in advance;
- Remove ambiguities in the way that CHG, DLA and other subsidiary messages relate to the flight to which they pertain;
- Allow more detailed specification of the equipment levels, status and other attributes of a flight;
- Systematize the permissible entries in item 18 of a flight plan;
- Provide enhanced editorial instructions for an operator filing flight plan messages.

Those changes impact the functionality of systems in place that handle flight plan and related messages, software/hardware upgrade is required to adapt those requirements, additional solution may be used as an alternative for upgrade in certain cases.

MID States take necessary measures to ensure its readiness to make the implementation date, 15th of Nov, 2012. A national transition timeline was setup to be in line with the regional transition strategy, different types of Testing were defined, and this test plan was developed to meet the functional specifications to comply with ICAO NEW Flight Plan format requirements.

2. Test Script Objectives

This Test script to be used by MID States to test the INFPL affected System supports the following objectives:

- Perform through testing on all System affected by the implementation of INFPL
- Define testing scripts to ensure that the INFPL handling automation remains to the greatest possible extent.
- Communicate to all responsible parties the results of test to take appropriate actions
- Assist States in testing their system before and after upgrade.

3. References:

- [1] Amendment 1 to the 15th edition of DOC 4444
- [2] MID Region strategy for the Implementation of ICAO New Flight Plan Format and supporting ATS messages.
- [3] Asia/ Pacific Guidance Material for the Implementation of Amendment 1 to the 15th Edition of the Procedures for Air Navigation Services - Air Traffic Management (PANS-ATM, Doc 4444) Now adopted by MID Region too
- [4] United States EXCEL based spreadsheet tool.
- [5] INFPL SG3 Report

4. Terminology

- **PRESENT** Flight Plan is defined as ICAO flight planning and ATS message format currently in use as specified in DOC 4444, 15th Edition.
- **New** Flight Plan is defined as ICAO flight planning and ATS message format currently in use as specified in Amendment 1 to DOC 4444, 15th Edition.

5. Test scripts use

The test script consists of a series of different tests that will fully exercise the INFPL affected systems. The primary purpose of these tests is to uncover the systems limitations and measure its full capabilities. A list of the various planned tests and a brief explanation follows below.

1. User Acceptance Test

Once any of the affected systems upgrade/ installation is ready for implementation, the project team will perform User Acceptance Testing. The purpose of these tests is to confirm that the system is developed according to the specified user requirements and is ready for operational use. This test will include also scenarios to test the compliance with INFPL functional specifications.

2. Internal Test

Conformance testing will be carried between all local systems. [4] Defined different categories of systems according to its role in handling FPL as described in part (6) of this document.

3. ANSPs External Test

Various test scripts will be performed to ensure that all adjacent states can accept and disseminate "new Flight plan and associated ATS message formats.

4. Airspace users Test

The Airspace users are one of the stakeholders of ICAO New flight plan format messages, an intensive tests will be performed to ensure their capability to file FPL in a new format.

6. Environment Requirements

ICAO New flight plan format team has performed the Impact study and identify the affected systems that need further upgrade or replacement.

6.1 Flight Plan Composer

It can be defined as an individual or organization that files an FPL or related ATS message, certain test cases were developed to this type of system/ subsystem:

- o AFTN Terminal/ ATS
- o Compose window on ATM system
- o Compose function at the Intervention position
- o Compose function at FPL Briefing Offices

6.2 Flight Planning Service

A system that electronically sends an FPL or related ATS message over AFTN to an FDP (e.g., flight services organizations, commercial services, etc.)

6.3 Flight Data Processing

A system that accepts and processes an FPL or related ATS message for ATC purposes, like:

- o FDP of ATM system

6.4 Flight Data User

A system that receives data from FDP systems which has been derived from an FPL or related ATS message, but does not directly receive FPLs or related ATS messages, a stripe printer or billing system are examples of such system.

6.4 INFPL Converter

- 7 • 1 April to 30 June 2012 – ANSPs external testing and implementation; and
- 8 • 1 July to 14 November 2012 – airspace

7. Test Schedule

▪ Software delivery and User Acceptance Test	Before 31 March 2012
▪ Internal Test	Before 31 March 2012
▪ ANSPs External Testing	1 April – 30 June 2012
▪ Airspace Users Testing	1 July – 14 November 2012

8. Control Procedures

This will differ between each State, however it is recommended to follow common procedure described below

8.1 Reviews

The project team will perform reviews for each Phase. (Test Plan Review, Test Case Review and Final Test Summary Review).

8.2 Defect Review meetings

Regular meetings will be held to discuss reported defects. The INFPL project manager will provide status/updates on all defects/enhancement reported to the director.

9. Functions to Be Tested

The following is a list of functions that will be tested:

- ✓ Handling/Compose FPL includes New Alphanumeric code in item 10 and item 18
- ✓ Handling/Compose FPL includes Invalid Alphanumeric code in item 10
- ✓ Perform Consistency check between item 10 and item 18
- ✓ Perform Coherence check in item 10
- ✓ The order of Item 18 indicators
- ✓ Handling FPL includes Non standard Item 18 indicators
- ✓ Handling/Compose FPL includes Date of Flight (DOF)
- ✓ Conversion from New to Current format
- ✓ Management of messages on queue.
- ✓ Handling of erroneous FPL.
- ✓ Verification of corrected FPL.

- ✓ CHG, CNL, DLA for FPL on queue
- ✓ Retrieval of all message types (sent, received, corrected, rejected)

A Requirements Validation Matrix will “map” the test cases back to the requirements.

10. Resources and Responsibilities

The Test Lead and Project Manager will determine when system test will start and end. The Test lead will also be responsible for coordinating schedules, equipment, & tools for the testers as well as writing/updating the Test Plan, Weekly Test Status reports and Final Test Summary report.

10.1 Resources

The test team will consist of:

- A Project Manager
- A Test Lead (INFPL Focal Point)
- 3 Testers
- INFPL Team

10.2 Responsibilities

Project Manager	Responsible for INFPL Project schedules and the overall success of the project.
Test Lead	Ensures the overall success of the test cycles. He/she will coordinate meetings and will communicate the testing status to the project team.
Testers	Responsible for performing the actual system testing.

11. Deliverables

Deliverable	Responsibility	Completion Date
Develop Test cases	Test Lead /Team members	-/-/2012
Test Case Review	Test Lead, Project manager, Testers Team members	-/-/2012
Requirements Validation Matrix	Test Lead Team members	-/-/2012
Execute tests	Testers & Test Lead Team members	-/-/2012
Complete Defect Reports	Everyone testing	On-going
Document and communicate test status/coverage	Test Lead Team members	-----
Execute User Acceptance tests	The project team of each system of INFPL environment	-/-/2012

12. Documentation

The following documentation will be available at the end of the test phase:

- Test Plan
- Test Cases
- Test Case review
- Requirements Validation Matrix
- Defect reports
- Final Test Summary Report

13. Test Cases

13.1 Flight Plan Composer

Its anticipated that there will be high number of rejected messages in the first period of implementation, a thorough testing for the FPL Composer has a significant impact to mitigate the number of erroneous flight plan and thus decreases rejected messages.

13.1 New Alphanumeric code in item 10

Test Criteria	Accept New alphanumeric code (Item 10a)
Test Number	TSTXXX
Reference	[1] The new format of ICAO Flight Plan includes letter-digit combinations in addition to single letters.
Scenario Description	1. Select filing FPL in new format. 2. From test terminal A send a FPL message to test terminal B that contains E1 and J4 in Item 10a.
Test Data	(FPL-TST111-IS -B738/M-SE1J4/S -OJAI0901 -NO45F360 QTR2D QTR R652 METSA W733 -HECA0111 HELX -DOF/120201 EET/HECC0025)
Expected Result	1. The Software accepts the new indicator. 2. Message is sent.
Observed Result	
Status (Pass/Failed/Retest)	

Test Criteria	Accept New alphanumeric code (Item 10a)
Test Number	TSTXX2
Reference	[1] [3] In the new format of ICAO Flight Plan the alphanumeric P1-P9 is reserved, the FPL filer should be able to file these items.
Scenario Description	1. Select filing FPL in new format. 2. From test terminal A send a FPL message to test terminal B that contains P2 in item 10a.
Test Data	(FPL-TST112-IS -B738/M-SP2/S -OJAI0902 -NO45F360 QTR2D QTR R652 METSA W733 -HECA0112 HELX -DOF/120201 EET/HECC0025)
Expected Result	1. The Software accepts the new indicator. 2. Message is sent.
Observed Result	
Status (Pass/Failed/Retest)	

Test Criteria	Accept New alphanumeric code (Item 10b)
Test Number	TSTXX3
Reference	[1] The new format of ICAO Flight Plan includes new letters in item 10b plus letter-digit combinations.
Scenario Description	1. Select filing FPL in new format. 2. From test terminal A send a FPL message to test terminal B that contains E, D1 and B2 in item 10a.
Test Data	(FPL-TST113-IS -B738/M-SJ2/ED1B2 -OJAI0903 -NO45F360 QTR2D QTR R652 METSA W733 -HECA0110 HELX -DOF/120203 EET/HECC0025)
Expected Result	1. The Software accepts the new indicator. 2. Message is sent.
Observed Result	
Status (Pass/Failed/Retest)	

13.1.2 Invalid Alphanumeric code in item 10

Test Criteria	Invalid Alphanumeric code in item 10a
Test Number	TSTXV1
Reference	[1] The new format of ICAO Flight Plan includes letter-digit combinations in addition to single letters in item 10a.
Scenario Description	1. Select filing FPL in new format. 2. From test terminal A send a FPL message to test terminal B that contains invalid letter J9 in item 10a.
Test Data	(FPL- TST121-IS -OJAI0804/M-SE1HYWJ9/S -N0431F240 LOSAR3D LOSAR DCT BUSRA -OLBA0044 LCLK -DOF/ 120201 EET/ OSTT0011)
Expected Result	1. The Software rejects filing the flight plan 2. The error is highlighted. 3. Message is not sent.
Observed Result	
Status (Pass/Failed/Retest)	

Test Criteria	Invalid Alphanumeric code in item 10b
Reference	[1] The new format of ICAO Flight Plan includes letter-digit combinations in addition to single letters in item 10b.
Test Number	TSTXV2
Scenario Description	1. Select filing FPL in new format. 2. From test terminal A send a FPL message to test terminal B that contains invalid letter F and D2 in item 10b.
Test Data	(FPL- TST122-IS -OJAI0805/M-SE1HYWJ2/FD2 -N0431F240 LOSAR3D LOSAR DCT BUSRA -OLBA0045 LCLK -DOF/ 120201 EET/ OSTT0011)
Expected Result	1. The Software rejects filing the flight plan 2. The user is advised about the error by the highlighting or a pop-up message. 3. Message is not sent.
Observed Result	
Status (Pass/Failed/Retest)	

13.1.3 Coherence check in item 10

Test Criteria	Coherence check in item 10b
Test Number	TSTXB1
Reference	[1] [3] Maximum one entry is expected for SSR Mode A.
Scenario Description	1. Select filing FPL in new format. 2. From test terminal A send a FPL message to test terminal B that contains B1 and B2 in item 10b.
Test Data	(FPL-TST131-IS -B738/M-SP2/SB1B2 -OJAI0906 -NO45F360 QTR2D QTR R652 METSA W733 -HECA0116 HELX -DOF/120201 EET/HECC0025)
Expected Result	1. The Software rejects filing the flight plan 2. The user is advised about the error by the highlighting or a pop-up message. 3. Message is not sent.
Observed Result	
Status (Pass/Failed/Retest)	

Test Criteria	Coherence check in item 10b
Test Number	TSTXB2
Reference	[1] [3] Maximum one entry is expected for SSR Mode C.
Scenario Description	1. Select filing FPL in new format. 2. From test terminal A send a FPL message to test terminal B that contains H and I in item 10b.
Test Data	(FPL-TST132-IS -B738/M-ADE3V/HIB1 -OJAI0907 -NO45F360 QTR2D QTR R652 METSA W733 -HECA0117 HELX -DOF/120201 EET/HECC0025)
Expected Result	1. The Software rejects filing the flight plan 2. The user is advised about the error by the highlighting or a pop-up message. 3. Message is not sent.
Observed Result	
Status (Pass/Failed/Retest)	

Test Criteria	Coherence check in item 10b
Test Number	TSTXB3
Reference	[1] [3] Maximum one entry is expected for each ADS-B link.
Scenario Description	1. Select filing FPL in new format. 2. From test terminal A send a FPL message to test terminal B that contains B1, B2, V1 and V2 in item 10b.
Test Data	(FPL-TST133-IS -B738/M-ADE3V/HB1B2V1V2 -OJAI0908 -NO45F360 QTR2D QTR R652 METSA W733 -HECA0118 HELX -DOF/120201 EET/HECC0025)
Expected Result	1. The Software rejects filing the flight plan 2. The user is advised about the error by the highlighting or a pop-up message. 3. Message is not sent.
Observed Result	
Status (Pass/Failed/Retest)	

13.1.4 Coherence check between item 10 and 18

Test Criteria	Coherence check between item 10a and item 18
Test Number	TSTXA1
Reference	[1] Letter G is used in item 10a to indicate GNSS capability equipage, the type of external augmentation should be specified in item 18 following the indicator NAV/
Scenario Description	1. Select filing FPL in new format. 2. From test terminal A send a FPL message to test terminal B that contains G in item 10a.
Test Data	(FPL-TST141-IS -B738/M-ADE3V/HB1V1G1 -OJAI0901 -NO45F360 QTR2D QTR R652 METSA W733 -HECA0111 HELX -DOF/120202 EET/HECC0025)
Expected Result	1. The Software rejects filing the flight plan 2. The user is advised about the error that the indicator NAV/ should be included in item 18. 3. Message is not sent.
Observed Result	
Status (Pass/Failed/Retest)	

Test Criteria	Coherence check between item 10a and item 18
Test Number	TSTXA2
Reference	[1] [3] The PBN/ indicator in item 18 convey the navigation capability with respect to accuracy and type of navigational equipment is used to achieve that capability.
Scenario Description	1. Select filing FPL in new format. 2. From test terminal A send a FPL message to test terminal B that contains PBN/B2 in item 18.
Test Data	(FPL-TST142-IS -B738/M-ADE3V/HB1V1G1 -OJAI1102 -NO45F360 QTR2D QTR R652 METSA W733 -HECA01112HELX -PBN/ B2 DOF/120202 EET/HECC0025)
Expected Result	1. The Software rejects filing the flight plan 2. The user is advised about the error that the indicator G should be included in item 10a. 3. Message is not sent.
Observed Result	
Status (Pass/Failed/Retest)	

Test Criteria	Coherence check between item 10a and item 18
Test Number	TSTXA3
Reference	[1] [3] The PBN/ indicator in item 18 convey the navigation capability with respect to accuracy and type of navigational equipment is used to achieve that capability.
Scenario Description	1. Select filing FPL in new format. 2. From test terminal A send a FPL message to test terminal B that contains PBN/C1 in item 18.
Test Data	(FPL-TST143-IS -B738/M-AE3V/HB1V1G1 -OJAI1103 -NO45F360 QTR2D QTR R652 METSA W733 -HECA01113 HELX -PBN/C1 DOF/120202 EET/HECC0025)
Expected Result	1. The Software rejects filing the flight plan 2. The user is advised about the error that the indicators DI should be included in item 10a. 3. Message is not sent.
Observed Result	
Status (Pass/Failed/Retest)	

Test Criteria	Coherence check between item 10a and item 18
Test Number	TSTXA4
Reference	[1] [3] The PBN/ indicator in item 18 convey the navigation capability with respect to accuracy and type of navigational equipment is used to achieve that capability.
Scenario Description	1. Select filing FPL in new format. 2. From test terminal A send a FPL message to test terminal B that contains PBN/D3 in item 18.
Test Data	(FPL-TST144-IS -B738/M-AE3V/HB1V1G1 -OJAI1104 -NO45F360 QTR2D QTR R652 METSA W733 -HECA01114 HELX -PBN/D3 DOF/120202 EET/HECC0025)
Expected Result	1. The Software rejects filing the flight plan 2. The user is advised about the error that the indicator D should be included in item 10a. 3. Message is not sent.
Observed Result	
Status (Pass/Failed/Retest)	

Test Criteria	Coherence check between item 10a and item 18
Test Number	TSTXA5
Reference	[1] [3] The STS/ NONRVSM indicator will be used in new flight plan format to notify the intention of operation of NONRVSM flight into RVSM airspace.
Scenario Description	1. Select filing FPL in new format. 2. From test terminal A send a FPL message to test terminal B that contains STS/NONRVSM in item 18 and W in item 10a.
Test Data	(FPL-TST145-IS -A342/H-SHIXWYJ3/S -OJAI0830 -N0471F380 QTR2D QTR R652 METSA W733 NWB A791 MENLI A411 CVO A727 AXD A1 BOPED/N0474F370 W725 NANVO/N0474F380 W725 BRN A411 LOSUL/N0474F380 A411 GARUS GARUS1E -HLLT0358 DTTA DTTJ -STS/ NONRVSM EET/HECC0028 HLLL0215 REG/JYAIA SEL/ADQS DOF/120201 RMK/TCAS-II 7 -E/0553 P/TBN R/E S/M J/L D/06 370 C SILVER A/GREY)
Expected Result	1. The Software rejects filing the flight plan 2. The user is advised about the error, that W in item 10a and STS/NONRVSM are mutually exclusive entries. 3. Message is not sent.
Observed Result	
Status (Pass/Failed/Retest)	

13.1.5 The order of Item 18 indicators

Test Criteria	The Order of Item 18 indicators
Test Number	TSTXA6
Reference	[1] Amendment 1 mandates using of indicators in item 18 in a defined order.
Scenario Description	1. Select filing FPL in new format. 2. From test terminal A send a FPL message to test terminal B that includes the following indicators: EET/ REG/ SEL/ DOF/
Test Data	(FPL-TST151-IS -A342/H-SHIXWYJ3/S -OJAI0830 -N0471F380 QTR2D QTR R652 METSA W733 NWB A791 MENLI A411 CVO A727 AXD A1 BOPED/N0474F370 W725 NANVO/N0474F380 W725 BRN A411 LOSUL/N0474F380 A411 GARUS GARUS1E -HLLT0358 DTTA DTTJ -EET/HECC0028 HLLL0215 SEL/ADQS REG/JYAIA DOF/120201 RMK/TCAS-II 7 -E/0553 P/TBN R/E S/M J/L D/06 370 C SILVER A/GREY)
Expected Result	1. The Software should file the flight plan in correct order DOF/ REG/ EET/ SEL/ RMK/ 2. Message is sent.
Observed Result	
Status (Pass/Failed/Retest)	

13.1.6 Date of Flight

Test Criteria	The Order of Item 18 indicators
Test Number	TSTXA7
Reference	[1] [2] Amendment 1 allows filing of a flight plan up to 120 hours in advance.
Scenario Description	1. Select filing FPL in new format. 2. From test terminal A send a FPL message to test terminal B that includes the date of flight indicator in item 18 DOF/"current day + 3"
Test Data	(FPL-TST161-IS -A342/H-SHIXWYJ3/S -OJAI0830 -N0471F380 QTR2D QTR R652 METSA W733 NWB A791 MENLI A411 CVO A727 AXD A1 BOPED/N0474F370 W725 NANVO/N0474F380 W725 BRN A411 LOSUL/N0474F380 A411 GARUS GARUS1E -HLLT0358 DTTA DTTJ - DOF/"current day + 3" EET/HECC0028 HLLL0215 RMK/TCAS-II 7 -E/0553 P/TBN R/E S/M J/L D/06 370 C SILVER A/GREY)
Expected Result	1. The flight plan should be sent immediately.
Observed Result	
Status (Pass/Failed/Retest)	

13.2 Flight Data Processing (FDP)

13.2.1 New Alphanumeric code in item 10

Test Criteria	Accept New alphanumeric code (Item 10a)
Test Number	TSTXC1
Reference	[1] The new format of ICAO Flight Plan includes letter-digit combinations in addition to single letters.
Scenario Description	1.The ATM system (FDP) should be able to receive flight plan in both format simultaneously, if not switch the system to receive FPL in new format. 2. From test terminal A send a FPL message containing E1 and J4 in Item 10a to the FDP.
Test Data	(FPL-TST211-IS -B738/M-SE1J4/S -OJAI0901 -NO45F360 QTR2D QTR R652 METSA W733 -HECA0111 HELX -DOF/120203 EET/HECC0025)
Expected Result	1. The FDP accepts the new indicator. 2. Message is displayed and processed.
Observed Result	
Status (Pass/Failed/Retest)	

Test Criteria	Accept New alphanumeric code (Item 10a)
Test Number	TSTXC2
Reference	[1] [3] In the new format of ICAO Flight Plan the alphanumeric P1-P9 is reserved, the FPL filer should be able to file these items.
Scenario Description	1.The ATM system (FDP) should be able to receive flight plan in both format simultaneously, if not switch the system to receive FPL in new format. 2. From test terminal A send a FPL message that contains P2 in item 10a to the FDP (ATM system)
Test Data	(FPL-TST212-IS -B738/M-SP2/S -OJAI0902 -NO45F360 QTR2D QTR R652 METSA W733 -HECA0112 HELX -DOF/120203 EET/HECC0025)
Expected Result	1. The FDP accepts the flight plan. 2. The flight plan is processed.
Observed Result	
Status (Pass/Failed/Retest)	

Test Criteria	Accept New alphanumeric code (Item 10b)
Test Number	TSTXC3
Reference	[1] The new format of ICAO Flight Plan includes new letters in item 10b plus letter-digit combinations.
Scenario Description	1.The ATM system (FDP) should be able to receive flight plan in both format simultaneously, if not switch the system to receive FPL in new format. 2. From test terminal A send a FPL message to the ATM system (FDP) that contains E, D1 and B2 in item 10a.
Test Data	(FPL-TST213-IS -B738/M-SJ2/ED1B2 -OJAI0903 -NO45F360 QTR2D QTR R652 METSA W733 -HECA0110 HELX -DOF/120203 EET/HECC0025)
Expected Result	1. The FDP accepts the flight plan. 2. The flight plan is processed
Observed Result	
Status (Pass/Failed/Retest)	

13.2.2 Coherence check between item 10 and item 18

Test Criteria	Coherence check between item 10a and item 18
Test Number	TSTXD1
Reference	[1] Letter G is used in item 10a to indicate GNSS capability equipage, the type of external augmentation should be specified in item 18 following the indicator NAV/
Scenario Description	1. The ATM system (FDP) should be able to receive flight plan in both format simultaneously, if not switch the system to receive FPL in new format. 2. From test terminal A send a FPL message to the ATM system (FDP) that contains G in item 10a and don't include indicator GNSS/ in item 18
Test Data	(FPL-TST221-IS -B738/M-ADE3V/HB1V1G1 -OJAI0901 -NO45F360 QTR2D QTR R652 METSA W733 -HECA0111 HELX -DOF/120202 EET/HECC0025)
Expected Result	Either (A) : 1. The FDP should accept the Flight plan, And 2. The ATC should be notified about the inconsistency between item 10 and 18. OR (B): 1. The message is rejected. And 2. The originator is notified automatically about the rejection reason : inconsistent flight plan (Item 10 and 18)
Observed Result	
Status (Pass/Failed/Retest)	

Test Criteria	Coherence check between item 10a and item 18
Test Number	TSTXD2
Reference	[1] [3] The PBN/ indicator in item 18 convey the navigation capability with respect to accuracy and type of navigational equipment is used to achieve that capability.
Scenario Description	1. The ATM system (FDP) should be able to receive flight plan in both format simultaneously, if not switch the system to receive FPL in new format. 2. From test terminal A send a FPL message to ATM system (FDP) that contains PBN/B2 in item 18 and don't include G in item 10a
Test Data	(FPL-TST222-IS -B738/M-ADE3V/HB1V1G1 -OJAI1102 -NO45F360 QTR2D QTR R652 METSA W733 -HECA01112HELX -PBN/ B2 DOF/120203 EET/HECC0025)
Expected Result	Either (A) : 1. The FDP should accept the Flight plan. And 2. The ATC should be notified about the inconsistency between item 10 and 18. OR (B): 1. The message is rejected., And 2. The originator is notified automatically about the rejection reason : inconsistent flight plan (Item 10 and 18)
Observed Result	
Status (Pass/Failed/Retest)	

Test Criteria	Coherence check between item 10a and item 18
Test Number	TSTXD3
Reference	[1] [3] The PBN/ indicator in item 18 convey the navigation capability with respect to accuracy and type of navigational equipment is used to achieve that capability.
Scenario Description	1.The ATM system (FDP) should be able to receive flight plan in both format simultaneously, if not switch the system to receive FPL in new format. 2. From test terminal A send a FPL message to the ATM system (FDP) that contains PBN/C1 in item 18 and don't include DI in item 10a.
Test Data	(FPL-TST223-IS -B738/M-AE3V/HB1V1G1 -OJAI1103 -NO45F360 QTR2D QTR R652 METSA W733 -HECA01113 HELX -PBN/C1 DOF/120203 EET/HECC0025)
Expected Result	Either (A) : 1. The FDP should accept the Flight plan., And 2. The ATC should be notified about the inconsistency between item 10 and 18. OR (B): 1.The message is rejected, And 2.The originator is notified automatically about the rejection reason : inconsistent flight plan (Item 10 and 18)
Observed Result	
Status (Pass/Failed/Retest)	

Test Criteria	Coherence check between item 10a and item 18
Test Number	TSTXD4
Reference	[1] [3] The PBN/ indicator in item 18 convey the navigation capability with respect to accuracy and type of navigational equipment is used to achieve that capability.
Scenario Description	1. The ATM system (FDP) should be able to receive flight plan in both format simultaneously, if not switch the system to receive FPL in new format. 2. From test terminal A send a FPL message to the ATM system (FDP) that contains PBN/D3 in item 18 and don't include item D in item 10a
Test Data	(FPL-TST224-IS -B738/M-AE3V/HB1V1G1 -OJAI1104 -NO45F360 QTR2D QTR R652 METSA W733 -HECA01114 HELX -PBN/D3 DOF/120203 EET/HECC0025)
Expected Result	Either (A) : 1. The FDP should accept the Flight plan., And 2. The ATC should be notified about the inconsistency between item 10 and 18. OR (B): 1.The message is rejected, And 2.The originator is notified automatically about the rejection reason : inconsistent flight plan (Item 10 and 18)
Observed Result	
Status (Pass/Failed/Retest)	

Test Criteria	Coherence check between item 10a and item 18
Test Number	TSTXD5
Reference	[1] [3] The STS/ NONRVSM indicator will be used in new flight plan format to notify the intention of operation of NONRVSM flight into RVSM airspace.
Scenario Description	1. The ATM system (FDP) should be able to receive flight plan in both format simultaneously, if not switch the system to receive FPL in new format. 2. From test terminal A send a FPL message to the ATM system (FDP) that contains STS/NONRVSM in item 18 and W in item 10a
Test Data	(FPL-TST225-IS -A342/H-SHIXWYJ3/S -OJAI0830 -N0471F380 QTR2D QTR R652 METSA W733 NWB A791 MENLI A411 CVO A727 AXD A1 BOPED/N0474F370 W725 NANVO/N0474F380 W725 BRN A411 LOSUL/N0474F380 A411 GARUS GARUS1E -HLLT0358 DTTA DTTJ -STS/ NONRVSM EET/HECC0028 HLLL0215 REG/JYAIA SEL/ADQS DOF/120201 RMK/TCAS-II 7 -E/0553 P/TBN R/E S/M J/L D/06 370 C SILVER A/GREY)
Expected Result	Either (A) : 1. The FDP should accept the Flight plan., And 2. The ATC should be notified about the inconsistency between item 10 and 18. OR (B): 1.The message is rejected, And 2.The originator is notified automatically about the rejection reason : inconsistent flight plan (Item 10 and 18)
Observed Result	
Status (Pass/Failed/Retest)	

13.2.3 Invalid Alphanumeric code in item 10

Test Criteria	Invalid Alphanumeric code in item 10a
Test Number	TSTXE1
Reference	[1] The new format of ICAO Flight Plan includes letter-digit combinations in addition to single letters in item 10a.
Scenario Description	1. The ATM system (FDP) should be able to receive flight plan in both format simultaneously, if not switch the system to receive FPL in new format. 2. From test terminal A send a FPL message to the ATM system (FDP) that contains invalid letter J9 in item 10a.
Test Data	(FPL- TST231-IS -OJAI0804/M-SE1HYWJ9/S -N0431F240 LOSAR3D LOSAR DCT BUSRA -OLBA0044 LCLK -DOF/ 120201 EET/ OSTT0011)
Expected Result	1.The Flight plan should be rejected, And 2.The originator is notified automatically about the rejection reason : Invalid Alphanumeric in Item 10a
Observed Result	
Status (Pass/Failed/Retest)	

Test Criteria	Invalid Alphanumeric code in item 10b
Reference	[1] The new format of ICAO Flight Plan includes letter-digit combinations in addition to single letters in item 10b.
Test Number	TST232
Scenario Description	1. The ATM system (FDP) should be able to receive flight plan in both format simultaneously, if not switch the system to receive FPL in new format. 2. From test terminal A send a FPL message to the ATM system (FDP) that contains invalid letter F and D2 in item 10b.
Test Data	(FPL- TST232-IS -OJAI0805/M-SE1HYWJ2/FD2 -N0431F240 LOSAR3D LOSAR DCT BUSRA -OLBA0045 LCLK -DOF/ 120201 EET/ OSTT0011)
Expected Result	1.The Flight plan should be rejected, And 2.The originator is notified automatically about the rejection reason : Invalid Alphanumeric in Item 10b
Observed Result	
Status (Pass/Failed/Retest)	

13.2.4 Coherence check in item 10

Test Criteria	Coherence check in item 10b
Test Number	TSTXF1
Reference	[1] [3] Maximum one entry is expected for SSR Mode A.
Scenario Description	1. The ATM system (FDP) should be able to receive flight plan in both format simultaneously, if not switch the system to receive FPL in new format. 2. From test terminal A send a FPL message to the ATM system (FDP) that contains B1 and B2 in item 10b.
Test Data	(FPL-TST241-IS -B738/M-SP2/SB1B2 -OJAI0906 -NO45F360 QTR2D QTR R652 METSA W733 -HECA0116 HELX -DOF/120204 EET/HECC0025)
Expected Result	Either (A) : 1. The FDP should accept the Flight plan., And 2. The ATC should be notified about the inconsistency in item 10b. OR (B): 1.The message is rejected, And 2.The originator is notified automatically about the rejection reason : inconsistent flight plan (Item 10b)
Observed Result	
Status (Pass/Failed/Retest)	

Test Criteria	Coherence check in item 10b
Test Number	TSTXF2
Reference	[1] [3] Maximum one entry is expected for SSR Mode C.
Scenario Description	1. The ATM system (FDP) should be able to receive flight plan in both format simultaneously, if not switch the system to receive FPL in new format. 2. From test terminal A send a FPL message to the ATM system (FDP) that contains H and I in item 10b.
Test Data	(FPL-TST242-IS -B738/M-ADE3V/HIB1 -OJAI0907 -NO45F360 QTR2D QTR R652 METSA W733 -HECA0117 HELX -DOF/120201 EET/HECC0025)
Expected Result	Either (A) : 1. The FDP should accept the Flight plan., And 2. The ATC should be notified about the inconsistency in item 10b. OR (B): 1.The message is rejected, And 2.The originator is notified automatically about the rejection reason : inconsistent flight plan (Item 10b)
Observed Result	
Status (Pass/Failed/Retest)	

Test Criteria	Coherence check in item 10b
Test Number	TSTXF3
Reference	[1] [3] Maximum one entry is expected for each ADS-B link.
Scenario Description	1. The ATM system (FDP) should be able to receive flight plan in both format simultaneously, if not switch the system to receive FPL in new format. 2. From test terminal A send a FPL message to the ATM system that contains B1, B2, V1 and V2 in item 10b.
Test Data	(FPL-TST243-IS -B738/M-ADE3V/HB1B2V1V2 -OJAI0908 -NO45F360 QTR2D QTR R652 METSA W733 -HECA0118 HELX -DOF/120201 EET/HECC0025)
Expected Result	Either (A) : 1. The FDP should accept the Flight plan., And 2. The ATC should be notified about the inconsistency in item 10b. OR (B): 1.The message is rejected, And 2.The originator is notified automatically about the rejection reason : inconsistent flight plan (Item 10b)
Observed Result	
Status (Pass/Failed/Retest)	

13.2.5 The order of Item 18 indicators

Test Criteria	The Order of Item 18 indicators
Test Number	TSTXG1
Reference	[1] Amendment 1 mandates using of indicators in item 18 in a defined order.
Scenario Description	1. The ATM system (FDP) should be able to receive flight plan in both format simultaneously, if not switch the system to receive FPL in new format. 2. From test terminal A send a FPL message to the ATM system (FDP) that includes the following indicators: EET/ REG/ SEL/ DOF/
Test Data	(FPL-TST251-IS -A342/H-SHIXWYJ3/S -OJAI0830 -N0471F380 QTR2D QTR R652 METSA W733 NWB A791 MENLI A411 CVO A727 AXD A1 BOPED/N0474F370 W725 NANVO/N0474F380 W725 BRN A411 LOSUL/N0474F380 A411 GARUS GARUS1E -HLLT0358 DTTA DTTJ -EET/HECC0028 HLLL0215 SEL/ADQS REG/JYAIA DOF/120201 RMK/TCAS-II 7 -E/0553 P/TBN R/E S/M J/L D/06 370 C SILVER A/GREY)
Expected Result	1. The ATM system should accept the Flight plan. 2. The ATM System should be able to process and reorder item 18 indicators.
Observed Result	
Status (Pass/Failed/Retest)	

13.2.6 Date of Flight

Test Criteria	The Order of Item 18 indicators
Test Number	TSTXG2
Reference	[1] Amendment 1 allows filing of a flight plan up to 120 hours in advance.
Scenario Description	1. The ATM system (FDP) should be able to receive flight plan in both format simultaneously, if not switch the system to receive FPL in new format. 2. From test terminal A send a FPL message to the ATM system (FDP) that includes the date of flight indicator in item 18 DOF/"current day + 3"
Test Data	(FPL-TST261-IS -A342/H-SHIXWYJ3/S -OJAI0830 -N0471F380 QTR2D QTR R652 METSA W733 NWB A791 MENLI A411 CVO A727 AXD A1 BOPED/N0474F370 W725 NANVO/N0474F380 W725 BRN A411 LOSUL/N0474F380 A411 GARUS GARUS1E -HLLT0358 DTTA DTTJ - DOF/"current day + 3" EET/HECC0028 HLLL0215 RMK/TCAS-II 7 -E/0553 P/TBN R/E S/M J/L D/06 370 C SILVER A/GREY)
Expected Result	1. The ATM system should accept the FPL. 2. The FPL should be kept on queue until reaches a VSP* prior to the EOBT.
Observed Result	
Status (Pass/Failed/Retest)	

13.2.7 New Indicator in Item 18

Test Criteria	Processing of new indicators in Item 18
Test Number	TSTXG3
Reference	[1] Amendment 1 indicates specific indicators should be used in Item 18.
Scenario Description	1. The ATM system (FDP) should be able to receive flight plan in both format simultaneously, if not switch the system to receive FPL in new format. 2. From test terminal A send a FPL message to the ATM system (FDP) that includes STS/HEAD in Item 18
Test Data	(FPL-TST261-IS -A342/H-SHIXWYJ3/S -OJAI0830 -N0471F380 QTR2D QTR R652 METSA W733 NWB A791 MENLI A411 CVO A727 AXD A1 BOPED/N0474F370 W725 NANVO/N0474F380 W725 BRN A411 LOSUL/N0474F380 A411 GARUS GARUS1E -HLLT0358 DTTA DTTJ -STS/HEAD DOF/120201 EET/HECC0028 HLLL0215 RMK/TCAS-II 7 -E/0553 P/TBN R/E S/M J/L D/06 370 C SILVER A/GREY)
Expected Result	1. The ATM system should accept the FPL. 2. The FPL should be processed. 3. The ATC should be notified about the reason for special handling case.
Observed Result	
Status (Pass/Failed/Retest)	

13.2.8 Handling of non standard indicators in Item 18

Test Criteria	Handling of non standard indicators in Item 18
Test Number	TST281
Reference	Other ICAO Region indicates their need to use other indicators in Item 18, each ANSP should test the capability of systems in place to handle FPL includes such indicators
Scenario Description	1. The ATM system (FDP) should be able to receive flight plan in both format simultaneously, if not switch the system to receive FPL in new format. 2. From test terminal A send a FPL message to the ATM system (FDP) that includes indicators will be used by other Region in Item 18, like EUR/ RVR/
Test Data	(FPL- TST281-IS -A342/H-SHIXWYJ3/S -OJAI0830 -N0431F240 LOSAR3D LOSAR DCT BUSRA -OLBA0045 LCLK -DOF/ 120201 EET/ OSTT0011 RVR/350)
Expected Result	1. The ATM system accepts FPL.
Observed Result	
Status (Pass/Failed/Retest)	

13.2.9 Undetermined FPL format.

Test Criteria	Handling of undetermined FPL format
Test Number	TST291
Reference	[1] [3]
Scenario Description	1. The ATM system (FDP) should be able to receive flight plan in both format simultaneously, if not switch the system to receive FPL in new format. 2. From test terminal A send a FPL message to the ATM system (FDP) that includes letters from both formats (current and new), letters M and E, plus J3 in item 10a.
Test Data	(FPL-TST291-IS -A342/H-SHIXWDEMJ3Y/S -OJAI0830 -N0364F080 OSAMA2D SALAM J17 BGN/N0469F300 UH1 PURLA UH1B SUVAS/N0468F320 UL53 KAROL UL995 RDS UL609 MES UG18 FSK UN128 VADIL UL863 SIVLA/N0452F340 UL863 VBA UM19 OBUTI/N0452F340 UM19 MUREG/N0452F340 UM19 GRZ UL604 RELBI UL602 NALAX UL46 REMSI UP6 MIMKU/M080F340 DCT SUNOT/M080F340 DCT 58N020W 59N030W 60N040W 59N050W DCT PRAWN/N0465F360 DCT YDP N356C ROUND/N0471F380 DCT JODEE PAITN2 -KORD1319 KMKE KDTW -DOF/120201 EET/LLLL0011 LCCC0024 LGGG0104 LTBB0126 LGGG0132 LWSS0216 EGGX0555 CZQX0730 CZUL1004 CZZY1142 KZMP1220 KZAU1246 RMK/RANDOM ATC FPL)
Expected Result	1. The ATM system should reject FPL 2. The originator should be notified about the reason of Rejection: Unknown Flight plan format
Observed Result	
Status (Pass/Failed/Retest)	

13.2.10 Long Message Size.

Test Criteria	Handling of long AFTN message size
Test Number	TST201
Reference	[1] Amendment 1 specified new indicators in Item 18 and it's anticipated that the AFTN message might be longer than the maximum size 2100.
Scenario Description	1. The ATM system (FDP) should be able to receive flight plan in both format simultaneously, if not switch the system to receive FPL in new format. 2. From test terminal A send a long FPL message to the ATM system (FDP) , more than 2100
Test Data	
Expected Result	1. The ATM system should accept FPL, and according to Annex 10, attachment B. 2. The FPL should be handled as following: 2.a The message is truncated, "CHECK TEXT NEW ENDING ADDED" 2.b The message is split into 2 or 3 messages 2.c The message received as it is.
Observed Result	
Status (Pass/Failed/Retest)	

13.3 FPL converter

13.3.8 Conversion from New to Current format

Test Criteria	Conversion from New to Current Format
Test Number	TST311
Reference	[1] [3] [5]
Scenario Description	- From Test Terminal A, select filing FPL in new format. - Send a flight plan in new format to the legacy system connected via the INFPL converter.
Test Data	(FPL- TST311-IS -A342/H- ACDHIKLORTUV/A -OJAI0830 -N0431F240 LOSAR3D LOSAR DCT BUSRA -OLBA0045 LCLK - STS/ATFMX PBN/A1 DOF/120201 REG/REG001 EET/OLBA0100 SEL/SELC CODE/123ABC DLE/WAY0030 WAY20130 OPR/RJ RIF/RIFTEXT RMK/TEST)
Expected Result	- The INFPL converter should convert the FPL as following: (FPL- TST311-IS -A342/H- CDHIKLORTUVZ/A -OJAI0830 -N0431F240 LOSAR3D LOSAR DCT BUSRA -OLBA0045 LCLK -STS/ATFMEXEMPTAPPROVED NAV/GBAS RNAV10 RNP10 A1 REG/REG001 EET/OLBA0100 SEL/SELC CODE/123ABC OPR/RJ RIF/RIFTEXT RMK/DLE/WAY0030 WAY20130 TEST PBN/A1)) - The Legacy ATM system should accept and process FPL in current format.
Observed Result	
Status (Pass/Failed/Retest)	

Test Criteria	Conversion from New to Current Format
Test Number	TST312
Reference	[1] [3] [5]
Scenario Description	- From Test Terminal A, select filing FPL in new format. - Send a flight plan in new format to the legacy system connected via the INFPL converter.
Test Data	(FPL- TST312-IS -B757/M-E1FGP1R/E -OJAI0830 -N0431F240 LOSAR3D LOSAR DCT BUSRA -OLBA0045 LCLK - STS/FFR PBN/B2 NAV/GBAS DAT/DATTEXT DOF/120201 REG/REG001 EET/OLBA0100 SEL/SELC CODE/123ABC)
Expected Result	- The INFPL converter should convert the FPL as following: (FPL- TST312-IS -B757/M-FGRZ/SD -OJAI0830 -N0431F240 LOSAR3D LOSAR DCT BUSRA -OLBA0045 LCLK -STS/FFR NAV/RNAV5 B2 GBAS COM/FMC WPR ACARS E1 E DATTEXT REG/REG001 EET/OLBA0100 SEL/SELC CODE/123ABC RMK/PBN/B2) - The Legacy ATM system should accept and process FPL in current format.
Observed Result	
Status (Pass/Failed/Retest)	

Test Criteria	Conversion from New to Current Format
Test Number	TST313
Reference	[1] [3] [5]
Scenario Description	1. From Test Terminal A, select filing FPL in new format. 2. Send a flight plan in new format to the legacy system connected via the INFPL converter.
Test Data	(FPL- TST313-IS -C160/M-E2P2RD/H -ZZZZ0830 -N0431F240 LOSAR3D LOSAR DCT BUSRA c -STS/FLTCK PBN/B3 DEP/MAFRAQ DEST/MARKA DOF/120201 REG/REG001 EET/OJAC0100 SEL/SELC CODE/123ABC RMK/TEST)
Expected Result	The INFPL converter should convert the FPL as following: (FPL- TST313-IS -ZZZZ0830 -N0431F240 LOSAR3D LOSAR DCT BUSRA -ZZZZ0830 -STS/FLTCK NAV/RNAV5 B3 COM/DFIS ACARS E2 H DEST/MARKA REG/REG001 EET/OJAC0100 SEL/SELC CODE/123ABC RMK/DEP/MAFRAQ PBN/B3) The Legacy ATM system should accept and process FPL in current format.
Observed Result	
Status (Pass/Failed/Retest)	

13.3.9 Conversion from Current to New format

The flight plan from current to new format is out of scope this document.

13.3.10 Date of Flight (DOF)

Test Criteria	Date of flight (DOF)
Test Number	TST331
Reference	[1] Amendment 1 allows filing of a flight plan up to 120 hours in advance.
Scenario Description	1. From Test Terminal A, select filing FPL in new format. 2. Send a flight plan in new format to the legacy system connected via the INFPL converter.
Test Data	(FPL-TST331-IS -A342/H-SHIXWYJ3/S -OJAI0830 -N0471F380 QTR2D QTR R652 METSA W733 NWB A791 MENLI A411 CVO A727 AXD A1 BOPED/N0474F370 W725 NANVO/N0474F380 W725 BRN A411 LOSUL/N0474F380 A411 GARUS GARUS1E -HLLT0358 DTTA DTTJ - DOF/"current day + 3" EET/HECC0028 HLLL0215 RMK/TCAS-II 7 -E/0553 P/TBN R/E S/M J/L D/06 370 C SILVER A/GREY)
Expected Result	1. The INFPL converter should accept the FPL. 2. The FPL should be kept on queue until reaches a VSP* prior to the EOBT. 3. The legacy ATM system should receive it VSP prior to EBOT in current format.
Observed Result	
Status (Pass/Failed/Retest)	

13.4 FPL Converter Intervention Position

13.4.1 Handling of erroneous FPL.

Test Criteria	Invalid Alphanumeric code in item 10a
Test Number	TST411
Reference	[1] The new format of ICAO Flight Plan includes letter-digit combinations in addition to single letters in item 10a.
Scenario Description	1. Select filing FPL in new format on AFTN Terminal A. 2. From test terminal A send a FPL message to the legacy ATM system (FDP) that contains invalid letter J9 in item 10a.
Test Data	(FPL- TST411-IS -OJAI0804/M-SE1HYWJ9/S -N0431F240 LOSAR3D LOSAR DCT BUSRA -OLBA0044 LCLK -DOF/ 120201 EET/ OSTT0011)
Expected Result	1. The converter can not the flight plan 2. The flight plan is sent to the manual intervention position. 3. The flight plan can be displayed and highlighted the error "J9" with advice to the operator "Invalid indicator"
Observed Result	
Status (Pass/Failed/Retest)	

13.4.2 Verification of corrected FPL.

Test Criteria	Invalid Alphanumeric code in item 10a
Test Number	TST421
Reference	[1] The new format of ICAO Flight Plan includes letter-digit combinations in addition to single letters in item 10a.
Scenario Description	1. repeat test TST411 2. correct the error, enter J2 instead of J9 3. click on "verify" button to verify message correction
Test Data	(FPL- TST421-IS -OJAI0804/M-SE1HYWJ9/S -N0431F240 LOSAR3D LOSAR DCT BUSRA -OLBA0044 LCLK -DOF/ 120201 EET/ OSTT0011)
Expected Result	1. The manual intervention position could verify the correction. 2. The flight plan is sent back to the converter. 3. The conversion from New to the current format performed successfully 4. The Legacy ATM system accept and process the Flight plan in current format
Observed Result	
Status (Pass/Failed/Retest)	

13.4.3 Manage FPL messages on queue

Test Criteria	Manage FPL message on Queue
Test Number	TST431
Reference	[1] Amendment 1 allows filing of a flight plan up to 120 hours in advance.
Scenario Description	1. From Test Terminal A, select filing FPL in new format. 2. Send a flight plan in new format to the legacy system connected via the INFPL converter. 3. View FPLs on queue 4. Delete the FPL from the queue
Test Data	(FPL-TST431-IS -A342/H-SHIXWYJ3/S -OJAI0830 -N0471F380 QTR2D QTR R652 METSA W733 NWB A791 MENLI A411 CVO A727 AXD A1 BOPED/N0474F370 W725 NANVO/N0474F380 W725 BRN A411 LOSUL/N0474F380 A411 GARUS GARUS1E -HLLT0358 DTTA DTTJ - DOF/"current day + 3" EET/HECC0028 HLLL0215 RMK/TCAS-II 7 -E/0553 P/TBN R/E S/M J/L D/06 370 C SILVER A/GREY)
Expected Result	1. The flight plan should be deleted from the queue. 2. Verify that the legacy ATM system does not receive the flight plan.
Observed Result	
Status (Pass/Failed/Retest)	

13.4.4 CHG, CNL, DLA for FPL on queue

Test Criteria	CHG message
Test Number	TST441
Reference	[1] Amendment 1 allows filing of a flight plan up to 120 hours in advance.
Scenario Description	1. Repeat test TST431 2. Send DLA FPL to the original FPL. 3. Check the time of release of the FPL
Test Data	(DLA-TST431-OJAI1200-HLLT-DOF/"current day + 3")
Expected Result	1. The flight plan should be sent VSP before the new EOBT 2. Verify (1) using retrieval function of sent FPL
Observed Result	
Status (Pass/Failed/Retest)	

13.4.5 Retrieval of all message types (sent, received, corrected, rejected)

Test Criteria	Retrieval of all message types
Test Number	TST451
Reference	[1]
Scenario Description	1. Repeat test TST421 2. At the Intervention position, open Retrieval window 3. Execute a command to retrieve all corrected flight plans in last two hours.
Test Data	
Expected Result	Verify that all corrected flight plans are displayed.
Observed Result	
Status (Pass/Failed/Retest)	

Test Criteria	Retrieval of all message types
Test Number	TST452
Reference	[1]
Scenario Description	1. Repeat test TST421 2. At the Intervention position, open Retrieval window 3. Execute a command to retrieve all Rejected flight plans in last two hours.
Test Data	
Expected Result	Verify that all Rejected flight plans are displayed.
Observed Result	
Status (Pass/Failed/Retest)	

16. Approvals

Name (Print)

Signature

Date

1.

2.

3.

4.

5.

-END-

Test Criteria	Retrieval of all message types
Test Number	TST452
Reference	[1]
Scenario Description	1. Repeat test TST421 2. At the Intervention position, open Retrieval window 3. Execute a command to retrieve all Rejected flight plans in last two hours.
Test Data	
Expected Result	Verify that all Rejected flight plans are displayed.
Observed Result	
Status (Pass/Failed/Retest)	

16. Approvals

Name (Print)

Signature

Date

1.

2.

3.

4.

5.

Requirements for the coordinated allocation and use of Mode S Interrogator Codes in the ICAO Middle East Region

DOCUMENT IDENTIFIER :

Edition Number	:	v 0.8
Edition Date	:	03 November 2011
Status	:	Working Draft
Intended for	:	General Public
Category	:	

DOCUMENT CHARACTERISTICS

TITLE		
Requirements for the coordinated allocation and use of Mode S Interrogator Codes in the ICAO Middle East Region		
Publications Reference:		
ISBN Number:		
Document Identifier	Edition Number:	v 0.8
	Edition Date:	03 November 2011
Abstract		
Keywords		
Contact Person(s)	Tel	Unit
BODART Jérôme	+32 2 729 4695	DNM/COO/DCO/SCC
POTIER Eric	+32 2 729 3504	DNM/COO/DCO/SCC

STATUS, AUDIENCE AND ACCESSIBILITY					
Status		Intended for		Accessible via	
Working Draft	☒	General Public	☒	Intranet	☐
Draft	☐	EUROCONTROL	☐	Extranet	☐
Proposed Issue	☐	Restricted	☐	Internet (www.eurocontrol.int)	☐
Released Issue	☐				

DOCUMENT APPROVAL

The following table identifies all management authorities who have successively approved the present issue of this document.

AUTHORITY	NAME AND SIGNATURE	DATE

DOCUMENT CHANGE RECORD

The following table records the complete history of the successive editions of the present document.

EDITION NUMBER	EDITION DATE	REASON FOR CHANGE	PAGES AFFECTED
1	01/02/2012	Review by CNS/ATM/IC SG/6	11,17

Publications

EUROCONTROL Headquarters
96 Rue de la Fusée
B-1130 BRUSSELS

Tel: +32 (0)2 729 4715
Fax: +32 (0)2 729 5149
E-mail: publications@eurocontrol.int

CONTENTS

DOCUMENT CHARACTERISTICS.....	2
DOCUMENT APPROVAL	3
DOCUMENT CHANGE RECORD	4
CONTENTS	5
LIST OF FIGURES	7
LIST OF TABLES.....	8
EXECUTIVE SUMMARY	9
1. Introduction.....	10
1.1 Purpose of the document.....	10
1.2 Mode S Interrogator Code	10
1.3 Abbreviations	10
1.4 Definitions.....	10
1.5 References.....	11
1.6 Document structure	12
2. IC Allocation Coordination in Europe	13
2.1 Organization	13
2.2 IC Allocations Framework	13
2.3 IC Allocation Status	14
3. Mode S IC Allocation Process	16
3.1 IC allocation cycle.....	16
3.2 Ad-hoc allocation process	17
3.3 Applications.....	17
3.4 Allocation Simulations	18
3.5 Allocation Proposals	18
3.6 Allocation Review	18
3.7 Allocation Publication	19
3.8 Output of the Allocation Process	19
3.9 Allocation Changes.....	19
3.10 Discrete Code Allocation.....	20
3.10.1 II code and mobile radar	20
3.10.2 Cluster	20
3.10.3 Test, Research and Development Mode S interrogators.....	20
3.10.4 Specific code for specific military operations.....	20

3.11	Dispute Resolution	21
3.12	MICoG working arrangement	21
4.	Role and Responsibilities for IC allocation in ICAO Middle East Region ..	22
4.1	Requirements for Mode S Operators in ICAO Middle East Region	22
4.2	Requirements for the ICAO Middle East Regional Office.....	23
4.3	Requirements related to IC Conflict	25
5.	Guidance for IC allocation in ICAO Middle East Region.....	26
5.1	Mode S Radars Performances	26
5.1.1	SI code capability	26
5.1.2	II/SI code operation	26
5.1.2.1	II/SI code operation in ICAO Middle East region	26
5.1.2.2	II/SI code operation in the European Union	26
5.1.3	Mode S Coverage	27
5.2	Requirements for airborne carriage	28
ANNEX A	– II/SI code operation	29

LIST OF FIGURES

Figure 1: Mode S IC Allocation Coordination in Europe 13
Figure 2: IC Allocation Status in European region at the end of MICA Cycle 13 14
Figure 3: IC Allocation Status in Middle East region at the end of MICA Cycle 13.....15
Figure 4: Mode S IC Allocation Cycle 16

LIST OF TABLES

EXECUTIVE SUMMARY

The introduction of SSR Mode S interrogators requires a coordinated approach to the allocation and implementation of the Interrogator Codes.

Provisions regarding the implementation and monitoring of Mode S IC allocations have been defined by ICAO.

In ICAO European region, the management of the plan is exercised by EUROCONTROL on behalf of the European regional office of ICAO. EUROCONTROL has put in place a cell (MICA Cell) to perform the allocation of the Interrogator Codes. To support the coordinated allocation and implementation of the Interrogator Code to Mode S interrogators in ICAO European region, a process (Mode S IC Allocation process) has been formalized.

Mode S radars are also installed in ICAO Middle East region. The operational coverage of some of these radars is overlapping coverage of Mode S radars installed in ICAO European Region. In order to avoid any Mode S Interrogator Code conflict with radar already operational in Mode S, it is therefore critical to coordinate the Mode S Interrogator Code Allocation in ICAO Middle East region in close cooperation with the ICAO Middle East regional office.

The purpose of this document is to lay down recommendations and requirements for an efficient support of the EUROCONTROL MICA Cell to the allocation of Mode S Interrogator Code by the ICAO Middle East regional office.

The Mode S IC Allocation process applied in Europe will also be applied for IC Allocation to Mode S radars in the Middle East ICAO region. This process is based on 168 days (approximately 6 months) cycles, aligned on AIRAC effective dates. The IC allocation to Mode S radars in ICAO Middle East region and ICAO European region will be processed together during the same MICA cycles. This document also details the role and responsibilities of ICAO Middle East regional office and Mode S operators.

In addition, the IC Allocation in Europe relies on required Mode S radar performances and airborne carriage. The last part of this document introduces recommended functionalities for Mode S interrogators and transponders which could compromise future IC Allocations if not implemented in that region.

1. Introduction

1.1 Purpose of the document

The purpose of this document is to lay down recommendations and requirements for an efficient support of the EUROCONTROL MICA Cell to the allocation of Mode S Interrogator Code by the ICAO Middle East regional office.

1.2 Mode S Interrogator Code

Whilst traditional Secondary Surveillance Radar (SSR) station sends interrogations that are replied by all aircraft within its beam, Mode S interrogator transmits addressed interrogations to each aircraft within its coverage.

In Mode S protocol each aircraft and each interrogator must be uniquely identified. Mode S Interrogators are identified by an Interrogator Code.

To secure the safety of the air traffic surveillance system, it is essential that the radar coverage areas of two Mode S interrogators using the same Interrogator Code do not overlap, except if they are grouped in a cluster or if other appropriate operational mitigations are in place.

Interrogator Codes can be either Interrogator Identifiers (II) or Surveillance Identifiers (SI). The design of the Mode S system limits the number of Interrogator Codes available (excluding II zero) to 15 II codes and 63 SI codes. Compared to the number of Mode S interrogators which might be deployed in a region, the number of IC is low.

The introduction of SSR Mode S interrogators requires a coordinated approach to the allocation and implementation of the Interrogator Codes.

1.3 Abbreviations

IC	Interrogator Code
II	Interrogator Identifier
MICA	Mode S Interrogator Code Allocation
MICoG	Mode S Interrogator Code Coordination Group
MID	Middle East
SI	Surveillance Identifier
SSR	Secondary Surveillance Radar

1.4 Definitions

1. **Cluster:** A set of Mode S interrogators connected all together in the same network and using the same Interrogator Code to share track information in order to allow aircraft acquisition already acquired by other stations in the same cluster.
2. **Eligible Mode S interrogator:** fixed Mode S interrogator for which at least one of the following conditions is satisfied:
 - a. the interrogator relies, at least partly, on Mode S all call interrogations and replies for Mode S targets acquisition; or

- b. the interrogator locks out acquired Mode S targets in reply to Mode S all call interrogations, permanently or intermittently, in part or totality of its coverage; or
 - c. the interrogator uses multisite communications protocols for data link applications.
- 3. **Eligible Interrogator Code:** any code among the II codes and the SI codes, except
 - a. II code 0
 - b. the Interrogator Code(s) reserved for military entities including intergovernmental organisations in particular North Atlantic Treaty Organisation (II code 15 is currently reserved in Europe for NATO management)
- 4. **Interrogator Code Conflict:** uncoordinated coverage overlap of two or more Mode S interrogators operating on the same interrogator code, potentially resulting in aircraft remaining undetected by at least one of the Mode S interrogators.
- 5. **Lockout:** protocol that allows the suppression of Mode S all call replies to Mode S all call interrogations transmitted on a specific IC.
- 6. **Lockout Map:** Mode S interrogator configuration file defining where and how to apply lockout to Mode S targets.
- 7. **MICA web:** the Mode S Interrogator Code Allocation (MICA) web application is used to coordinate and manage IC Allocation to Mode S radars in the ICAO European region and in the ICAO Middle East region. The access to the web application is managed through the Eurocontrol OneSkyOnline portal.
- 8. **Mode S All Call interrogations:** messages that are normally used by Mode S interrogators to acquire Mode S targets entering their coverage area.
- 9. **Mode S interrogator:** system composed of antenna and electronics, supporting detection and tracking of individual aircraft through the Mode S protocol.
- 10. **Mode S Operator:** a person, from States, or organisation or enterprise operating or offering to operate a Mode S interrogator, including:
 - a. air navigation service providers
 - b. Mode S interrogators manufacturers
 - c. airport operators
 - d. military units operating Mode S interrogators on any other interrogator code than II code 0
 - e. research establishments
 - f. any other entity entitled to operate a Mode S interrogator
- 11. **Mode S target:** a platform equipped with a Mode S transponder.

1.5 References

ICAO Annex 10 to the Convention on International Civil Aviation
Aeronautical Telecommunications
Volume IV Surveillance and Collision Avoidance Systems

1.6 Document structure

Chapter 2 describes how the IC Allocation coordination is organized in ICAO European region. The IC Allocation status in the ICAO European region and ICAO Middle East region is also provided in this chapter.

Chapter 3 presents the IC Allocation process that is applied in the ICAO European region to process Interrogator Code requests for new Mode S radars. This process will also be applied to the ICAO Middle East region.

Chapter 4 summarizes the role and responsibilities of ICAO Middle East regional office and Mode S operators in the IC Allocation process applied in the ICAO European region.

Chapter 5 provides some guidance for IC allocation in ICAO Middle East Region. In particular the Mode S radar performances are discussed.

2. IC Allocation Coordination in Europe

2.1 Organization

Provisions regarding the implementation and monitoring of Mode S IC allocations have been defined by ICAO.

In European ICAO region, the management of the plan is exercised by EUROCONTROL on behalf of the European regional office of ICAO.

EUROCONTROL has put in place a cell (MICA Cell) to perform the allocation of the Interrogator Codes. In addition a working arrangement (MICoG) has been created to oversee the allocation process and provide guidance to the MICA Cell. MICoG members are the Focal Points representing the National Regulatory Authorities of European States and those international organisations applying for Interrogator Codes.

The Focal Points are also responsible for the coordination of all matters concerning the IC allocations between the MICA Cell and the Mode S Operators in their area of oversight.

The Figure 1 here below depicts the co-ordination for IC Allocation to Mode S radars in ICAO European region.

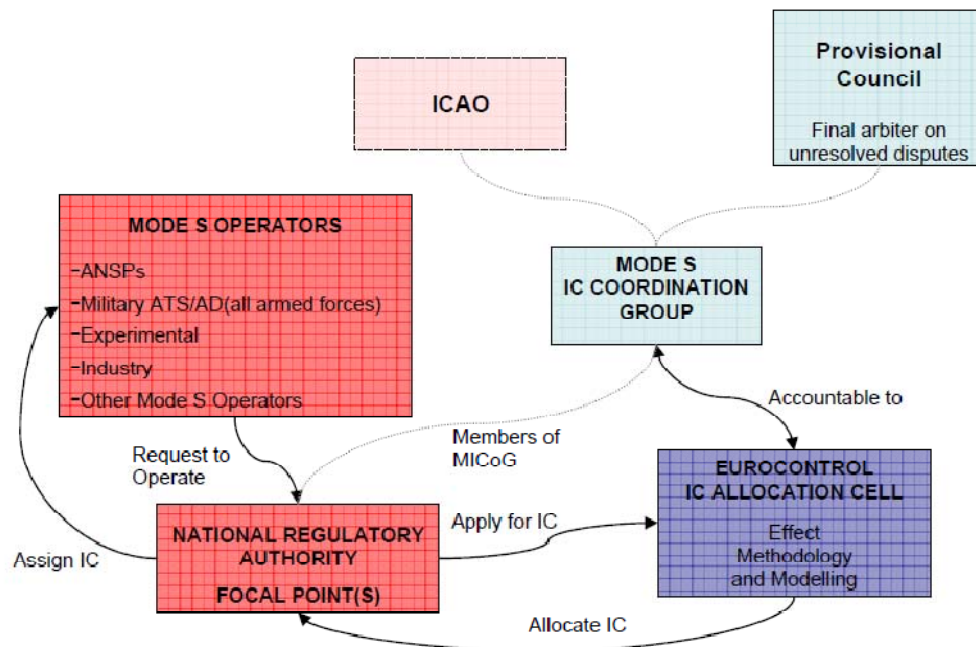


Figure 1: Mode S IC Allocation Coordination in Europe

2.2 IC Allocations Framework

IC allocation started with deployment of the first Mode S stations in Europe. The deployment of more Mode S stations required a coordinated process which was formalized in 2005:

Mode S Interrogator Codes Allocation Process 1.0

29 September 2005

From that date, the Mode S IC allocation is managed in cycle of 6 months.

To enforce the requirements and responsibilities on each participant, the following European Regulation was issued in 2009:

COMMISSION REGULATION (EC) No 262/2009 of 30 March 2009

laying down requirements for the coordinated allocation and use of Mode S interrogator codes for the single European sky

For countries belonging to the European Union, the European Regulation supersedes the Eurocontrol document depicting the Mode S Interrogator Codes Allocation Process.

In addition, a web application, called MICA web, has been developed to improve the processing and coordination of IC Allocation to Mode S radars in the European region.

2.3 IC Allocation Status

At the end of MICA Cycle 13 (September 2011), 247 Mode S radars were allocated an Interrogator Code, either an II code or an SI code, in the European region.

The Figure 2 here below depicts the IC Allocation Status in the European region at the end of MICA Cycle 13.

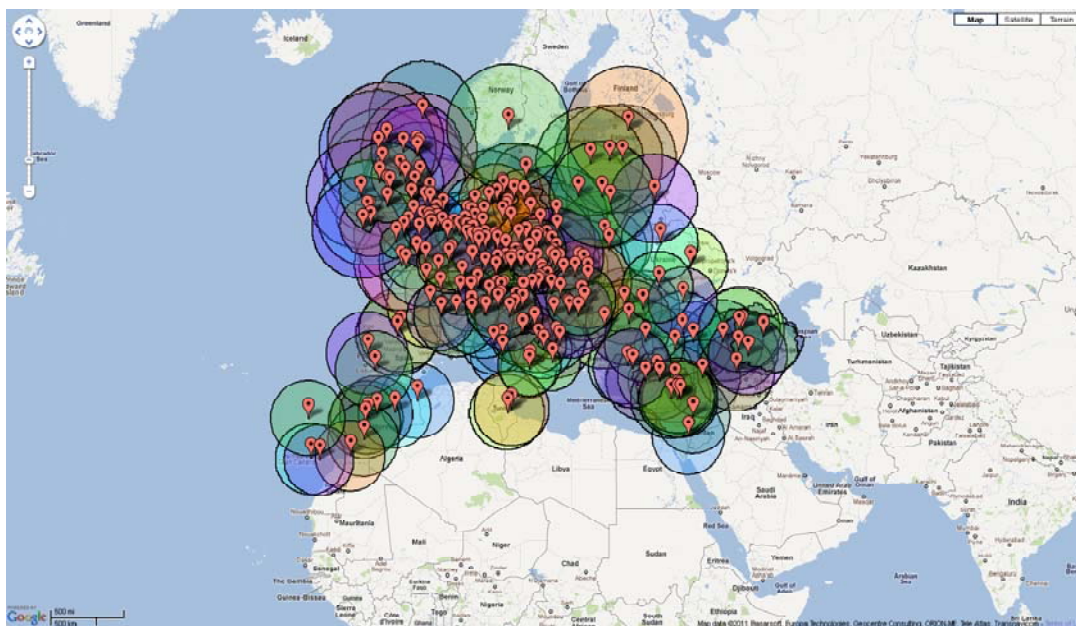


Figure 2: IC Allocation Status in European region at the end of MICA Cycle 13

Mode S radars are also installed in ICAO Middle East region. The operational coverage of some of these radars is overlapping coverages of Mode S radars installed in ICAO European Region. In order to avoid any Mode S Interrogator Code conflict with radar already operational in Mode S, it is therefore critical to coordinate the Mode S Interrogator Code Allocation in ICAO Middle East region in close cooperation with the ICAO Middle East regional office.

Until now, the allocation of Interrogator Codes to Mode S radars in ICAO MID region has been done on an ad-hoc basis.

At the end of MICA Cycle 13 (September 2011), 32 Mode S radars were allocated an II code in the Middle East region.

The Figure 3 here below depicts the IC Allocation Status in the Middle East region at the end of MICA Cycle 13.



Figure 3: IC Allocation Status in Middle East region at the end of MICA Cycle 13

The purpose of this document is then to lay down recommendations and requirements for an efficient support of the MICA cell to the allocation of IC by the ICAO MID office in the ICAO Middle East Region.

3. Mode S IC Allocation Process

The Mode S IC Allocation process applied in Europe and described hereafter will also be used for IC Allocation to Mode S radars in the Middle East ICAO region.

If, for some reasons, the Mode S IC Allocation process cannot directly be applicable to the ICAO Middle East region, then differences will be highlighted.

The MICA web is the main interface of the Mode S IC Allocation process. Register users can submit applications to get an IC for new Mode S radars, they can also retrieve the issued allocations. In addition, there is a conflict report mechanism to help Mode S operators to investigate potential Mode S conflicts. As a consequence, all Focal Points shall be registered on the MICA web. It is highly recommended for Mode S operators to also be registered in order to have direct access to their allocations and to be able to investigate quicker IC conflicts.

3.1 IC allocation cycle

The IC allocation to Mode S radars in Middle East region will be processed together with IC allocation to Mode S radars in European region during the same MICA cycles.

The Mode S IC Allocation cycles are based on AIRAC effective dates. MICA cycles are as follows:

- There are only two allocation effective dates per year (at 168 days intervals).
- Applications to request the allocation of an Interrogator Code must be received at least 168 days before the effective AIRAC date; that is before the requirements freeze date (see Figure 4 her below).
- Applications received after the requirements freeze date will not be processed until the next allocation cycle, unless they can be accommodated through the ad-hoc process.
- Draft allocation or change proposals are published by the MICA Cell, for review by the Focal Points, 140 days in advance of the corresponding effective date.
- The draft proposals publication is followed by a 28 days review period.
- The allocations are then published 98 days in advance of the effective date.
- Focal Points from affected states have 14 days to acknowledge the new allocation plan and to transmit allocation details to Mode S Operators as necessary.
- All changes implemented through the cyclic IC allocation process shall be completed before the cycle effective date. The effective date is the latest implementation date and will correspond with the requirements freeze date for the next allocation cycle.

Note: Other systems such as radar data processing systems may need to be updated concurrently during the implementation period, e.g. to reflect a possible change in radar coverage maps.

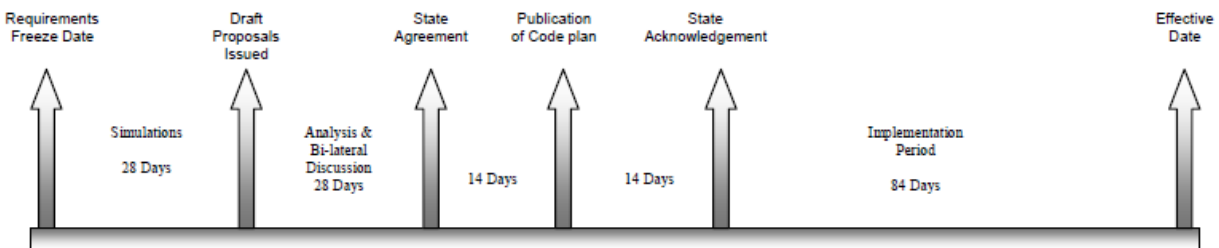


Figure 4: Mode S IC Allocation Cycle

3.2 Ad-hoc allocation process

The MICA Cell will deal with urgent applications on an ad-hoc basis, but will not guarantee an optimal allocation. In particular, no change will be made to the existing Mode S allocations during the ad-hoc process.

As no existing issued Mode S allocation can be impacted by the ad-hoc process, this process is faster than the Mode S IC Allocation cycle.

3.3 Applications

Requests for the allocation of a Mode S Interrogator Code have to be made by the Mode S Operators to the appropriate National Authority of the European Region which is empowered to issue, amend or revoke approvals to operate Mode S interrogators, or by a properly designated authority in the case of international organisations.

The ICAO Middle East Regional Officer CNS will act as the Focal Point for all Mode S Operators within the ICAO Middle East region. As a consequence, he will be responsible to collect applications from all Mode S Operators in ICAO Middle East region.

Applications shall be submitted at least 168 days before the target effective date to give adequate time to be processed by the MICA Cell and any difficulties to be resolved. Focal Points and Mode S Operators are advised to take the allocation period into consideration when developing implementation plans.

Applications for IC allocation should be submitted online on the MICA web by the Focal Point for European region.

Applications can also be submitted by the Mode S Operator on the MICA web. In that case, the applications shall be reviewed and acknowledged online by the responsible Focal Point.

Requests for IC allocation can still be submitted by the Focal Point by e-mail accompanied by the appropriate form which has been developed for that purpose. Nevertheless the online submission on the MICA web is preferred.

The operators must provide the necessary information to perform the IC allocation. An IC application shall include the following key items:

- a. Mode S interrogator name
- b. Mode S interrogator use (operational or test)
- c. Mode S interrogator position in Lat/Long (in degree, minute, seconds format)
- d. Mode S interrogator planned date of first Mode S transmission
- e. requested Mode S coverage
- f. SI code capability
- g. 'II/SI code operation' capability
- h. coverage map capability

In the application, the requested Mode S coverage, provided in range per sector, is defining the required operational coverage. A Mode S Operator can communicate additional specific operational requirements to the MICA Cell, through his Focal Point.

If the Mode S interrogator position is a sensitive information (e.g. military radars), that position can be approximate to the minute.

3.4 Allocation Simulations

During the Allocation Simulation period, the MICA Cell is creating allocation proposals for all applications under process in the current MICA cycle. Existing IC allocations may also be impacted.

The MICA Cell may need guidance from and coordination with Focal Points and/or Mode S Operators to complete its work. Focal Points and Mode S Operators points of contact should be available to provide assistance to the MICA Cell during the Allocation Simulation period, particularly if they submitted applications processed in the corresponding MICA cycle.

Points of contact of Mode S Operators who are not registered on the MICA web shall be explicitly provided by the responsible Focal Point.

3.5 Allocation Proposals

At the end of the simulations period, the MICA Cell issues IC allocation proposals. The proposals cover new allocations as well as existing allocation changes required to provide IC allocations to new Mode S interrogators.

All the allocation proposals are available online on the MICA web and can be accessed by all Focal Points. Allocation proposals for radars of a given organisation can also be accessed by Mode S operators from the same organisation.

3.6 Allocation Review

Focal Points have 28 days to review the allocation proposals. An acknowledgement is required from affected States only.

Each Focal Point has to accept or reject allocations proposed for Mode S radars installed or planned to be in the country under his responsibility. To fulfil that task, the Focal Points are responsible to check the acceptability of the allocation proposals with the corresponding Mode S Operators.

The ICAO Middle East Regional Officer will have to accept or reject all allocation proposals for Mode S radar installed or planned to be in the ICAO Middle East region. To fulfil that task, he will have to check the acceptability of the allocation proposals with the corresponding Mode S Operators.

The Focal Points should accept or reject allocation proposals directly on the MICA web. There is an Accept button and a Refuse button at the bottom of each Allocation Proposal.

In case an allocation proposal is refused, the following may happen:

- The MICA Cell produces an updated proposal within the initial 14 days of the review period; or
- As a last resort, the controversial proposals are withdrawn, to be processed in the next allocation cycle.

The Focal Points can also raise an objection for any other allocation proposal. In that case, a comment will have to be provided to explain the objection. In that case, the allocation proposal may be updated.

Given that the MICA Cell consults Focal Points and Mode S Operators during the simulations period, objections raised during the review period should be limited.

3.7 Allocation Publication

84 days before the effective date, the MICA Cell publishes official IC allocations.

All the issued IC allocations are available online on the MICA web.

The Focal Point is responsible to ensure that all Mode S Operators under his responsibility and impacted by the Mode S IC Allocation cycle are aware of the new issued allocations. In particular, he is responsible to deliver the IC allocation details to the Mode S Operators. It should be noted that Mode S operators registered on the MICA web have also access to IC allocations issued for their organisation.

The Focal Point has to acknowledge issued IC allocations under his responsibility directly on the MICA web. There is an Acknowledge button at the bottom of each issued IC allocation. By doing this action, the Focal Point confirms that Mode S Operators have been informed.

3.8 Output of the Allocation Process

The allocation activity of the MICA Cell is referred to as being the Interrogator Code allocation. However, an allocation is in fact granting the right to an interrogator to lockout on a given code over a given area. This implies that the output of the allocation process is not only a code, but also a matching coverage.

The coverage associated with the code allocation is defined in the allocation form on the MICA web and can be expressed as:

- A Mode S responsibility map (in the European Mode S Coverage Map ICD format); or
- A sectorised range around the radar position.

The MICA Cell allocates both lockout and surveillance coverage, the former always being inscribed within the latter.

The lockout coverage provided by the MICA Cell is reduced compared to the surveillance coverage. As the lockout timer of an aircraft takes 18 seconds to time-out, the purpose here is to ensure that an aircraft which was locked out by neighbouring radar on the same code is unlocked when entering the surveillance coverage of the next radar.

For a sectorised range around the radar position, the allocated lockout coverage is reduced by 5 NM, compared to the surveillance coverage. For a Mode S responsibility map, the lockout coverage is reduced by 1 cell, compared to the surveillance coverage.

NOTES: Mode S Operators are encouraged to support the use of European Mode S coverage maps. Lacking support for such maps will require the MICA Cell to allocate coverage expressed as sectorised ranges, which may result in less optimal overall coverage.

3.9 Allocation Changes

Existing allocations may be impacted by the MICA Cycle in order to provide IC allocations to new Mode S interrogators.

Interrogator Code and coverage maps changes need to be carefully coordinated in order to avoid potential conflicts.

The MICA Cell identifies all Mode S Operators and ATM systems impacted by a given change and inform their relevant Focal Points. In addition to the issued Allocations, MICA Cell provides an implementation sequence, which is the time-bounded sequence of implementation of Interrogator Code allocations with which Mode S Operators need to comply to avoid temporary interrogator code conflicts

The Focal Points are responsible to provide this implementation sequence to all impacted Mode S Operators. These Mode S Operators are then responsible for the organisation of the necessary coordination. The Mode S Operators are required to advise their Focal Point of the agreed arrangements in advance of implementation. MICA Cell should also be informed.

3.10 Discrete Code Allocation

3.10.1 II code and mobile radar

II Code 0 has been reserved by ICAO for operation without an assigned code. Mode S interrogators using II Code 0 in accordance with the ICAO Standards and Recommended Practices do not need to be subject to the coordinated allocation process.

Discrete code allocations are not made to mobile installations for which special modes of acquisition on II code 0 are used.

3.10.2 Cluster

Fixed operational interrogators are normally allocated a single Interrogator Code, unless they are operated in a cluster. In the latter case, a second IC may be allocated to the cluster for fallback modes of operation, and to test and integrate new cluster interrogators.

3.10.3 Test, Research and Development Mode S interrogators

Test systems are normally allocated a shared Interrogator Code (currently II 14). This may typically not be a conflict-free situation and Mode S targets acquisition cannot be guaranteed when several test systems operate concurrently. Mode S Operators of Mode S test systems who need to conduct temporary trials requiring a conflict free situation are responsible for the bilateral coordination with other Mode S Operators of Mode S test system.

However, applications for IC Allocation to test systems still need to be done according to the agreed IC Allocation Process.

Operation on any other code without prior coordination and allocation is prohibited as it could severely interfere with other Mode S surveillance systems and consequently impact civil and military ATC and AD operations.

Mode S IC Allocations to test systems on II code 14 and Mode S Operators point of contacts are available on the MICA web.

3.10.4 Specific code for specific military operations

II code 15 is currently reserved in Europe for NATO management. It is not available for allocation as part of the process run by Eurocontrol. SI codes matching II code 15 (SI 15, SI 31, SI 47 and SI 63) are not reserved for NATO but are currently not used either for allocation.

Discussions are ongoing about the possibility to reserve SI codes matching II code 15 for military use. The management of these codes would be done by NATO.

Mode S interrogators affected by the discussion are exclusively the non-fixed, deployable military installations.

Fixed military radars are still eligible to get a discrete Interrogator Code following the normal Mode S IC Allocation process.

ICAO Middle East regional office has to decide how to use II code 15.

Note: there is currently discussion to reserve II code 15 for military application everywhere in the world.

ICAO Middle East regional office has to decide how to use SI codes matching II code 15.

3.11 Dispute Resolution

Dispute may happen during the Mode S IC Allocation process. Discussions with the impacted Mode S operator(s) and the responsible Focal Point(s) may be sufficient to find a solution.

If no solution is found, a final arbiter to unresolved dispute is required.

The ICAO Middle East regional officer is responsible to manage disputes inside the ICAO Middle East region.

Final arbiter has to be identified to resolve disputes that could occur between countries of ICAO European region and ICAO Middle East region.

3.12 MCoG working arrangement

MCoG working arrangement has been created to oversee the allocation process and provide guidance to the MICA Cell. MCoG members are the Focal Points representing the National Regulatory Authorities of European States and those international organisations applying for Interrogator Codes.

As Focal Point for all countries in ICAO Middle East region, the ICAO Middle East regional officer is invited to be a MCoG member and to attend MCoG meetings (twice a year).

ICAO Middle East regional office should determine the necessity to meet Middle East Mode S operators at regular interval to discuss about technical problems and other topics related to Mode S radar installation in ICAO Middle East region. The MICA cell would not participate to Middle East Mode S operators meetings.

The ICAO Middle East regional officer could submit problems encountered in ICAO Middle East region during the MCoG meeting.

4. Role and Responsibilities for IC allocation in ICAO Middle East Region

4.1 Requirements for Mode S Operators in ICAO Middle East Region

1. 'Mode S Operator' means a person, organisation or enterprise operating or offering to operate a Mode S interrogator, including:
 - a. air navigation service providers
 - b. Mode S interrogators manufacturers
 - c. airport operators
 - d. military units operating Mode S interrogators on any other interrogator code than II code 0
 - e. research establishments
 - f. any other entity entitled to operate a Mode S interrogator

2. Mode S Operators should be registered on the MICA web.

3. Mode S Operators shall only operate an eligible Mode S interrogator, using an eligible Interrogator Code, if they have received an Interrogator Code allocation, for this purpose, from the ICAO Middle East regional office.

4. All Mode S Operators intending to operate, or operating, an eligible Mode S interrogator for which no Interrogator Code allocation has been provided shall submit an Interrogator Code application to the ICAO Middle East regional office. **Except if using II=0 mobile interrogators**

An IC application shall include the following key items:

- a. Mode S interrogator name
- b. Mode S interrogator use (operational or test)
- c. Mode S interrogator position in Lat/Long (in degree, minute, seconds format); if the radar position is a sensitive information (e.g. military radars), the position can be approximate to the minute
- d. Mode S interrogator planned date of first Mode S transmission;
- e. requested Mode S coverage
- f. SI code capability
- g. 'II/SI code operation' capability
- h. coverage map capability

Discrete code allocations are not made to mobile installations for which special modes of acquisition on II code 0 are used.

Interrogator Code 0 has been reserved by ICAO for operation without an assigned code. Mode S interrogators using Interrogator Code 0 in accordance with the ICAO Standards and Recommended Practices do not need to be subject to the coordinated allocation process.

The use of II Code 0 can be approved at National Regulatory level.

Mode S applications could be submitted directly on the MICA web by registered Mode S

Operators; or will have to be submitted by e-mail to the ICAO MID Focal Point accompanied by the appropriate application form which has been developed for the purpose.

5. Mode S Operators shall comply with the key items of the Interrogator Code allocations they receive.

Mode S IC allocations could be retrieved directly from the MICA web by registered Mode S Operators; or will have to be provided by the ICAO MID Focal Point to the Mode S Operators by e-mail.

6. Mode S Operators shall ensure that each of their Mode S interrogators uses exclusively its allocated Interrogator Code, its allocated surveillance coverage and its allocated lockout coverage.
7. Coordination with other Mode S Operators may be required prior to implement the latest issued allocation in Mode S radars in order to avoid potential conflicts. The Mode S Operators shall organize the necessary coordination in collaboration with the ICAO MID Focal Point.

The MICA Cell will identify all Mode S Operators and ATM systems impacted by a given change and will provide to the ICAO MID Focal Point the implementation sequence to follow. The ICAO MID Focal Point will be responsible to provide this implementation sequence to all impacted Mode S Operators. These Mode S Operators will then be responsible for the organisation of the necessary coordination. The Mode S Operators will be required to advise the ICAO MID Focal Point of the agreed arrangements in advance of implementation. MICA Cell should also been informed.

8. Mode S Operators should provide a point of contact in case of conflict.
9. Mode S Operators should restrict transmitter power to the minimum necessary to meet the operational requirement, within the technical constraints of the interrogator.

4.2 Requirements for the ICAO Middle East Regional Office

1. The ICAO Middle East Regional Officer will be the Mode S IC Allocation Focal Point for all countries in ICAO Middle East region.
2. ICAO Middle East regional office shall be responsible to coordinate and manage Mode S IC Allocation both for civil and military in ICAO Middle East region.
3. The ICAO MID Focal Point shall be responsible for the coordination of all matters concerning the IC allocations between the MICA Cell and the Mode S Operators in ICAO Middle East region.
4. The ICAO Middle East regional office shall be responsible to identify which Mode S Operators from ICAO MID Region to register on the MICA web application. Requests coming directly from Mode S Operators won't be accepted if they are not fully supported by the ICAO MID Regional Officer.
5. The ICAO Middle East regional office shall collect the IC applications for all countries in the ICAO Middle East region.

The ICAO MID Focal Point will have to collect application forms received by e-mail.

This point is not relevant if the application has been directly created on the MICA web by the Mode S Operator.

6. The ICAO Middle East regional office shall check the validity of Interrogator Code applications received from Mode S Operators, before making them available to the MICA cell.

The ICAO MID Focal Point will have to review applications received from Mode S Operators and verify that all contained information is correct. In case of mistake, the ICAO MID Focal

Point will have to contact the responsible Mode S Operator to correct them.

Once the application has been verified and is correct:

- If the application has been created on the MICA web by Mode S operator, then this application has to be acknowledged by the ICAO MID Focal Point*
- If the application has been provided by e-mail (application form), then the Focal Point can either enter this application on the MICA web or forward this application form to the MICA Cell.*

No applications for Mode S radars in MID region will be processed without approval of the ICAO MID Focal Point.

7. Changes in the interrogator code allocation plan shall be subject to the approval of the ICAO Middle East regional office when countries of ICAO Middle East region are affected by the update of the plan.

Allocation proposals will have to be reviewed by the ICAO MID Focal Point during the review period of the MICA Cycle. In particular, the ICAO MID Focal Point will have to check the acceptability of the allocation proposed for Mode S radars installed or planned to be in ICAO Middle East region with the concerned Mode S Operators. Then he will have to accept or reject these allocation proposals on the MICA web.

8. ICAO Middle East regional office shall ensure that interrogator code allocation changes resulting from an update to the interrogator code allocation plan are communicated to the relevant Mode S Operators under their authority within 14 calendar days of the reception of the updated allocation plan.

In particular, the ICAO MID Focal Point shall deliver the issued allocation details to the concerned Mode S Operators.

The ICAO MID Focal Point can retrieve issued allocations from the MICA web. It should be noted that Mode S operators registered on the MICA web have also access to IC allocations issued for their organisation.

9. Coordination with other Mode S Operators may be required prior to implement the latest issued allocation in the radar in order to avoid potential conflicts. The Focal Point shall inform impacted Mode S Operators and supervise coordination between them.

The MICA Cell will identify all Mode S Operators and ATM systems impacted by a given change and will provide to the ICAO MID Focal Point the implementation sequence to follow. The ICAO MID Focal Point will be responsible to provide this implementation sequence to all impacted Mode S Operators. These Mode S Operators will then be responsible for the organisation of the necessary coordination. The Mode S Operators will be required to advise the ICAO MID Focal Point of the agreed arrangements in advance of implementation. It will also be desirable to inform the MICA Cell.

10. Where an overlap exists between the coverage of a Mode S interrogator located within the area of responsibility of the ICAO Middle East regional office and the coverage of a Mode S interrogator located within the area of responsibility of a third country, the ICAO Middle East regional office shall:

- a. ensure that the third country is informed of the safety requirements related to the allocation and use of interrogator codes;
- b. take the necessary measures to coordinate the use of interrogator codes with the third country.

11. ICAO Middle East regional office shall take the necessary measures to ensure that military units operating eligible Mode S interrogators on any other interrogator code than II code 0 comply with the Requirements for Mode S Operators in ICAO Middle East Region and the Requirements related to IC Conflict.

12. ICAO mid office shall manage dispute which occur inside the ICAO Middle East region.

4.3 Requirements related to IC Conflict

1. Air traffic service providers should assess the possible impact on air traffic services of Interrogator Code conflicts, and the corresponding potential loss of Mode S target surveillance data from the impacted Mode S interrogators, taking into account their operational requirements and available redundancy.
2. Mode S Operators and air traffic service providers should take appropriate measures to detect and mitigate the effect of possible interrogator codes conflicts.
3. Mode S Operators shall report any identified Interrogator Code conflict involving an eligible Mode S interrogator they operate on any operational Interrogator Code to the ICAO MID Focal Point and the MICA Cell.
4. Mode S Operators which are registered on the MICA web will have to make available the information related to the conflict to the other Mode S Operators through the conflict report part of the MICA web.
5. For Mode S Operators who are not registered, the ICAO MID Focal Point will be responsible to submit this information and Mode S Operators contact details on the conflict report part of the MICA web.
6. The ICAO MID Focal Point shall be responsible to inform all Mode S Operators from the Middle East region about the interrogator code conflict.

5. Guidance for IC allocation in ICAO Middle East Region

5.1 Mode S Radars Performances

5.1.1 SI code capability

It is recommended for Mode S Interrogators to support SI code capability.

Initially, for technical reasons, only Interrogator Identifier codes (II codes) 1 to 15 were defined and allocated as Interrogator Codes in the European region. Due to the expected number of Mode S interrogators, measures were later taken to allow the use of additional Surveillance Identifier codes (SI codes) 1 to 63.

Only SI code capable Mode S target will be correctly detected by Mode S station operating on SI code. ICAO annex 10 requires all Mode S transponder to be SI code capable however the experience shows that there are still old versions of Mode S transponder flying without the SI code capability.

5.1.2 II/SI code operation

It is recommended for Mode S Interrogators to support II/SI code operation.

Normally, the use of SI codes requires that all Mode S targets within the coverage of Mode S interrogators are equipped for this purpose. However, specifications were developed by Eurocontrol for an II/SI code operation which enables the early use of SI codes by Mode S interrogators even in an environment where all Mode S targets are not equipped for the use of SI codes.

Mode S interrogator which operates on an SI code with II/SI code operation enabled will detect correctly both SI capable and II only capable Mode S targets.

For more information, please refer to Annex A.

5.1.2.1 II/SI code operation in ICAO Middle East region

Even if the current number of Mode S radars installed in ICAO Middle East region is not as important as in the European region, there is no guarantee that allocating II code only to Mode S radar in the ICAO Middle East region will remain possible in the future.

Without any regulation to support SI code allocation (on Mode S radars to support SI code and II/SI code operation), it may not be possible to keep on allocating Interrogator Code to Mode S radars in the future, preventing them to operate in Mode S.

5.1.2.2 II/SI code operation in the European Union

In order to facilitate and support the use of SI code in European Union, requirements on SI code and II/SI code support capabilities have been lay down in article 3 of COMMISSION REGULATION (EC) No 262/2009:

*Article 3****Interoperability and performance requirements:***

Mode S operators shall ensure that the radar head electronics constituent of their Mode S interrogators using an operational interrogator code:

1. support the use of SI codes and II codes in compliance with the International Civil Aviation Organisation provisions¹
2. support the use of II/SI code operation in compliance with the requirements specified in Annex A

5.1.3 Mode S Coverage

Several formats exist to define the Mode S coverage:

- Mode S responsibility map (in European Mode S Coverage Map ICD format²).
 - o This map format has been developed by Eurocontrol in the frame of POEMS contract³. System Maps are geodesic maps (latitude/longitude) sub-divided into horizontal cells from approx. 5NM by 5NM (latitude of Paris) and an associated vertical extent.
 - o When supported by the Mode S interrogator, the coverage allocated during the Mode S IC Allocation Cycle is provided in this format.
- Sectorized Range
 - o The circular coverage is divided into sectors (by default 32 sectors). Surveillance and Lockout ranges are provided per sector.
 - o When coverage map in EMS Map ICD format is not supported by the interrogator, then surveillance and lockout coverage allocated to the radar are provided in this format.
- Global Range for the circular coverage.
 - o One unique surveillance range and one unique lockout range are provided for the circular coverage.
 - o When none of the both formats here above are supported, then this format is used.

Mode S Operators are encouraged to support the use of European Mode S coverage maps.

As these coverage maps are all aligned on the same common origin and have the same cell size, coverage maps can be joint without overlapping which is optimal in term of allocation volume and RF band usage (as there may be no gap between coverage of neighboring Mode S interrogators on the same Interrogator Code, aircraft lockout is optimized).

The second solution is less optimal as there will be gap between allocated coverage. Nevertheless to use range per sector is better than to apply the same range to the circular coverage (Third solution).

Concerning the third solution, the minimum range not to overlap neighboring Mode S interrogators on the same IC will be used as the circular range.

¹ Chapter 3 'Surveillance radar systems', Section 3.1.2.5.2.1.2 'IC: Interrogator code' of ICAO Annex 10 'Aeronautical Telecommunications', Volume IV 'Surveillance Radar and Collision Avoidance Systems' (Third Edition, July 2002, incorporating Amendment 77).

² European Mode S Station Coverage Map Interface Control Document, Edition 1.16

³ European Mode S Station Functional Specification, Edition 3.11

5.2 Requirements for airborne carriage

It is required for Mode S targets to support SI code capability.

In ICAO Annex 10 Vol. IV - §2.1.5.1.7.1: "SI code capability shall be provided in accordance with the provisions of 2.1.5.1.7 for all Mode S transponders installed on or after 1 January 2003 and by all Mode S transponders by 1 January 2005."

Airspace regulation should enforce the carriage of Mode S transponder capable to support SI capability as defined in ICAO Annex 10 Vol. IV.

Middle East ICAO office should verify and ensure the correct transponder capability in order to allow the use of SI codes in the ICAO MID region.

It is already possible to start using SI code without having 100% of the fleet SI capable. However in this case Mode S ground stations shall have the II/SI code operation capability as described in §5.1.2 in order to acquire aircraft which are not SI capable.

When using II/SI code operation, it is recommended not to lock aircrafts which are not SI cable. Depending on number of aircrafts which are not SI capable, the II/SI code operation may increase the RF pollution. In addition, there could be cases where the aircraft transponder is not working as expected.

ANNEX A – II/SI code operation

1. Mode S interrogators, when operating with an SI code and if enabled by an appropriate operational parameter, shall also acquire targets through all call replies which are encoded using the matching II code.
2. Mode S interrogators, when operating with an SI code and if enabled by an appropriate operational parameter, shall consider transponders replying with all call replies encoded using the matching II code as non-SI equipped transponders, irrespective of the SI capability reported in the data link capability report defined in the document referred to in Annex II point 2.
3. Mode S interrogators, when operating with an SI code and if enabled by an appropriate operational parameter, shall interrogate transponders lacking SI code capability using the Mode S multisite lockout protocol messages foreseen for II code operation. The II code to be used shall be the matching II code.
4. Mode S interrogators, when operating with an SI code and if enabled by an appropriate operational parameter, shall be configurable by the operator to either:
 - o not use lockout on the matching II code for transponders lacking SI code capability, or
 - o use intermittent lockout on the matching II code for transponders lacking SI code capability.
5. Mode S interrogators, when operating with an II code and if enabled by an appropriate operational parameter, shall be configurable by the operator to either:
 - o not use lockout for transponders which report no SI capability in their data link capability report or cannot report their data link capability, or
 - o use intermittent lockout for transponders which report no SI capability in their data link capability report or cannot report their data link capability.
6. When the II/SI code operation is activated, the lockout maps shall not be taken into account for transponders lacking SI code capability.

MIDANPIRG/13
Appendix 4.5P to the Report on Agenda Item 4.5

MID REGION SURVEILLANCE STRATEGY

- Share experience and trial results in new surveillance technologies;
- Minimize reliance on position reporting, particularly voice reporting & Primary Radar;
- Maximize contiguous coverage and use of ADS-B on major routes/terminal areas;
- Make full use of SSR Mode 'S' capabilities, reduce reliance on 4 digit octal code;
- Make use of ADS-C when ADS-B, SSR or multilateration not supported;
- Encourage Multilateration for surface, terminal & area surveillance;
- Improve safety through sharing ATS surveillance data across FIR boundaries;
- Broaden scope of cooperation between ANSPs and Stakeholders;
- Acknowledge the development of other Regions and should consider incremental introduction of new surveillance technologies;
- Increase use of Aircraft Derived Data; and
- The MID Region ADS-B implementation times line set for 2017.

**MID REGION STRATEGY FOR THE IMPLEMENTATION OF AUTOMATIC
DEPENDENT SURVEILLANCE-BROADCAST (ADS-B)**

Considering the:

- a) ICAO strategic objectives;
- b) ICAO Business Plan;
- c) Global Air Traffic Management Operational Concept;
- d) revised Global Air Navigation Plan and associated GPIs; and
- e) outcome of the 11th Air Navigation Conference.

Recognizing that:

- i) the implementation of data-link surveillance technologies is an evolutionary process, but which has significant potential for safety and cost-effectiveness; and
- ii) implementation of ADS-B is in support of various Global Plan Initiatives;

The MID Region strategy for the implementation of ADS-B is detailed below:

- A) the MID Region ADS-B implementation plan should:
 - 1) be evolutionary and consistent with the Global Air Navigation Plan taking into consideration associated MID Region priorities;
 - 2) when cost/benefit models warrant it, prioritize implementation in areas where there is no radar coverage surveillance, followed by areas where implementation would otherwise bring capacity and operational efficiencies;
 - 3) ensure that implementation of ADS-B is harmonized, compatible and interoperable with respect to operational procedures, supporting data link and ATM applications;
 - 4) identify sub-regional areas where the implementation of ADS-B would result in a positive cost/benefit in the near term, while taking into account overall Regional developments and implementation of ADS-B in adjacent homogeneous ATM areas;
 - 5) be implemented following successful trial programmes with regards to safety and operational feasibility, taking into account studies and implementation experiences from other ICAO Regions;
 - 6) be implemented in close collaboration with users;
 - 7) The proportions of equipped aircrafts are also critical for the ADS-B deployment, for which it is required to periodically provide, at least, the following information: number of equipped aircrafts operating in the concern airspace, number and name of the airlines that have equipped aircrafts for ADS-B, type of equipped aircrafts, categorization of the accuracy/integrity data available in the aircrafts;

- 8) The ADS-B deployment should be associated at early stages in coordination with the States/Regional/International Organizations responsible for the control of adjacent areas, and the correspondent ICAO Regional Office, establishing a plan in the potential areas of ADS-B data sharing, aimed at a coordinated, harmonious and interoperable implementation;
 - 9) Each State/Regional/International Organization should investigate and report their own Administration's policy in respect to the ADS-B data sharing with their neighbours and from cooperative goals;
 - 10) The ADS-B data sharing plan should be based selecting centres by pairs and analyzing the benefits and formulating proposals for the ADS-B use for each pair of centre/city with the purpose to improve the surveillance capacity;
 - 11) Likewise, it is necessary to consider implementing surveillance solutions for surface movement control by the implementation of ADS-B; and
 - 12) The implementation would be in conformity with the SARPs, ICAO guidelines and the MIDANPIRG conclusions and according to MID Surveillance Strategy where the time line for implementation is set for 2017.
- B) The implementation would require aircraft equipped with avionics compliant with either:
- i) Version 0 ES as specified in Annex 10, volume IV, Chapter 3, paragraph 3.1.2.8.6 (up to and including amendment 83 to annex 10) and chapter 2 of draft technical Provisions for Mode S services and extended Squitter (ICAO Doc 9871) to be used till at least 2020, or
 - ii) Version 1 ES as specified in chapter 3 draft Technical Provisions for Mode S Services and Extended Squitter (ICAO Doc 9871) Equivalent to DO260A.
- C) Implementation should be monitored to ensure collaborative development and alignment with the MID Region projects and relevant elements of the GPIs.
-

REVISED STRATEGY FOR THE IMPLEMENTATION OF GNSS IN THE MID REGION

The following is the Strategy for the implementation of GNSS aligned with PBN in the MID Region:

Considering that:

- a) Safety is the highest priority.
- b) Elements of Global Air Navigation Plan on GNSS and requirements for the GNSS implementation will be incorporated into the CNS part of FASID.
- c) GNSS Standards and Recommended Practices (SARPs), PANS and guidance material for GNSS implementation are available.
- d) Human, environmental and economic factors will affect the implementation.
- e) The availability of avionics, their capabilities and the level of user equipage.
- f) The development of GNSS systems including satellite constellations, augmentation systems and improvement in system performance.
- g) The airworthiness and operational approvals allowing the current GNSS applied for en-route and non-precision approach phases of flight without the need for augmentation services external to the aircraft.
- h) The effects of ionosphere on GNSS and availability of mitigation techniques;
- i) The PBN concept and the availability of PBN guidance material
- j) The monitoring of the GNSS signal according to ICAO Document 9849 (GNSS Manual) and other related ICAO documents
- k) States pay fair cost for GNSS to service providers (according to ICAO provisional policy guidance on GNSS cost allocation)

The general strategy for the implementation of GNSS in the MID Region is detailed below:

- 1) Introduction of GNSS Navigation Capability should be consistent with the Global Air Navigation Plan.
- 2) Implementation of GNSS and Augmentations should be in full compliance with ICAO Standards and Recommended Practices and PANS.
- 3) Assessment of the extent to which the GNSS system accessible in the Region can meet the navigational requirements of ATM service providers and aircraft operators in the Region.
- 4) Introduce the use of GNSS with appropriate augmentation systems, as required, for en-route navigation and Implementation of approach procedures with vertical guidance (Baro-VNAV and/or augmented GNSS), including LNAV only minima, for all instrument runway ends, either as the primary approach or as a back-up for precision approaches by 2016 with intermediate milestones as follows: 30 per cent by 2010, 70 per cent by 2014 as per 37th ICAO General Assembly resolutions 37-11 and according to Regional PBN Implementation Plan.

- 5) States, in their planning and introduction of GNSS services, take full advantage of future benefits accrued from using independent core satellite constellations, other GNSS elements and their combinations, and avoid limitations on the use of specific system elements.
- 6) Facilitate the use of GNSS; as enabler for PBN for en-route, terminal, approach and departure navigation. States should coordinate to ensure that harmonized separation standards and procedures are developed and introduced concurrently in adjacent flight information regions along major traffic flows to allow for a seamless transition to GNSS based navigation.
- 7) States should to the extent possible work co-operatively on a multinational basis under ICAO MID Office guidance to implement GNSS in order to facilitate seamless and inter-operable systems and undertake coordinated R&D programmes on GNSS implementation and operation.
- 8) States consider segregating traffic according to navigation capability and granting preferred routes to aircraft that are appropriately equipped for PBN to realize the benefits of such equipage taking due consideration of the need of State aircraft.
- 9) ICAO and States should undertake education and training programs to provide necessary knowledge in AIM, PBN, GNSS, Augmentation systems and operational application.
- 10) States establish multidisciplinary GNSS implementation teams, using section 5.2.2 and Appendix C of ICAO Document 9849, GNSS Manual.
- 11) States, in their planning for implementation of GNSS services, provide effective spectrum management and protection of GNSS frequencies to reduce the possibility of unintentional interference.
- 12) During transition to GNSS, sufficient ground infrastructure for current navigation systems must remain available. Before existing ground infrastructure is considered for removal, users should be given reasonable transition time to allow them to equip accordingly.
- 13) States should approach removal of existing ground infrastructure with caution to ensure that safety is not compromised, such as by performance of safety assessment, consultation with users through regional air navigation planning and plan for complete decommissioning of NDBs by 2012.
- 14) Implement GNSS with augmentation as required for APV where operationally required in accordance with the MID Regional and National PBN Implementation plans.
- 15) States continue their efforts to implement GNSS applications for en-route, APV and TMA operations. Attention should be accorded to meeting all GNSS implementation requirements, including establishment of GNSS legislation, regulatory framework, and approval procedure.

Notes:

GNSS (and ABAS using RAIM in particular) is available on a worldwide basis, not much needs to be done in terms of infrastructure assessment. Nonetheless, the responsibility for providing services based on GNSS within the airspace of a particular State remains within that State.

A decision on whether or not to develop a status monitoring and NOTAM system for ABAS operations should be made by taking into account the nature of PBN approvals. In many cases ABAS operations are predicated on having a full complement of traditional NAVAIDs available for back-up when ABAS cannot support service.

MIDANPIRG/13
Appendix 4.5S to the Report on Agenda Item 4.5

GNSS ASSESSMENT SURVEY

The following GNSS survey has been developed by ICAO to assess the Regional (Global) level of GNSS implementation and to determine the role that States would like ICAO to assume

Please return the completed survey to icaomid@cairo.icao.int before 1 September 2012

State Name:

Contact Name:

Contact email:

- 1) Has your State developed a plan to implement GNSS -- ☐Yes ☐No
- 2) Was the GNSS Manual (Doc 9849) used as a reference when considering the implementation of GNSS ☐Yes ☐No
- 3) Has the basic GNSS regulation been promulgated in your State -- ☐Yes ☐No
- 4) a-Has your administration received requests from domestic aircraft operators to provide GNSS-based services -- ☐Yes ☐No

b-Has your administration received requests from international aircraft operators to provide GNSS-based services -- ☐Yes ☐No
- 5) What is the level of WGS – 84 survey completion in your State
 - a. For Waypoints -- _____%
 - b. For Airports -- _____%
- 6) What percentage of aircraft are equipped with GNSS avionics _____%
- 7) a- What is the number of runways in your State that meet instrument standards but do not have an instrument approach _____

b- What is the number of runways in your State that are only served by a circling procedure
- 8) In your State, how many PBN approach procedures are promulgated based on
 - a. GNSS -- _____
 - b. Conventional navigation-aids _____
- 9) How many ILS systems are equipped with marker beacons only (no DME) for aircraft to perform altitude/distance cross checks? _____

10) Do you allow the use of FMS GPS based computed distance checks? -- ☐Yes ☐No

11) Does your State plan to implement ADS-B -- ☐Yes When _____ ☐No

12) Does your State plan to implement Multilateration -- ☐Yes When _____ ☐No

13) What is the Status of the following systems in your State

a. ADS-C -- Equipped ☐Yes ☐No Operational ☐Yes ☐No

b. CPDLC -- Equipped ☐Yes ☐No Operational ☐Yes ☐No

.....

14) Does your State have any plans to implement augmentation systems

a. SBAS -- ☐Yes When _____ ☐No

b. GBAS -- ☐Yes When _____ ☐No

15) What role would your State like ICAO to assume in your GNSS Programme

16) Any comments

MID REGIONAL PERFORMANCE-BASED NAVIGATION IMPLEMENTATION STRATEGY AND PLAN

1. EXECUTIVE SUMMARY

1.1 The MID Regional Performance Based Navigation (PBN) Implementation Strategy and Plan has been produced in line with Resolution A 36/23 adopted by ICAO Assembly in its 36th Session held in September 2007.

1.2 This version of the MID Regional PBN implementation strategy and plan include the modification of assembly resolution A36/23 by the 37th assembly which is now A37-11. The modification of resolution A36/23 by A 37/11 means that even for those runways that are not served with APV aircraft there has to be at least a GNSS procedure with LNAV only. The Regional Plan addresses the strategic objectives of PBN implementation based on clearly established operational requirements, avoiding equipage of multiple on-board or ground based equipment, avoidance of multiple airworthiness and operational approvals and explains in detail contents relating to potential navigation applications.

1.3 The plan envisages pre- and post-implementation safety assessments and continued availability of conventional air navigation procedures during transition. The plan discusses issues related to implementation which include traffic forecasts, aircraft fleet readiness, adequacy of ground-based CNS infrastructure etc. Implementation targets for various categories of airspace for the short term (2008 – 2012) and for the medium term (2013 – 2016) have been projected in tabular forms to facilitate easy reference. For the long term (2016 and beyond) it has been envisaged that GNSS will be the primary navigation infrastructure. It is also envisaged that precision approach capability using GNSS and its augmentation system will become available in the long term.

2. EXPLANATION OF TERMS

2.1 The drafting and explanation of this document is based on the understanding of some particular terms and expressions that are described below:

2.1.1 **MID Regional PBN Implementation Strategy and Plan** - A document offering appropriate guidance for air navigation service providers, airspace operators and users, regulating agencies, and international organizations, on the evolution of navigation, as one of the key systems supporting air traffic management, and which describes the RNAV and RNP navigation applications that should be implemented in the short, medium and long term in the MID Region.

2.1.2 **Performance Based Navigation** - Performance based navigation specifies RNAV and RNP system performance requirements for aircraft operating along an ATS route, on an instrument approach procedure or in an airspace.

2.1.3 **Performance requirements** - Performance requirements are defined in terms of accuracy, integrity, continuity, availability and functionality needed for the proposed operation in the context of a particular airspace concept. Performance requirements are identified in navigation specifications which also identify which navigation sensors and equipment may be used to meet the performance requirement.

3. ACRONYMS

3.1 The acronyms used in this document along with their expansions are given in the following List:

AACO	Arab Air Carrier Association
ABAS	Aircraft-Based Augmentation System
ACAC	Arab Civil aviation Commission
AIS	Aeronautical Information System
APAC	Asia and Pacific Regions
APCH	Approach
APV	Approach Procedures with Vertical Guidance
ATC	Air Traffic Control
Baro VNAV	Barometric Vertical Navigation
CDO	Continuous Decent Operations
CNS/ATM	Communication Navigation Surveillance/Air Traffic Management
CPDLC	Controller Pilot Data Link Communications
DME	Distance Measuring Equipment
FASID	Facilities and Services Implementation Document
FIR	Flight Information Region
FMS	Flight Management System
GBAS	Ground-Based Augmentation System
GNSS	Global Navigation Satellite System
GLS	GBAS Landing System
IATA	International Air Transport Association
IFALPA	International Federation of Air Line Pilots' Associations
IFATCA	International Federation of Air Traffic Controllers' Associations
IFF	Identification Friend or Foe
INS	Inertial Navigation System
IRU	Inertial Reference Unit
MIDANPIRG	Middle East Air Navigation Planning and Implementation Regional Group
MID RMA	Middle East Regional Monitoring Agency
MLAT	Multilateration
PANS	Procedures for Air Navigation Services
PBN	Performance Based Navigation
PIRG	Planning and Implementation Regional Group
RCP	Required Communication Performance
RNAV	Area Navigation
RNP	Required Navigation Performance
SARP	Standards and Recommended Practices
SBAS	Satellite-Based Augmentation System
SID	Standard Instrument Departure
STAR	Standard Instrument Arrival
TMA	Terminal Control Area
VOR	VHF Omni-directional Radio-range
WGS	World Geodetic System

4. INTRODUCTION

Need for the roadmap

4.1 The Performance Based Navigation (PBN) concept specifies aircraft RNAV system performance requirements in terms of accuracy, integrity, availability, continuity and functionality needed for the proposed operations in the context of a particular airspace concept, when supported by the appropriate navigation infrastructure. In this context, the PBN concept represents a shift from sensor-based to performance –based navigation.

4.2 The implementation of RVSM on 27 NOV 2003 in the MID Region brought significant airspace and operational benefits to the Region. However, the realization of new benefits from RVSM have reached a point of diminishing returns. The main tool for optimizing the airspace structure is the implementation of PBN, which will foster the necessary conditions for the utilization of RNAV and RNP capabilities by a significant portion of airspace users in the MID region.

4.3 In view of the need for detailed navigation planning, it was deemed advisable to prepare a PBN Roadmap to provide proper guidance to air navigation service providers, airspace operators and user, regulating agencies, and international organization, on the evolution of performance base navigation, as one of the key systems supporting air traffic management, which describes the RNAV and RNP navigation applications that should be implemented in the short and medium term in the MID Region.

4.4 Furthermore, the MID PBN roadmap will be the basic material for the development of a boarder MID air navigation strategy, which will serve as guidance for regional projects for the implementation of air navigation infrastructure, such as SBAS, GBAS, GLS etc., as well as for the development of national implementation plans.

4.5 The PBN Manual (Doc 9613) provides guidance on RNAV/RNP navigation specifications and encompasses two types of approvals: airworthiness, exclusively relating to the approval of aircraft, and operational, dealing with the operational aspects of the operator. RNAV/RNP approval will be granted to operators that comply with these two types of approval.

4.6 After the implementation of PBN as part of the airspace concept, the total system needs to be monitored to ensure that safety of the system is maintained. A system safety assessment shall be conducted during and after implementation and evidence collected to ensure that the safety of the system is assured.

Benefits of Performance-Based Navigation

- a) Reduces need to maintain sensor- specific routes and procedures, and their associated costs.
- b) Avoids need for development of sensor- specific operations with each new evolution of navigation systems; the present requirement of developing procedures with each new introduction is often very costly.
- c) Allows more efficient use of airspace (route placement, fuel efficiency, noise abatement).
- d) In true harmony with the way in which RNAV systems are used.
- e) Facilitates the operational approval process for operators by providing a limited set of navigation specification intended for global use.

- f) Improved airport and airspace arrival paths in all weather conditions, and the possibility of meeting critical obstacle clearance and environmental requirements through the application of optimized RNAV or RNP paths.
- g) Reduced delays in high-density airspaces and airports through the implementation of additional parallel routes and additional arrival and departure points in terminal areas.
- h) For the pilots, the main advantage of using this system is that the navigation function is performed by highly accurate and sophisticated onboard equipment and thus allowing reduction in cockpit workload, with increase in safety.
- i) For Air Traffic Controllers, the main advantage of aircraft using a RNAV system is that ATS routes can be straightened as it is not necessary for the routes to pass over locations marked by conventional NAVAIDS.
- j) RNAV based arrival and departure routes can complement and even replace radar vectoring, thereby reducing approach and departure controllers' workload.
- k) Increase of predictability of the flight path.

Goals and Objectives of PBN Implementation

4.7 The MIDANPIRG/11 meeting required that PBN be implemented in a strategic manner in the MID Region and accordingly established the PBN/GNSS Task Force which, *inter alia*, was required to follow up developments related to PBN and develop an implementation strategy. The 36th Session of ICAO Assembly adopted Resolution A36-23: *Performance based navigation global goals*, which, amongst others, highlighted global and regional harmonization in the implementation of PBN. Accordingly, the MID PBN Implementation Regional Plan has the following strategic objectives:

- (a) To ensure that implementation of the navigation element of the MID CNS/ATM system is based on clearly established operational requirement.
- (b) To avoid unnecessarily imposing the mandate for multiple equipment on board or multiple systems on ground.
- (c) To avoid the need for multiple airworthiness and operational approvals for intra and inter-regional operations.
- (d) To avoid an eclipsing of ATM operational requirements by commercial interests, generating unnecessary costs States, international organization, and airspace users.
- (e) To explain in detail the contents of the MID air navigation plan and of the MID CNS/ATM plan, describing potential navigation application.

4.8 Furthermore, the MID PBN roadmap will provide a high-level strategy for the evolution of the navigation applications to be implemented in the MID region in the short term (2008-2012), medium term (2013-2016). This strategy is based on the coverage of area navigation (RNAV) and required navigation performance (RNP), which will be applied to aircraft operations involving instrument approaches, standard departure (SID) routes, standard arrival (STAR) routes, and ATS routes in oceanic and continental areas.

4.9 The MID PBN implementation regional plan is developed by MID States together with the international and Regional organizations concerned, and is intended to assist the main stakeholders of the aviation community to plan a gradual transition to the RNAV and RNP concepts. The main stakeholders of the aviation community that benefit from this roadmap are:

- Airspace operators and users
- Air navigation service providers
- Regulating agencies
- International and Regional organizations
- Military Authorities

4.10 The plan is intended to assist the main stakeholders of the aviation community to plan the future transition and their investment strategies. For example, airlines and operators can use this Regional Plan to plan future equipage and additional navigation capability investment; air navigation service providers can plan a gradual transition for the evolving ground infrastructure, Regulating agencies will be able to anticipate and plan for the criteria that will be needed in the future.

Planning principles

4.11 The implementation of PBN in the MID Region shall be based on the following principles:

- (a) develop strategic objectives and airspace concepts as described in the PBN manual (Doc 9613) to justify the implementation of the RNAV and/or RNP concepts in each particular airspace;
- (b) States conduct pre- and post-implementation safety assessments to ensure the application and maintenance of the established target level of safety;
- (c) development of airspace concept, applying airspace modelling tools as well as real-time and accelerated simulations, which identify the navigation applications that are compatible with the aforementioned concept; and
- (d) continued application of conventional air navigation procedures during the transition period, to guarantee the operation by users that are not RNAV- and/or RNP-equipped.
- (e) operational requirement and Stake holder consultation
- (f) early implementation is encouraged based on operational requirements and States readiness.

4.12 Planning Documentation: The implementation of PBN in the MID Region will be incorporated into the Regional Supplementary Procedures (Doc 7030) as approved by the ICAO Council. The States' PBN implementation plan will include a concise and detailed schedule of implementation for all phases of flight which will be endorsed through Regional agreement processes and considered by the Council as requirements for incorporation in the Air Navigation Plan (ANP).

5. PBN OPERATIONAL REQUIREMENTS AND IMPLEMENTATION STRATEGY

5.1 Introduction of PBN should be consistent with the Global Air Navigation Plan. Moreover, PBN Implementation shall be in full compliance with ICAO SARPs and PANS and be supported by ICAO Global Plan Initiatives.

5.2 In November 2006 the ICAO Council accepted the second amendment to the Global Air Navigation Plan for the CNS/ATM System, which has been renamed the Global Air Navigation Plan (Doc 9750), referred to as the Global Plan. A key part of the Global Plan framework are Global Plan Initiatives (GPIs), which are options for air navigation system improvements that when implemented, result in direct performance enhancements. The GPIs include implementation of performance based navigation (PBN) and navigation system. The introduction of PBN must be supported by an appropriate navigation infrastructure consisting of an appropriate combination of Global Navigation Satellite System (GNSS), self-contained navigation system (inertial navigation system) and conventional ground-based navigation aids.

5.3 It is envisaged that for the short term and medium term implementation of PBN, the establishment of a backup system in case of GNSS failure or the development of contingency procedures will be necessary.

En-route

5.4 Considering the traffic characteristic and CNS/ATM capability of the region, the en-route operation can be classified as Oceanic, Remote continental, Continental, and local/domestic. In principle, each classification of the en-route operations should adopt, but not be limited to single RNAV or RNP navigation specification. This implementation strategy will be applied by the States and international organizations themselves, as coordinated at regional level to ensure harmonization.

5.5 In areas where operational benefits can be achieved and appropriate CNS/ATM capability exists or can be provided for a more accurate navigation specification, States are encouraged to introduce the more accurate navigation specification on the basis of coordination with stakeholders and affected neighbouring States.

Terminal

5.6 Terminal operations have their own characteristics, taking into account the applicable separation minima between aircraft and between aircraft and obstacles. It also involves the diversity of aircraft, including low-performance aircraft flying in the lower airspace and conducting arrival and departure procedures on the same path or close to the paths of high-performance aircraft.

5.7 In this context, the States should develop their own national plans for the implementation of PBN in TMAs, based on the MID PBN Regional Implementation Plan, seeking the harmonization of the application of PBN and avoiding the need for multiple operational approvals for intra- and inter-regional operations, and the applicable aircraft separation criteria.

Approaches

5.8 During early implementation of PBN, IFR Approaches based on PBN should be designed to accommodate mixed-equipage (PBN and non-PBN) environment. ATC workload should be taken into account while developing approach procedures. One possible way to accomplish this is to co-locate the Initial Approach Waypoint for both PBN and conventional approaches. States should phase-out conventional non-precision approach procedures at a certain point when deemed operationally suitable and taking in consideration GNSS integrity requirements, and planning for CDO implementation.

5.9 Recognizing the efficiency and environmental benefits of CDO, and the need to harmonize these operations in the interest of safety, MID States are encouraged to include implementation of CDO as part of their PBN implementation plans and to implement CDO in accordance with the ICAO CDO Manual Doc 9931.

Implementation Strategy

5.10 In order to address the operational requirements, the following PBN Implementation & Harmonisation Strategy for the ICAO MID Region is formulated as follows:

- a) Implementation of any RNAV or RNP application shall be in compliance with ICAO PBN Manual (Doc 9613).
- b) Implementation of RNAV5/RNAV1 depending on operational requirements for continental en-route and local/domestic en-route applications at least until 2016.
- c) Implementation of RNAV1/Basic-RNP-1 depending on operational requirements for terminal applications at least until 2016.
- d) Implementation of RNAV-10 for oceanic/remote continental until at least 2016.
- e) The use of RNAV 5 / RNAV 1 specification by RNP specifications (e.g. advanced-RNP-1) for the use in the en-route and terminal airspace to commence by 2016.
- f) implementation of approach procedures with vertical guidance (APV) (Baro-VNAV and/or augmented GNSS), including LNAV only minima, for all instrument runway ends, either as the primary approach or as a back-up for precision approaches by 2016 with intermediate milestones as follows: 30 per cent by 2010, 70 per cent by 2014; and
- g) implementation of straight-in LNAV only procedures, as an exception to f) above, for instrument runways at aerodromes where there is no local altimeter setting available and where there are no aircraft suitably equipped for APV operations with a maximum certificated take-off mass of 5 700 kg or more;
- h) The use of NDB for approach operations shall be terminated not later than 2012.
- i) The operation of CDO to commence 2013;
- j) The RNP AR Approaches to commence depending on States operational requirement starting 2012.

6. CURRENT STATUS AND FORECAST

MID Traffic Forecast

6.1 The GEN part of FASID (Part II) provides the information and data of the following traffic forecasts and trends:

- air traffic demand for air navigation systems planning
- Passenger traffic
- Aircraft movements

- Major city-pairs traffic

6.2 The forecast data as well as the figures contained in the FASID document are the results of the regular meetings of, MIDANPIRG Traffic Forecasting Sub-group, which had in last meeting in April 2007. Notably however, in the past two years, air traffic growth trend for the MID Region has signalled a significantly higher aircraft fleet and traffic growth than was previously forecast.

6.3 World scheduled traffic measured in terms of Passenger-kilometers Performed (PKPs) is forecast to increase at a “most likely” average annual rate at 4.6 per cent for the period 2005-2025. International traffic is expected to increase at 5.3 per cent per annum.

6.4 The airlines of the Middle East regions are expected to experience the highest growth in passenger traffic at 5.8 per cent per annum through to the year 2025 compared to the world average of 4.6%.

6.5 World scheduled freight traffic measured in terms of tonne-kilometres performed is forecast to increase at a “most likely” average annual rate of 6.6 per cent for the period 2005-2025. International freight traffic is expected to increase at an average annual growth rate of 6.9 per cent.

6.6 Air freight traffic of the airlines of Middle East region is expected to remain higher than the world average at 7.8 per annum.

6.7 The following major route groups to, from and within the Middle East Region have been identified:

- Between Middle East - Europe
- Between Middle East - Africa
- Between Middle East - Asia/Pacific
- Between Middle East - North America
- Intra Middle East

6.8 Movement forecasts for the major route groups for the 2007-2025 periods are depicted in **Table 1**.

TABLE 1

AIRCRAFT MOVEMENTS FORECAST TO THE YEAR 2025

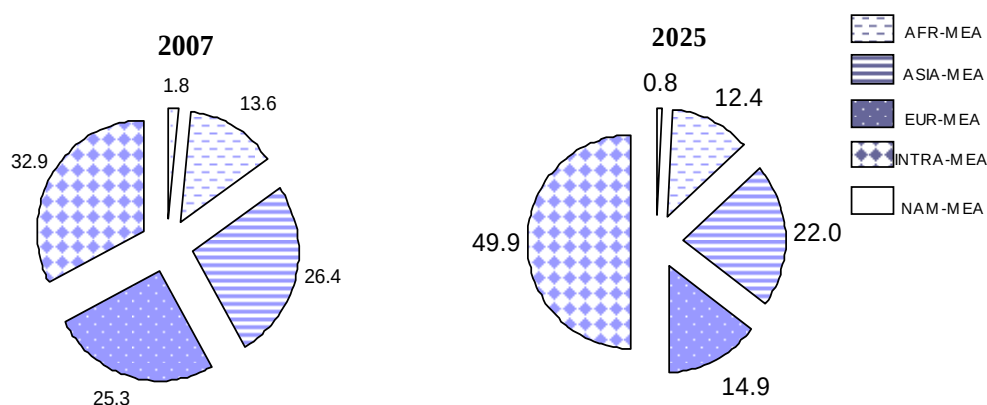
	Actual	Forecast	Average	Annual	Growths
	2007	2025		(per cent) 2007-2025	
AFR-MEA	84933	291159		7.1	
ASIA-MEA	165364	514979		6.5	
EUR-MEA	158346	350380		4.5	
INTRA MEA	205769	1170709		10.1	
NAM-MEA	11075	18703		3.0	
TOTAL	625487	2345929		7.6	

6.9 The total aircraft movements to/from and within the Middle East region are estimated to increase from some 625000 in 2007 to around 2346000 in 2025 at an average annual growth rate of

7.6 per cent. The resulting movements' shares for the year 2025 are depicted in **Figure 1**.

FIGURE 1

SHARES OF SELECTED ROUTE GROUPS IN AIRCRAFT MOVEMENTS



Aircraft Fleet Readiness

6.10 IATA had circulated survey and will be compiling the results in report which could be referred to for details

CNS Infrastructure

Navigation infrastructure

Global Navigation Satellite System (GNSS)

6.11 Global Navigation Satellite System (GNSS) is a satellite-based navigation system utilizing satellite signals, such as Global Positioning System (GPS), for providing accurate and reliable position, navigation, and time services to airspace users. In 1996, the International Civil Aviation Organization (ICAO) endorsed the development and use of GNSS as a primary source of future navigation for civil aviation. ICAO noted the increased flight safety, route flexibility and operational efficiencies that could be realized from the move to space-based navigation.

6.12 GNSS supports both RNAV and RNP operations. Through the use of appropriate GNSS augmentations, GNSS navigation provides sufficient accuracy, integrity, availability and continuity to support en-route, terminal area, and approach operations. Approval of RNP operations with appropriate certified avionics provides on-board performance monitoring and alerting capability enhancing the integrity of aircraft navigation.

6.13 GNSS augmentations include Aircraft-Based Augmentation System (ABAS), Satellite-Based Augmentation System (SBAS) and Ground-Based Augmentation System (GBAS).

6.14 Multilateration (MLAT) employs a number of ground stations, which are placed in strategic locations around an airport, its local terminal area or a wider area that covers the larger surrounding airspace. Multilateration requires no additional avionics equipment, as it uses replies

from Mode A, C and S transponders, as well as military IFF and ADS-B transponders. MLAT is under consideration by several MID States (Bahrain, Egypt, Oman and UAE).

Other PBN Infrastructure

6.15 Other navigation infrastructure that supports PBN applications includes INS, VOR/DME, DME/DME, and DME/DME/IRU. These navigation infrastructures may satisfy the requirements of RNAV navigation specifications, but not those of RNP.

6.16 INS may be used to support PBN en-route operations with RNAV-10 and RNAV 5 navigation specifications.

6.17 VOR/DME may be used to support PBN en-route and Arrival STAR operations based on RNAV 5 navigation specification.

6.18 Uses of DME/DME and DME/DME/IRU may support PBN en-route and terminal area operations based on RNAV 5, and RNAV 1 navigation specifications. Validation of DME/DME coverage area and appropriate DME/DME geometry should be conducted to identify possible DME/DME gaps, including identification of critical DMEs, and to ensure proper DME/DME service coverage.

Note.- The conventional Navaid infrastructure should be maintained to support non-equipped aircraft during a transition period until at least 2016.

Surveillance Infrastructure

6.19 For RNAV operations, States should ensure that sufficient surveillance coverage is provided to assure the safety of the operations. Because of the on-board performance monitoring and alerting requirements for RNP operations, surveillance coverage may not be required. Details on the surveillance requirements for PBN implementation can be found in the ICAO PBN Manual and ICAO PANS-ATM (Doc 4444), and information on the current surveillance infrastructure in the MID can be found in ICAO FASID table.

Communication Infrastructure

6.20 Implementation of RNAV and RNP routes includes communication requirements. Details on the communication requirements for PBN implementation can be found in ICAO PANS-ATM (Doc 4444), ICAO RCP Manual (Doc 9869), and ICAO Annex 10. Information on the current communication infrastructure in the MID can also be found in ICAO FASID table.

7. IMPLEMENTATION ROADMAP OF PBN

ATM Operational Requirements

7.1 The Global ATM Operational Concept: Doc 9854 makes it necessary to adopt an airspace concept able to provide an operational scenario that includes route networks, minimum separation standards, assessment of obstacle clearance, and a CNS infrastructure that satisfies specific strategic objectives, including safety, access, capacity, efficiency, and environment.

7.2 In this regard, the following programmes will be developed:

- a) Traffic and cost benefit analyses
- b) Necessary updates on automation

- c) Operational simulations in different scenarios
- d) ATC personnel training
- e) Flight plan processing
- f) Flight procedure design training to include PBN concepts and ARINC-424 coding standard
- g) Enhanced electronic data and processes to ensure appropriate level of AIS data accuracy, integrity and timeliness
- h) WGS-84 implementation in accordance with ICAO Annex 15
- i) Uniform classification of adjacent and regional airspaces, where practicable
- j) RNAV/RNP applications for SIDs and STARs
- k) Coordinated RNAV/RNP routes implementation
- l) RNP approach with vertical guidance
- m) Establish PBN approval database

7.3 The above programmes should conform to the performance objectives and regional action plan supporting the regional implementation plan (roadmap).

Short Term (2008-2012)

En-route

7.4 During the planning phase of any implementation of PBN routes, States should gather inputs from all aviation stakeholders to obtain operational needs and requirements. These needs and requirements should then be used to derive airspace concepts and to select appropriate PBN navigation specification.

7.5 In this phase, the current application of RNAV 10 is expected to continue for Oceanic and Remote continental routes.

7.6 For Continental routes, the applications of RNAV 5 and RNAV 1 navigation specifications are expected. Before the PBN concept was established, the MID Region adopted the Regional implementation of RNP 5. Under the PBN concept it is now required that RNP 5 will change into RNAV 5. Based on operational requirements, States may choose to implement RNAV 1 routes to enhance efficiency of airspace usages and support closer route spacing, noting that appropriate communication and surveillance coverage is provided. Details of these requirements are provided in the PBN manual (Doc 9613) and PANS-ATM (Doc 4444).

7.7 **Operational approval.** Operators are required to have operational approval for RNAV 5. Depending on operational requirement RNAV 1 for terminal operations and RNAV 10 for Oceanic/Remote Continental operations.

7.8 Application of RNAV 5 or RNAV 1 for continental en-route will be mandated by the end of 2012.

Terminal

7.9 In selected TMAs, the application of RNAV-1 in a surveillance environment can be supported through the use of GNSS or ground navigation infrastructure, such as DME/DME and DME/DME/IRU. In this phase, mixed operations (equipped and non-equipped) will be permitted.

7.10 In a non- surveillance environment and/or in an environment without adequate ground navigation infrastructure, the SID/STAR application of Basic-RNP 1 is expected in selected TMAs with exclusive application of GNSS.

7.11 **Operational approval.** Operators are required to have operational approval for RNAV 1. In addition, operators are required to have Basic RNP 1 approval when operating in procedural control TMAs.

Note: In order to avoid unnecessary approvals, operators equipped with GNSS should apply for combined RNAV 1 and Basic RNP 1.

Approach

7.12 The application of RNP APCH procedures is expected to be implemented in the maximum possible number of airports, primarily international airports. To facilitate transitional period, conventional approach procedures and conventional navigation aids should be maintained for non-equipped aircraft.

7.13

7.14 States should promote the use of APV operations (Baro-VNAV SBAS) to enhance safety of RNP approaches and accessibility of runways.

7.15 The application of RNP AR APCH procedures should be limited to selected airports, where obvious operational benefits can be obtained due to the existence of significant obstacles.

7.16 **Operational approval requirements.** Operators shall plan to have operational approval for RNP APCH with VNAV operations (Baro-VNAV). Depending on operational need, aircraft shall also meet the RNP AR APCH specification.

SUMMARY TABLE AND IMPLEMENTATION TARGETS

SHORT TERM (2008-2012)		
<i>Airspace</i>	<i>Navigation Specification Preferred</i>	<i>Navigation Specification Acceptable</i>
En-route – Oceanic	RNAV 10	RNAV 10
En-route - Remote continental	RNAV 5, RNAV 10	RNAV 10
En-route – Continental	RNAV 5, RNAV 1	
En-route - Local / Domestic	RNAV 5, RNAV 1	
TMA – Arrival	RNAV 1 in surveillance environment and with adequate navigation infrastructure. Basic RNP 1 in non-surveillance environment	
TMA – Departure	RNAV 1 in surveillance environment and with adequate navigation infrastructure. Basic RNP 1 in non-surveillance environment	
Approach	RNP APCH with Baro VNAV in all possible airports; RNP AR APCH in airport where there are obvious operational benefits. Implementation of straight-in LNAV only procedures, as an exception	
Implementation Targets		
Implementation of approach procedures with vertical guidance (APV) (Baro-VNAV and/or augmented GNSS), including LNAV only minima, for all instrument runway ends, either as the		

primary approach or as a back-up for precision approaches by 2016 with intermediate milestones as follows: 30% by 2010, and 50 % by 2012; and priority should be given to airports with most significant operational benefits

- RNAV 1 SIDs/STARs for 30% of international airports by 2010 and 50% by 2012 and priority should be given to airports with RNP Approach

Medium Term (2013-2016)

En-route

7.17 Noting the current development of route spacing standards for RNAV 1, in this phase, it is expected that the implementations of all existing RNAV/RNP routes are consistent with PBN standards. However, in order to ensure implementation harmonization, States are urged to implement their RNAV/RNP routes based on a Regional agreements and consistent PBN navigation specifications and separation standards.

7.18 With regard to oceanic remote operations, it is expected that with the additional surveillance capability, the requirement for RNAV 10 will disappear, and be replaced by navigation specifications for continental en-route applications.

7.19 **Operational approval.** Operators are required to have operational approval for RNAV 5 and RNAV 1.

Terminal

7.20 RNAV 1 or Basic RNP 1 will be fully implemented in all TMAs by the end of this term.

7.21 **Operational approval.** Operators are required to have operational approval for RNAV 1/Basic RNP 1 approval.

Note: In order to avoid unnecessary approvals, operators equipped with GNSS should apply for combined RNAV 1 and Basic RNP 1

Approach

7.22 In this phase, full implementation of RNP APCH with Baro VNAV or APV SBAS for all instrument runways is expected. These applications may also serve as a back-up to precision approaches.

7.23 The extended application of RNP AR Approaches should continue for airports where there are operational benefits.

7.24 The introduction of application of landing capability using GNSS is expected to guarantee a smooth transition toward high-performance approach and landing capability.

7.25 **Operational approval requirements.** Operators are required to have operational approval for RNP APCH with VNAV operations (Baro VNAV). Depending on operations, aircraft shall also meet RNP AR specification.

7.26 Application of RNAV 1 or Basic RNP-1 for all terminal areas and APV/Baro VNAV or APV/SBAS for all instrument runway ends, either as the primary approach or as a back-up for precision approaches will be mandated by 2016.

SUMMARY TABLE AND IMPLEMENTATION TARGETS

MEDIUM TERM (2013-2016)		
<i>Airspace</i>	<i>Navigation Specification (preferred)</i>	<i>Navigation Specification (/acceptable)</i>
En-route – Oceanic	RNAV 10	RNAV 10
En-route - Remote continental	NIL	RNAV 10
En-route – Continental	RNAV 1, RNAV 5	RNAV 1, RNAV 5
En-route - Local / Domestic	RNAV 1 , RNAV 5	RNAV 1, RNAV 5
TMA – (Arrival, Departure)	RNAV1 or RNP 1 application	RNAV 1 or RNP 1 application
Approach	RNP APCH (with Baro VNAV) and APV Expansion of RNP AR APCH where there are operational benefits Introduction of landing capability using GNSS and its augmentations	RNP APCH (with Baro VNAV) and APV Expansion of RNP AR APCH where there are operational benefits Introduction of landing capability using GNSS and its augmentations
Implementation Targets ▪ RNP APCH with Baro VNAV or APV or LNAV in 100% of instrument runways by 2016 ▪ RNAV 1 or RNP 1 SID/STAR for 100% of international airports by 2016 ▪ RNAV 1 or Basic RNP 1 SID/STAR at busy domestic airports where there are operational benefits ▪ Implementation additional RNAV/RNP routes ▪ CDO Implementation will commence in this term		

Long Term (2016 and Beyond)

7.27 In this phase, GNSS is expected to be a primary navigation infrastructure for PBN implementation. States should work co-operatively on a multinational basis to implement GNSS in order to facilitate seamless and inter-operable systems and undertake coordinated Research and Development (R&D) programs on GNSS implementation and operation.

7.28 Moreover, during this phase, States are encouraged to consider segregating traffic according to navigation capability and granting preferred routes to aircraft with better navigation performance.

7.29 Noting the current development of Advanced RNP-1 navigation specification, it is expected that this navigation specification will play an important role in the long term implementation of PBN for enroute and terminal operations.

7.30 With the expectation that precision approach capability using GNSS and its augmentation systems will become available, States are encouraged to explore the use of such capability where there are operational and financial benefits.

7.31 During this term the use of Advanced RNP-1 for terminal and en-route will be mandated by a date to be determined.

7.32 Implementation of CDO in all International Airports is recommended.

8. TRANSITIONAL STRATEGIES

8.1 During the transitional phases of PBN implementation, sufficient ground infrastructure for conventional navigation systems must remain available. Before existing ground infrastructure is considered for removal, users should be consulted and given reasonable transition time to allow them to equip appropriately to attain equivalent PBN-based navigation performance. States should approach removal of existing ground infrastructure with caution to ensure that safety is not compromised, such as by performance of safety assessment, consultation with users through regional air navigation planning process and national consultative forums. Moreover, noting that navigation systems located in a particular State/FIR may be supporting air navigation in airspaces in other States/FIRs States are required to cooperate and coordinate bilaterally, multilaterally and within the framework of Regional agreements, in the phasing out of conventional ground based navigation systems and maintaining the serviceability of required navigation aids for area navigation (e.g. DME).

8.2 States should ensure that harmonized separation standards and procedures are developed and introduced concurrently in all flight information regions to allow for a seamless transition towards PBN.

8.3 States should cooperate on a multinational basis to implement PBN in order to facilitate seamless and inter-operable systems and undertake coordinated R&D programs on PBN implementation and operation.

8.4 States are encouraged to consider segregating traffic according to navigation capability and granting preferred routes to aircraft with better navigation performance, taking due consideration of the need of State/Military aircraft.

8.5 States should encourage operators and other airspace users to equip with PBN avionics. This can be achieved through early introductions of RNP approaches, preferably those with vertical guidance.

8.6 ICAO MID Region Regional Office should provide leadership supporting implementation and transition towards PBN.

8.7 States should have PBN operational approval process.

8.8 Early Implementation of PBN are encouraged.

9. SAFETY ASSESSMENT AND MONITORS

Methodology

Need for Safety Assessment

9.1 To ensure that the introduction of PBN en-route applications within the MID Region is undertaken in a safe manner and in accordance with relevant ICAO provisions, implementation shall only take place following conduct of a safety assessment that has demonstrated that an acceptable level of safety will be met. This assessment may also need to demonstrate levels of risk associated with specific PBN en-route implementation. Additionally, ongoing periodic safety reviews shall be undertaken where required in order to establish that operations continue to meet the target levels of safety.

Roles and Responsibilities

9.2 To demonstrate that the system is safe, it will be necessary that the implementing agency – a State or group of States - ensures that a safety assessment and, where required, ongoing monitoring of the PBN en-route implementation are undertaken. The implementing agency may have the capability to undertake such activities or may seek assistance from the Middle East Regional Monitoring Agency (MID RMA). The latter course of action is preferred as the MID RMA would be in a position to establish the necessary monitoring and data collection activity in an effective manner. Furthermore, the MIDANPIRG/10 meeting in April 2007 adopted the revised terms of reference of the MID RMA, whose scope includes safety monitoring of RNP/RNAV.

9.3 In undertaking a safety assessment to enable en-route implementation of PBN, a State, implementing agency or the MID RMA shall:

- (a) Establish and maintain a database of PBN approvals;
- (b) Monitor aircraft horizontal-plane navigation performance and the occurrence of large navigation errors and report results appropriately to the MID RMA;
- (c) Conduct safety and readiness assessments and report results appropriately to the MID RMA;
- (d) Monitor operator compliance with State approval requirements after PBN implementation; and
- (e) Initiate necessary remedial actions if PBN requirements are not met.

9.4 The duties and responsibilities of the MID RMA as well as the agreed principles for its establishment are available from the ICAO MID Regional Office.

10. PERIODIC REVIEW OF IMPLEMENTATION ACTIVITIES

Procedures to Modify the Regional Plan

10.1 Whenever a need is identified for a change to this document, the Request for Change (RFC) Form should be completed and submitted to the ICAO MID Regional Office. The Regional Office will collate RFCs for consideration by the PBN/GNSS Task Force (ATM/SAR/AIS Sub-group of MIDANPIRG).

10.2 When an amendment has been agreed by a meeting of the PBN/GNSS Task Force, a new version of the PBN Regional Plan will be prepared, with the changes marked by an “[” in the margin, and an endnote indicating the relevant RFC, to enable a reader to note the origin of the change. If the change is in a table cell, the outside edges of the table will be highlighted. Final approval for publication of an amendment to the PBN Regional Plan will be the responsibility of MIDANPIRG.

Appendix A – Practical Examples of tangible benefits (living document)

Egypt/ Bahrain / UAE with figures will be provided and inserted here.

Practical examples of tangible benefits derived from the implementation of PBN are:

- Increased airspace safety through the implementation of continuous and stabilized descent procedures using vertical guidance;

- Provision of runway-aligned final approach path which may not be possible from conventional navigation;
- Reduced aircraft flight time due to the implementation of optimal flight paths, with the resulting savings in fuel, noise reduction, and enhanced environmental protection;
- Improved airport and airspace arrival paths in all weather conditions, and the possibility of meeting critical obstacle clearance and environmental requirements through the application of optimized RNAV or RNP paths;
- Implementation of more precise approach, departure, and arrival paths that will reduce dispersion and will foster smoother traffic flows;
- Reduced delays in high-density airspaces and airports through the implementation of additional parallel routes and additional arrival and departure points in terminal areas;
- Reduction of lateral and longitudinal separation between aircraft to accommodate more traffic;
- Decrease ATC and pilot workload by utilizing RNAV/RNP procedures and airborne capability and reduce the needs for ATC-Pilot communications and radar vectoring;
- Increase of predictability of the flight path; and
- Reduction of maintenance and flight inspection costs associated with conventional navigation aids

Appendix B – Reference documentation for developing operational and airworthiness approval regulations/procedures

General Guidelines for Obtaining Airworthiness and Operational Approvals for PBN Navigation Specifications, Version 1.0, International Air Transport Association, August 2008. (URL - [http://www2.icao.int/en/pbn/ICAO%20Documentation/ICAO%20Documentation/State%20letter%2007.22%20Guidance%20material%20for%20the%20issuance%20of%20performance%20based%20navigation%20\(PBN\)%20operational%20approvals.pdf](http://www2.icao.int/en/pbn/ICAO%20Documentation/ICAO%20Documentation/State%20letter%2007.22%20Guidance%20material%20for%20the%20issuance%20of%20performance%20based%20navigation%20(PBN)%20operational%20approvals.pdf))

MIDANPIRG/13
Appendix 4.5U to the Report on Agenda Item 4.5

**TERMS OF REFERENCE FOR
MID PBN SUPPORT TEAM (MPST)**

1. TERMS OF REFERENCE:

- a) promote PBN and convince Stakeholders to support PBN;
- b) gap Analysis and PBN Implementation Plan update/improvement; and
- c) implementation of PBN. This would result in the engagement at a working level to coordinate and provide assistance to States.

2. WORK PROGRAMME:

- a) promotion of PBN by increasing awareness and education to motivate States to invest and implement;
- b) make use of the PBN Go Team Visit to the UAE, and adapt this to provide the support at a greater frequency;
- c) collection of required data and practices to maintain data integrity;
- d) conducting safety assessments;
- e) completion and improvement of PBN implementation plans;
- f) guidance to establish the regulatory framework, approvals process and other mechanisms necessary for implementation and sustainment of PBN capabilities;
- g) provide guidance and assistance to operators in obtaining operational approval for utilising RNP and other PBN procedures;
- h) assist in operational approval;
- i) providing guidance to States in PBN en-route implementation, airspace route design and harmonization across FIRs; and
- j) undertake other functions relevant to implementation of PBN as assigned by the PBN/GNSS TF and report to PBN/GNSS TF

3. COMPOSITION OF THE TASK FORCE

Experts from MID Region States, UAE as champion, IATA support and representative from Industry, International/Regional Organizations may be invited when required.

MIDANPIRG/13
Appendix 4.5V to the Report on Agenda Item 4.5

STATUS OF MID STATES PBN IMPEMETATION PLAN

State	Plan Submission	Plan Status	Percentage of Implementation Short term (2012)		Remark
			En route %	TMA %	
Bahrain	Submitted		10	40	
Egypt	Submitted	Draft	100	80	need user input
Iran	Not submitted				Only PBN approach and Terminal implementation status received
Iraq	Not submitted				
Jordan	Submitted		100		Restriction on levels
Kuwait	Submitted				
Lebanon	Not submitted				Only PBN approach and Terminal implementation status received
Oman	submitted		100	7	
Qatar	Submitted		10	40	
Saudi Arabia	submitted				
Syria	Submitted	Draft			
UAE	submitted		100	60	
Yemen	Submitted	Draft			

MIDANPIRG/13
Appendix 4.5W to the Report on Agenda Item 4.5

PBN IMPLEMENTATION FOCAL POINT

STATE	NAME	TITLE	ADDRESS	EMAIL	FAX	TEL	MOBILE
Bahrain	Fareed Abdullah Al Alawi	Head, air Traffic Operations	Civil Aviation Affairs P.O. Box 586	falalawi@caa.gov.bh	+973 17321992	+973 17321158	+97339651596
Bahrain	Saleem Mohamed Hassan	Chief Air Traffic Management	Civil Aviation Affairs P.O. Box 586	saleemmh@caa.gov.bh	+973 17329966	+973 17321117	+97339608860
Egypt	Badr Mohamed Shouman	General Director HCAA	Ministry of Civil Aviation Egyptian Civil Aviation Authority Cairo International Airport Road Cairo - EGYPT	badrshoman@yahoo.com	+202 2268 0627	+202 2265 7849	+20100 601 3603
Iran	Habib Davoudi Dana	Chief of Procedure Design Office	ATM Department Mehrabad International Airport Tehran 13445	h.davoudi@yahoo.com	+982144649269	+982 166025013	
Iran	Mohammad Khodakarami	D.G. of Aeronautical Affairs (in CAO)	Mehrabad International Airport P.O. Box 13445 – 1798	mkhd4444@yahoo.com	+98214464 9269	+982 16603 6241	
Iraq							
Jordan	Nayef Marshoud	Director ATM department	P.O. Box 7547	datm@carc.gov.jo	+962 6 4891266	+962 6 4897729	+962 797498992
Kuwait	Adel Mohammed Al Yagout	Superintendent of Air Navigation Department	Directorate General of Civil Aviation Kuwait International Airport P.O. Box 17 Safat 13001	Q8dgca_danoff@hotmail.com	+965 4346221	+965 4346220	+965 9571755
Lebanon	Walid Alhassanieh	Chief ACC	Air Navigation Department Beirut Rafic Hariri Int'l Airport	hassaniehw @beirutairport.gov.lb	+9611629023 +9611629106	+961 1629026	+961 3509902
Oman	Sabri Said Saud Al-Busaidy	DMS Manager	Directorate General of Meteorology & Air Navigation (DGMAN) Muscat International Airport P.O. Box 1 CPO Seeb	sabri@dgc.gov.om	+96824518990 +24519 939	+968 24519501	+968 99359415

MIDANPIRG/13-REPORT
APPENDIX 4.5W

4.5W-2

STATE	NAME	TITLE	ADDRESS	EMAIL	FAX	TEL	MOBILE
Qatar	Ahmed Al-Eshaq	Director Air Navigation	Civil Aviation Authority P.O. Box 3000 Doha – QATAR	ahmed@caa.gov.qa	(974) 465 6554	(974) 462 2300	(974) 555 0440
Qatar	Faisal Alqahtan	Head of AIS	Civil Aviation Authority P.O. Box 73 Doha – QATAR	Faisal.alqahtan@caa.gov.qa	(974)44656554	(974)44656221	(974) 5553 7060
Saudi Arabia	Ali H. Hakami	Navigational Aids Systems Planner	General Authority of Civil Aviation P.O. Box 21444 Jeddah 21444	yaro123@yahoo.com	+966 2 671 7717 Ext 1594	+966 2 671 7717 Ext 1593	+966 59 840 2598
Syria	Al Layth Al Hammoud	Chief of Air Navigation					
UAE	Talal Al Hammadi	Head - Airspace Coordination General Civil Aviation Authority	Sheikh Zayed Air Navigation Centre P.O. Box 66 Abu Dhabi – UAE	thammadi@szc.gcaa.ae	+97125996883	97125996890	+971508180873
Yemen	Ahmed Mohamed Al Kobati	Director Air Navigation Operations	Air Navigation Sector CAMA Airport Road P.O. Box 3473 Sana’a – REPUBLIC OF YEMEN	cama570@yahoo.com	+9671344047	+9671345402	+967 777241375

MIDANPIRG/13
Appendix 4.5X to the Report on Agenda Item 4.5

MIDANPIRG/13-REPORT
APPENDIX 4.5X

<STATE> PBN APPROACH and TERMINAL IMPLEMENTATION STATUS

UPDATED: 29/02/2008

NO	ICAO REGION	ICAO DESIG	AIRPORT NAME ⁵	COUNTRY	INTL (Y/N) ¹	RUNWAY	INST RWY Y/N	RESTRICTIONS	APPROACH LNAV/VNAV ²	APPR EFF DATE ⁶	RNAV/RNP SID ³	SID EFF DATE ⁶	RNAV/RNP STAR ⁴	STAR EFF DATE ⁶	COMMENTS
1	MID	OOMS	MUSCAT	OMAN	Y	08	Y		LNAV	May-07	RNAV-1	Dec-10	RNAV-1	Dec-10	
2	MID	OOMS	MUSCAT	OMAN	Y	26	Y		LNAV/VNAV	May-07	RNAV-1	Dec-10	RNAV	May-07	

ABOVE IS ONLY AN EXAMPLE. IT IS NOT MEANT TO SHOW THE ACTUAL IMPLEMENTATION AT THAT AIRPORT

Notes:

1. If the aerodrome is used for international operations, including as an alternate, enter 'Y', if not, enter 'N'
2. If LNAV only, enter LNAV. If LNAV/VNAV only enter LNAV/VNAV. If both enter BOTH. If RNP AR, enter RNP AR. If there is an RNP AR to the same runway that also has an LNAV and/or LNAV/VNAV the enter the RNP AR on a separate line for that runway.
3. If RNAV or RNP SID exists for this runway, note navigation specification, RNAV 1, RNAV 2, or Basic-RNP 1. If not based on a PBN navigation specification, enter RNAV.
4. If RNAV or RNP STAR exists for this aerodrome note navigation specification, RNAV-1, RNAV 2, or Basic-RNP 1. If not based on a PBN navigation specification, enter RNAV.
5. Should list all instrument aerodromes and runway ends in the State, as well as non-instrument runway ends that are used by aircraft in excess of 5700 kg MTOW. Leave blank blocks L-N as appropriate, if PBN or RNAV approaches, SIDs or STARs are not implemented or planned to be implemented yet as part of the State PBN Implementation Plan
6. Enter actual effective date or proposed future effective date as month-year

<STATE> PBN APPROACH AND TERMINAL IMPLEMENTATION STATUS

NO	ICAO REGION	ICAO DESIG	AIRPORT NAME ⁵	COUNTRY	INTL (Y/N) ¹	RUNWAY	INST RWY Y/N	RESTRICTIONS IF ANY	APPROACH LNAV/VNAV ²	APPR EFF DATE ⁶	RNAV/RNP SID ³	SID EFF DATE ⁶	RNAV/RNP STAR ⁴	STAR EFF DATE ⁶	COMMENTS
1															
2															
3															
4															
5															
6															
7															
8															
9															
10															
11															
12															
13															
14															
15															
16															
17															
18															
19															
20															
21															
22															
23															
24															
25															
26															
27															
28															
29															
30															
31															
32															
33															
34															
35															
36															
37															
38															
39															
40															
41															
42															
43															
44															
45															
46															
47															
48															
49															
50															

1. If the aerodrome is used for international operations, including as an alternate, enter 'Y', if not, enter 'N'. 2. If LNAV only, enter LNAV. If LNAV/VNAV only enter LNAV/VNAV. If both enter BOTH. If RNP AR, enter RNP AR. If there is an RNP AR to the same runway that also has an LNAV and/or LNAV/VNAV the enter the RNP AR on a separate line for that runway. 3. If RNAV or RNP SID exists for this runway, note navigation specification, RNAV 1, RNAV 2, or Basic-RNP 1. If not based on a PBN navigation specification, enter RNAV. 4. If RNAV or RNP STAR exists for this aerodrome note navigation specification, RNAV-1, RNAV 2, or Basic-RNP 1. If not based on a PBN navigation specification, enter RNAV. 5. Should list all instrument aerodromes and runway ends in the State, as well as non-instrument runway ends that may be used by aircraft in excess of 5700 kg MTOW. Leave blank blocks L-N as appropriate, if PBN or RNAV approaches, SIDs or STARs are not implemented or planned to be implemented yet as part of the State PBN Implementation Plan. 6. Enter actual effective date or proposed future effective date as month-year

MIDANPIRG/13
Appendix 4.5Y to the Report on Agenda Item 4.5

PBN IMPLEMENTATION PROGRESS REPORT

Date: (DD/MM/YY)

State: (Name of State)

Designation of PBN Focal Point

Reference: MID State Letter Ref AN 6/28 – 149 dated 21 April 2008 and follow up letter Ref AN6/28 – 293 dated 10 August “ in order to facilitate necessary follow-up and coordination, to provide a PBN Implementation Focal Point by 21 August 2008 “

Status: (Nominated/ To be Nominated)

Focal Point: (Name, Designation, Mailing Address, Email, Phone, Fax)

State PBN Implementation Plan

Reference: ICAO Assembly Resolution 37/11: Performance-based navigation global goals

Recognizing that not all States have developed a PBN implementation plan by the target date of 2009;
The Assembly: Urges all States to implement RNAV and RNP air traffic services (ATS) routes and approach procedures in accordance with the ICAO PBN concept laid down in the Performance-based Navigation (PBN) Manual (Doc 9613);

Status: (Adopted / To be adopted) by (name of a national body) and (Reviewed / To be reviewed) by ICAO PBN/GNSS TF

Approach Operations

Reference: ICAO Assembly Resolution A37/11

“States complete a PBN implementation plan to achieve: implementation of approach procedures with vertical guidance (APV) (Baro-VNAV and/or augmented GNSS), including LNAV only minima, for all instrument runway ends, either as the primary approach or as a back-up for precision approaches by 2016 with intermediate milestones as follows: 30 per cent by 2010, 70 per cent by 2014 and implementation of straight-in LNAV only procedures, as an exception, for instrument runways at aerodromes where there is no local altimeter setting available and where there are no aircraft suitably equipped for APV operations with a maximum certificated take-off mass of 5 700 kg or more.

Implementation Targets (# of RWY Ends)			Completed (# of RWY Ends)		On Progress (# of RWY Ends)	
Y2012	Y2014	Y2016	LNAV	LNAV/VNAV	LNAV	LNAV/VNAV
10			8			

Note(s): (States may include information on recent publications of new PBN approach procedures.)

Arrival and Departure Operations

Reference: ICAO Assembly Resolution A37/11

Implementation Targets (# of Int'l Airports)			Completed (# of Int'l Airports)		On Progress (# of Int'l Airports)	
Y2012	Y2014	Y2016	Arrival	Departure	Arrival	Departure

Note(s): (States may include information on recent publications with new PBN arrival/departure procedures.)

MIDANPIRG/13
Report on Agenda Item 4.6

REPORT ON AGENDA ITEM 4: PERFORMANCE FRAMEWORK FOR REGIONAL AIR NAVIGATION PLANNING AND IMPLEMENTATION ISSUES

4.6 MET

4.6.1 The meeting noted that the Third Meeting of the Meteorology Sub-Group (MET SG/3, Cairo, 19 - 20 December 2011) had formulated two (2) Draft Decisions and seven (7) Draft Conclusions for endorsement by MIDANPIRG/13, and developed a follow-up action plan including expected deliverables and target dates.

4.6.2 The MIDANPIRG was pleased that several States in the MID Region had representation from MET at MIDANPIRG/13 noting that the Second Meeting of the MID Bulletin Management Group (BMG/2) of the MET SG was held on 23 April 2012 in Abu Dhabi as a side meeting during the MIDANPIRG/13 meeting.

Implementation of the WAFS and SADIS in the MID Region

4.6.3 The meeting noted that MET SG/3 meeting reviewed a summary of World Area Forecast System (WAFS) and Satellite Distribution System for information relating to air navigation (SADIS) since MET SG/2 as well as future developments for MET SG consideration in regional planning.

4.6.4 The meeting noted that issues related to discrepancies in observed weather and WAFS SIGWX forecasts should be reported to WAFC London with as much data as possible (e.g. satellite, radar, etc) as per the Manual on Aeronautical Meteorological Practice (ICAO Doc 8896). Despite the introduction of OCNL CB in high-level SIGWX forecasts on 15 June 2011, Saudi Arabia had provided 3 scenarios during April 2012 where the area of cumulonimbus (CB) depicted by the WAFS SIGWX forecasts was underestimated and at times misplaced. These case studies would be forwarded to World Area Forecast Centre (WAFC) London by the Secretariat. The meeting also noted that SIGWX forecasts are produced 24 hours in advance and used primarily in flight planning while SIGMET is essential in these cases for in-flight tactical decision making.

4.6.5 The meeting noted that the Secure SADIS FTP Service was sufficiently different to SADIS FTP in that it requires updates to software and consequently, the SADIS Provider recommended that users should consult their software vendor to obtain the necessary software updates well in advance of the cessation of SADIS FTP Service in November 2012 (in accordance with SADISOPSG Conclusion 16/15). As regional implementation, by States, of the Secure SADIS FTP Service was necessary, the meeting agreed that ICAO assist in informing States of this necessary action and encouraged all users of SADIS FTP to contact the SADIS Manager to register for Secure SADIS FTP accounts if they had not already done so. The meeting agreed that WAFC London liaise with ICAO to campaign the implementation of Secure SADIS FTP Service. Given the above, the meeting agreed to the following Conclusion:

CONCLUSION 13/51: SUPPORTING IMPLEMENTATION OF SECURE SADIS FTP SERVICE IN THE MID REGION

That, States, that have not already done so, be urged to register for the Secure SADIS FTP Service in view of noting the cessation of its predecessor, the SADIS FTP Service, on 30 November 2012, in accordance with SADISOPSG/16 Conclusion 16/15.

MIDANPIRG/13
Report on Agenda Item 4.6

4.6.6 The meeting also noted that States should contact the World Area Forecast System Internet File Service (WIFS) Provider to obtain WIFS accounts for backup/contingency purposes to the SADIS services (in accordance with SADISOPSG/16 Conclusion 16/14).

Volcanic Ash Contingency

4.6.7 The meeting recalled MIDANPIRG/12 Decision 12/72 that invited the ATM/AIM/SAR Sub-Group and MET Sub-Group of MIDANPIRG to develop a draft Volcanic Ash Contingency Plan for the MID Region for consideration at the MIDANPIRG/13 Meeting. The meeting noted that the ATM Sub-Group of the International Volcanic Ash Task Force (IVATF) was expected to complete an Air Traffic Management (ATM) Volcanic Ash Contingency Plan (VACP) Template for application in those ICAO Regions where such a contingency plan does not exist. Once available, the template would be adapted by both the ATM/AIM/SAR Sub-Group and MET Sub-Group, which could take into account States' contingency plans if they exist, to fulfil the operational needs and capabilities of the MID Region. Consequently, formal approval of the ATM VACP for the MID Region would be expected by the MIDANPIRG/14 meeting at the latest. IFALPA encouraged harmonization of ATM contingency plans amongst regions, which was expected to occur with the development of the ATM VACP Template by IVATF.

4.6.8 The meeting noted that the International Airways Volcano Watch Operations Group (IAVWOPSG) called for an ad-hoc working group to develop guidance to assist Meteorological Watch Office in the issuance of SIGMET on radioactive cloud (IAVWOPSG Conclusion 5/24 refers). Guidance material would have to take into account that personnel at MWOs were not versed in dealing with radioactive clouds and that radiation and health impacts would have to be considered by appropriate international organizations (e.g. threshold exposure rate considered unsafe could be used in the development of products). In light of the above, further work would have to be undertaken in the development of guidance material and products related to radioactive cloud (IAVWOPSG Conclusion 6/29 refers) and alternative provisions for radioactive cloud information such as regional or global centres should be considered (IAVWOPSG Conclusion 6/30 refers). Progress with these initiatives would be reported at the IAVWOPSG/7 Meeting (March 2013) and the Secretariat was expected to provide a brief of the IAVWOPSG/7 Meeting to the MET SG/4 meeting in the first half of 2013.

4.6.9 The meeting noted that the MID BMG/2 Meeting (23 April 2012, Abu Dhabi) provided 8-character ACC AFTN addresses for 3 of 8 MID States where entries were missing in the global database of ACC AFTN addresses used for the notification of a radioactive release into the atmosphere by Volcanic Ash Advisory Centre (VAAC) London (<http://www.icao.int/safety/meteorology/iavwopsg/Pages/default.aspx>). This information would be forwarded to the IAVWOPSG Secretariat for updating the global database. The remaining five States that have not yet provided this information are strongly encouraged to provide the ICAO MID Regional Office their ACC AFTN addresses for inclusion in the global database.

MIDANPIRG/13
Report on Agenda Item 4.6

Implementation of MET Advisories and Warnings

4.6.10 The meeting recalled MIDANPIRG/12 Conclusion 12/65 to finalize SIGMET test procedures and conduct regular SIGMET tests in the MID Region and noted that part a) of this conclusion has been completed (State letter AN 10/12-10/422 dated 14 December 2010) with the adaptation of the MID SIGMET Test Procedures which was forwarded to States for implementation. The meeting noted that parts b) and c) of this conclusion were ongoing in that MID States were expected to participate in conducting regular WS- and WV- SIGMET tests in 2011 and beyond and report to each MET Sub-Group Meeting. Feedback would be provided on any identified deficiencies provided to States concerned in order to formulate corrective actions. In order to ascertain States continue their efforts in participating in SIGMET tests as well as continue improvements in the format and dissemination of SIGMET where deficiencies were identified. Until Regional OPMET Centres have been established, involvement in SIGMET tests in another Region (Europe for volcanic ash and other phenomenon) should occur as was demonstrated in February 2012 by at least two (2) States. In view of the above, the meeting agreed the following Conclusion to replace and supersede MIDANPIRG/12 Conclusion 12/65 (parts b and c):

CONCLUSION 13/52: SIGMET TEST PARTICIPATION

That, States' MID SIGMET Test focal points be invited to participate in the bi-annual SIGMET tests conducted by the EUR Region and report any deficiencies at each MET SG meeting.

4.6.11 The meeting recalled MIDANPIRG/12 Conclusion 12/66 to finalize the MID Regional SIGMET Guide and that the working draft was circulated to States in January 2010 and finalized in December 2010, except for the WMO Abbreviated Header Lines (AHL) for SIGMET. Since that time, the WMO AHL for SIGMET for Saudi Arabia was received and included in the draft MID Regional SIGMET Guide (reference Appendix 4.2A of MET SG/3). The MID BMG/2 meeting (23 April 2012, Abu Dhabi) confirmed six additional WMO AHL entries. Therefore, only four of twelve entries were still needed to be verified. Since this information was near completion and that the MID Regional SIGMET Guide would assist States in the implementation of SIGMET before tropical cyclone season in the Indian Ocean, the meeting agreed to have the MID Regional SIGMET Guide posted as soon as possible. In addition, States that have not confirmed their WMO AHL would be urged to provide that information by 1 July 2012 that would be reflected in the posted MID Regional SIGMET Guide. The meeting also noted with appreciation the contributions by Oman in the development of the MID Regional SIGMET Guide. Given the aforementioned, the meeting agreed to the following Conclusion to replace and supersede MIDANPIRG/12 Conclusion 12/66:

CONCLUSION 13/53: UPDATE TO THE MID REGIONAL SIGMET GUIDE

That, States with meteorological watch office responsibilities, and that have not yet done so, be invited to provide, by 1 July 2012, the World Meteorological Organization Abbreviated Header Lines used for the issuance of SIGMET for flight information regions (FIRs) under their area of responsibility for inclusion in the MID Regional SIGMET Guide.

MIDANPIRG/13
Report on Agenda Item 4.6

Requirements for OPMET Data and Status of OPMET Data Exchange

4.6.12 The meeting noted OPMET issues raised at the first meeting of the MID Bulletin Management Group (BMG/1) held in Cairo on 18 December 2012 (http://legacy.icao.int/MID/2011/mid_opmet_bmg1/Docs/Report.pdf) and in particular to the possible designation of Regional OPMET Centre(s) (ROC) in the MID Region for the collection and exchange of OPMET data to other regions would increase the efficiency in inter-regional OPMET exchange. This arrangement would allow for bulletins to be exchanged amongst regions in an efficient manner, coordinate on updating the bulletins and associated documentation with other regional centres and improve general coordination.

4.6.13 The Second Meeting of the MID Bulletin Management Group (BMG/2) held in Abu Dhabi on 23 April 2012 attended by 14 participants consisting of 8 States and ICAO agreed that the draft requirements and associated survey only needed minor adjustments (e.g. include acronyms and more clearly define human and hardware resources where possible). The draft ROC requirements and associated survey was developed by ROC Vienna and ICAO and reviewed by the EUR Data Management Group in March 2012. The BMG/2 meeting agreed that the survey be sent to those States interested and likely capable of hosting a ROC. Bahrain, Iran, Kuwait, Saudi Arabia and the United Arab Emirates have expressed interest. The survey would be returned to the ICAO MID Regional Office by 31 August 2012 for distribution to the MID BMG in order to formulate a recommendation of MID ROCs for consideration by the MET SG/4 Meeting and then the MIDANPIRG/14 Meeting. Once ROCs in the MID Region were determined, Terms of Reference would be developed and account for the areas of responsibility and backup procedures. The MID BMG/2 Meeting expressed the desire to determine two ROCs taking into account the geographic size of the MID Region and need for backup plans. Accordingly, the meeting agreed to the following Conclusion:

***CONCLUSION 13/54: DEVELOP RECOMMENDATION OF MID REGIONAL
OPMET CENTRES FOR INTER-REGIONAL
EXCHANGE OF OPMET DATA***

That,

a) the MID Bulletin Management Group:

- i. determine requirements associated with the establishment of Regional OPMET Centres (ROC) in the MID Region; and*
- ii. carry out a survey based on requirements developed in (i) to determine States' capabilities for establishing ROC(s); and*

b) concerned States be invited to complete the survey by 31 August 2012 in order for the MID BMG to report back to MET SG/4 with a recommendation of potential regional designation of ROC(s) for further consideration by MIDANPIRG/14.

MIDANPIRG/13
Report on Agenda Item 4.6

4.6.14 The meeting noted that a series of OPMET exchange issues identified by ROC Vienna and the EUR OPMET Data Management Group (DMG) monitoring during the period from 28 October 2011 to 2 November 2011 such as incorrect bulletin addressing to ROC Vienna (should be LOZZMMID) as provided at **Appendix 4.6A** to the Report on Agenda Item 4.6, multiple bulletins sent to ROC Vienna as per **Appendix 4.6B** to Agenda Item 4.6 to this Report that should be reduced to one transmission, and OPMET data not meeting requirements in MID FASID Table MET 2A as provided at **Appendix 4.6C** to the Report on Agenda Item 4.6. Given the aforementioned, the meeting agreed to the following Conclusion:

CONCLUSION 13/55: OPMET DATA ERRORS AND DEFICIENCIES

That,

a) States be informed of:

- i) incorrect addressing to Regional OPMET Centre (ROC) Vienna as provided at **Appendix 4.6A** to the Report on Agenda Item 4.6;*
- ii) multiple bulletins received at ROC Vienna as provided at **Appendix 4.6B** to the Report on Agenda Item 4.6 and assure only one bulletin is sent to ROC Vienna;*
- iii) non-receipt of OPMET (SA, FC, FT) requests during monitoring as provided at **Appendix 4.6C** to the Report on Agenda Item 4.6; and*

b) States non-compliant with TAF requirements be included in ICAO MID deficiency list.

4.6.15 The meeting recalled MIDANPIRG/12 Conclusion 12/68 that called for the ICAO MID Regional Office to develop guidance material related to the issuance of OPMET data, which had been addressed with State letter AN 10/11-10/426 issued on 14 December 2010. The meeting also noted that the BMG/1 meeting determined that further guidance was needed and agreed to distribute guidance related to the time to create and disseminate OPMET data as provided at **Appendix 4.6D** to the Report on Agenda Item 4.6. In view of the above, the meeting agreed to the following Conclusion:

CONCLUSION 13/56: TIMELINESS OF OPMET DATA

*That, States be notified of procedures related to METAR and TAF compilation and dissemination times as per **Appendix 4.6D** to the Report on Agenda Item 4.6.*

MET provisions in the MID Basic ANP and FASID

4.6.16 The meeting recalled MIDANPIRG/12 Conclusion 12/73 to review Part VI (MET) of the MID Air Navigation Plan Volume II (FASID), and in particular, FASID Tables MET 2B, 2C, 4A and 4B. The meeting noted that the MID BMG/1 provided input related to FASID Table MET 4A and that no changes were needed to FASID Table MET 2B and in addition, States had the opportunity to provide changes until 12 February 2012 for inclusion in the amendment proposal distributed on 26 March 2012. Input provided by the United Arab Emirates, World Area Forecast System Operations Group

MIDANPIRG/13
Report on Agenda Item 4.6

(WAFSOPSG), International Airways Volcanic Watch Operations Group (IAVWOPSG) and the Secretariat (e.g. removal of Israel entries as these entries are now provided in the EUR Regional Air Navigation Plan) was also included in this amendment proposal. The meeting was pleased to note that the MID Regional Office had taken the initiative to circulate proposals for amendment to the Basic ANP and FASID in March 2012 based on MET SG Draft Conclusion 3/7. Since the consultation process of the amendment proposal had begun, the meeting agreed that no further follow-up was required in respect of MET SG Draft Conclusion 3/7.

4.6.17 The meeting recalled OPMET deficiencies in the MIDANPIRG Air Navigation Deficiency Database (MANDD) which included missing OPMET data from Iraq and non-compliant period of validity of TAF for Iran (30-hour TAF required for OIFM, OISS and OITT) and Syria (30-hour TAF required for OSDI and 24-hour TAF required for OSAP and OSLK) as per requirements listed in MID FASID Table MET 1A. The MET SG/3 meeting noted that further monitoring was necessary to obtain a status on these deficiencies and formulated a draft Conclusion (MET SG Draft Conclusion 3/8) for ICAO and ROC Vienna to monitor OPMET Air Navigation Deficiencies in the MID Region. Since the MET SG/3 meeting, ROC London provided ICAO with OPMET data reception results from a monitoring period 1-10 February 2012 and it was observed that the listed deficiencies as stated in this paragraph were no longer occurring and States commended for meeting requirements.

4.6.18 Availability of OPMET for Syria will be monitored as anomalies have been identified during the 1-10 February 2012 monitoring period and if necessary, will be listed in the MID Air Navigation Deficiency Database (MANDD). In addition, a recent request for OPMET data from ORNI in Iraq has been addressed by a State letter and if this OPMET data is not provided as per the requirements will be listed in the MANDD. In view of this recent information, the meeting agreed that no further follow-up was required in respect of MET SG/3 Draft Conclusion 3/8 since ROC London was providing results of OPMET data monitoring.

Survey on Implementation of MET Services

4.6.19 The meeting recalled MIDANPIRG/12 Conclusion 12/70 related to the conduct of a regional survey on the implementation of MET services and facilities to be used for the assessment of the level of implementation of MET services and facilities in the MID Region. Since only one response (Egypt) was received before the MET SG/3, a reminder letter was sent in January 2012 for which six States (Egypt, Iraq, Kuwait, Oman, Saudi Arabia, and United Arab Emirates) responded. General results were deduced such as an agreement between the ATS Authority and MET Authority for the provision of MET services were practiced by the State; that quality system for the MET Service was in place or being implemented, except for Iraq; a need to implement provisions of wind shear warnings and alerts, where warranted; and assuring staff are sufficiently trained.

Implementation of Quality Management System (QMS) for MET

4.6.20 The meeting noted MIDANPIRG/12 Conclusion 12/71 to take necessary action to expedite the implementation of Quality Management System (QMS) in accordance with Annex 3 provisions taking into consideration the key recommendation in Appendix 7B to the MET SG/2 meeting report had been completed. The meeting noted the provisions related to QMS in Annex 3, and in particular, to the implementation date of 15 November 2012 and the need for implementing this upcoming standard as soon as possible.

MIDANPIRG/13
Report on Agenda Item 4.6

MET SG Terms of Reference (TOR)

4.6.21 The meeting reviewed and updated the TOR of the MET Sub-Group as at **Appendix 4.6E** to the Report on Agenda Item 4.6; and agreed accordingly to the following Decision:

DECISION 13/57: REVISED TOR OF THE MET SG

*That, the Terms of Reference (ToR) of the Meteorology Sub-Group be updated as at **Appendix 4.6E** to the Report on Agenda Item 4.6.*

MET Global Developments

4.6.22 The meeting noted that global initiatives and developments (e.g. Aviation System Block Upgrades (ASBU), development of MET requirements for ATM) should be addressed by the next MET SG meeting noting significant developments were expected in the MET field in the next decade. The meeting noted that the Secretariat of the MET SG would report significant global developments to the MET SG/4 meeting in the first half of 2013.

MIDANPIRG/13
Appendix 4.6A to the Report on Agenda Item 4.6

FTSY31 OSDI, FTYE21 OYSN and SALB31 OLBA should be sent to LOZZMMID (Vienna ROC)

TT	AAii	CCCC	Loc.Ind.	Sent to	Originator	Suggestion
FT	AR20	OEJD	OBBI	LOZZMMID	OEJDYMYX	FTAR20 OEJD is obviously a recompiled bulletin. All included reports are received within the original bulletins. It is not necessary to send this bulletin to LOWM. Furthermore it should be checked whether there is a need for it in general. Furthermore both bulletins are received more than once, sent by different centres. It is sufficient to receive it from only one centre. FTIN90 VOMM: It seems to be a special recompilation of airports from different states. UK will be contacted for details.
FT	AR20	OEJD	OBBI	LOZZMMID	OLLYPYX	
FT	BN31	OBBI	OBBI	LOZZMMID	OBBIATFS	
FT	BN31	OBBI	OBBI	LOZZMMID	OBBIYPYX	
FT	BN31	OBBI	OBBI	LOZZMMID	OLLYPYX	
FT	IN90	VOMM	OBBI	LOWMMMXX	EGGYBYA	The bulletin is received more than once, sent by different centres. It is sufficient to receive it from only one centre.
FT	SD40	OEJD	OEAB	LOZZMMID	OEJDYMYX	
FT	SD40	OEJD	OEAB	LOZZMMID	OLLYPYX	
FT	BN31	OBBI	OEDF	LOZZMMID	OBBIATFS	
FT	BN31	OBBI	OEDF	LOZZMMID	OBBIYPYX	
FT	BN31	OBBI	OEDF	LOZZMMID	OLLYPYX	The bulletin FTBN31 OBBI is received from three different AFTN-addresses. Receiving it from only one would be sufficient. The bulletins FTSD22 OEJD as well as FTSD31 OEJD are received from two different addresses. Receiving it from only one would be sufficient. The TAF for OEDF is included in all three of them!!
FT	SD22	OEJD	OEDF	LOZZMMID	OEJDYMYX	
FT	SD22	OEJD	OEDF	LOZZMMID	OLLYPYX	
FT	SD31	OEJD	OEDF	LOZZMMID	OEJDYMYX	
FT	SD31	OEJD	OEDF	LOZZMMID	OLLYPYX	
FT	BN31	OBBI	OEDR	LOZZMMID	OBBIATFS	Same as above!
FT	BN31	OBBI	OEDR	LOZZMMID	OBBIYPYX	
FT	BN31	OBBI	OEDR	LOZZMMID	OLLYPYX	
FT	SD22	OEJD	OEDR	LOZZMMID	OEJDYMYX	
FT	SD22	OEJD	OEDR	LOZZMMID	OLLYPYX	
FT	SD31	OEJD	OEDR	LOZZMMID	OEJDYMYX	Same as above!
FT	SD31	OEJD	OEDR	LOZZMMID	OLLYPYX	
FT	SD22	OEJD	OEJN	LOZZMMID	OEJDYMYX	
FT	SD22	OEJD	OEJN	LOZZMMID	OLLYPYX	
FT	SD31	OEJD	OEJN	LOZZMMID	OEJDYMYX	
FT	SD31	OEJD	OEJN	LOZZMMID	OLLYPYX	Same as above!
FT	SD22	OEJD	OEMA	LOZZMMID	OEJDYMYX	
FT	SD22	OEJD	OEMA	LOZZMMID	OLLYPYX	
FT	SD31	OEJD	OEMA	LOZZMMID	OEJDYMYX	
FT	SD31	OEJD	OEMA	LOZZMMID	OLLYPYX	
FT	SD22	OEJD	OERK	LOZZMMID	OEJDYMYX	Same as above!
FT	SD22	OEJD	OERK	LOZZMMID	OLLYPYX	
FT	SD31	OEJD	OERK	LOZZMMID	OEJDYMYX	
FT	SD31	OEJD	OERK	LOZZMMID	OLLYPYX	
FT	SD22	OEJD	OETF	LOZZMMID	OEJDYMYX	Same as above with different bulletins!
FT	SD22	OEJD	OETF	LOZZMMID	OLLYPYX	
FT	SD32	OEJD	OETF	LOZZMMID	OEJDYMYX	
FT	SD40	OEJD	OETF	LOZZMMID	OEJDYMYX	
FT	SD40	OEJD	OETF	LOZZMMID	OLLYPYX	
FT	IR31	OIII	OIAW	LOZZMMID	OIIYPYX	The bulletin is received more than once, sent by different centres. It is sufficient to receive it from only one centre.
FT	IR31	OIII	OIAW	LOZZMMID	OLLYPYX	
FT	IR32	OIII	OIBK	LOZZMMID	OIIYPYX	The bulletin is received more than once, sent by different centres. It is sufficient to receive it from only one centre.
FT	IR32	OIII	OIBK	LOZZMMID	OLLYPYX	
FT	IR33	OIII	OIZC	LOZZMMID	OIIYPYX	The bulletin is received more than once, sent by different centres. It is sufficient to receive it from only one centre.
FT	IR33	OIII	OIZC	LOZZMMID	OLLYPYX	
FT	JD31	OJAI	OJAI	LOZZMMID	OJAMYMYX	The TAF for OJAI is received in three different bulletins. The bulletin FTME31 is available as compilation from OEJD and OLBA.
FT	ME31	OEJD	OJAI	LOZZMMID	OEJDYMYX	
FT	ME31	OLBA	OJAI	LOZZMMID	OLBAYZYX	Same as above!
FT	JD31	OJAI	OJAM	LOZZMMID	OJAMYMYX	
FT	ME31	OEJD	OJAM	LOZZMMID	OEJDYMYX	
FT	ME31	OLBA	OJAM	LOZZMMID	OLBAYZYX	
FT	JD31	OJAI	OJAQ	LOZZMMID	OJAMYMYX	
FT	ME31	OEJD	OJAQ	LOZZMMID	OEJDYMYX	Same as above!
FT	ME31	OLBA	OJAQ	LOZZMMID	OLBAYZYX	
FT	AR20	OEJD	OKBK	LOZZMMID	OEJDYMYX	
FT	AR20	OEJD	OKBK	LOZZMMID	OLLYPYX	
FT	BN31	OBBI	OKBK	LOZZMMID	OBBIATFS	
FT	BN31	OBBI	OKBK	LOZZMMID	OBBIYPYX	The TAF for OKBK is included in three different bulletins from the MID region sent from different addresses and in one compilation done by VOMM.
FT	BN31	OBBI	OKBK	LOZZMMID	OLLYPYX	
FT	IN90	VOMM	OKBK	LOWMMMXX	EGGYBYA	
FT	KW21	OKBK	OKBK	LOZZMMID	OLLYPYX	
FT	LB31	OLBA	OLBA	LOZZMMID	OLBAYMYX	
FT	ME31	OEJD	OLBA	LOZZMMID	OEJDYMYX	The TAF for OLBA is received in three different bulletins. The bulletin FTME31 is available as compilation from OEJD and OLBA.
FT	ME31	OLBA	OLBA	LOZZMMID	OLBAYZYX	
FT	AR20	OEJD	OMAA	LOZZMMID	OEJDYMYX	The TAF for OMAA is included in three different bulletins from the MID region sent from different addresses and in one compilation done by VOMM.
FT	AR20	OEJD	OMAA	LOZZMMID	OLLYPYX	
FT	BN32	OBBI	OMAA	LOZZMMID	OBBIATFS	
FT	BN32	OBBI	OMAA	LOZZMMID	OBBIYPYX	
FT	BN32	OBBI	OMAA	LOZZMMID	OLLYPYX	
FT	ER32	OMAE	OMAA	LOZZMMID	OMAEYFYX	
FT	ER32	OMAE	OMAA	LOZZMMID	OMAEYPYX	
FT	ER32	OMAE	OMAA	LOZZMMID	OMAEYPPY	
FT	IN90	VOMM	OMAA	LOWMMMXX	EGGYBYA	
FT	AR20	OEJD	OMAD	LOZZMMID	OEJDYMYX	
FT	BN32	OBBI	OMAD	LOZZMMID	OBBIATFS	The TAF for OMAD is included in three different bulletins from the MID region sent from different addresses.
FT	BN32	OBBI	OMAD	LOZZMMID	OBBIYPYX	
FT	BN32	OBBI	OMAD	LOZZMMID	OLLYPYX	
FT	ER32	OMAE	OMAD	LOZZMMID	OMAEYFYX	
FT	ER32	OMAE	OMAD	LOZZMMID	OMAEYPYX	
FT	ER32	OMAE	OMAD	LOZZMMID	OMAEYPPY	
FT	BN32	OBBI	OMAL	LOZZMMID	OBBIATFS	

FT	BN32	OBBI	OMAL	LOZZMMID	OBBIYPYX	The TAF for OMAL is included in two different bulletins from the MID region sent from different addresses and in one compilation done by VOMM.
FT	BN32	OBBI	OMAL	LOZZMMID	OLLYPYX	
FT	ER32	OMAE	OMAL	LOZZMMID	OMAEYFYX	
FT	ER32	OMAE	OMAL	LOZZMMID	OMAEYPPY	
FT	IN90	VOMM	OMAL	LOWMMMXX	EGGYBYA	
FT	AR20	OEJD	OMDB	LOZZMMID	OEJDYMYX	The TAF for OMDB is included in three different bulletins from the MID region sent from different addresses and in one compilation done by VOMM.
FT	AR20	OEJD	OMDB	LOZZMMID	OLLYPYX	
FT	BN32	OBBI	OMDB	LOZZMMID	OBBITAFS	
FT	BN32	OBBI	OMDB	LOZZMMID	OBBIYPYX	
FT	BN32	OBBI	OMDB	LOZZMMID	OLLYPYX	
FT	ER32	OMAE	OMDB	LOZZMMID	OMAEYFYX	
FT	ER32	OMAE	OMDB	LOZZMMID	OMAEYPPY	
FT	ER32	OMAE	OMDB	LOZZMMID	OMAEYPPY	The TAF for OBBI is included in two different bulletins from the MID region sent from different addresses.
FT	IN90	VOMM	OMDB	LOWMMMXX	EGGYBYA	
FT	BN32	OBBI	OMDW	LOZZMMID	OBBITAFS	
FT	BN32	OBBI	OMDW	LOZZMMID	OBBIYPYX	
FT	BN32	OBBI	OMDW	LOZZMMID	OLLYPYX	
FT	ER32	OMAE	OMDW	LOZZMMID	OMAEYFYX	The TAF for OMFJ is included in two different bulletins from the MID region sent from different addresses and in one compilation done by VOMM.
FT	ER32	OMAE	OMFJ	LOZZMMID	OBBITAFS	
FT	BN32	OBBI	OMFJ	LOZZMMID	OBBIYPYX	
FT	BN32	OBBI	OMFJ	LOZZMMID	OLLYPYX	
FT	ER32	OMAE	OMFJ	LOZZMMID	OMAEYFYX	
FT	ER32	OMAE	OMFJ	LOZZMMID	OMAEYPPY	The TAF for OMRK is included in three different bulletins from the MID region sent from different addresses.
FT	IN90	VOMM	OMFJ	LOWMMMXX	EGGYBYA	
FT	AR20	OEJD	OMRK	LOZZMMID	OEJDYMYX	
FT	AR20	OEJD	OMRK	LOZZMMID	OLLYPYX	
FT	BN32	OBBI	OMRK	LOZZMMID	OBBITAFS	
FT	BN32	OBBI	OMRK	LOZZMMID	OBBIYPYX	The TAF for OMSJ is included in three different bulletins from the MID region sent from different addresses and in one compilation done by VOMM.
FT	BN32	OBBI	OMRK	LOZZMMID	OLLYPYX	
FT	ER32	OMAE	OMRK	LOZZMMID	OMAEYFYX	
FT	ER32	OMAE	OMRK	LOZZMMID	OMAEYPPY	
FT	ER32	OMAE	OMRK	LOZZMMID	OMAEYPPY	
FT	AR20	OEJD	OMSJ	LOZZMMID	OEJDYMYX	The TAF for OOMS is included in two different bulletins from the MID region sent from different addresses and in one compilation done by VOMM.
FT	AR20	OEJD	OMSJ	LOZZMMID	OLLYPYX	
FT	BN32	OBBI	OMSJ	LOZZMMID	OBBITAFS	
FT	BN32	OBBI	OMSJ	LOZZMMID	OBBIYPYX	
FT	BN32	OBBI	OMSJ	LOZZMMID	OLLYPYX	
FT	ER32	OMAE	OMSJ	LOZZMMID	OMAEYFYX	
FT	ER32	OMAE	OMSJ	LOZZMMID	OMAEYPPY	
FT	IN90	VOMM	OMSJ	LOWMMMXX	EGGYBYA	The TAF for OOSJ is included in two different bulletins from the MID region sent from different addresses.
FT	AR20	OEJD	OOMS	LOZZMMID	OEJDYMYX	
FT	AR20	OEJD	OOMS	LOZZMMID	OLLYPYX	
FT	BN32	OBBI	OOMS	LOZZMMID	OBBITAFS	
FT	BN32	OBBI	OOMS	LOZZMMID	OBBIYPYX	
FT	BN32	OBBI	OOMS	LOZZMMID	OLLYPYX	The TAF for OSAP is included in three different bulletins from the MID region sent from different addresses.
FT	IN90	VOMM	OOMS	LOWMMMXX	EGGYBYA	
FT	AR20	OEJD	OOSA	LOZZMMID	OEJDYMYX	
FT	AR20	OEJD	OOSA	LOZZMMID	OLLYPYX	
FT	BN32	OBBI	OOSA	LOZZMMID	OBBIYPYX	
FT	ME31	OEJD	OSAP	LOZZMMID	OEJDYMYX	The TAF for OSDI is included in three different bulletins from the MID region sent from different addresses and in one compilation done by VOMM.
FT	ME31	OLBA	OSAP	LOZZMMID	OLBAYZYX	
FT	SY31	OSDI	OSAP	LOZZMMID	OSDIYMYX	
FT	SY31	OSDI	OSAP	LOWMYBYX	OSDIYMYX	
FT	ME31	OEJD	OSDI	LOZZMMID	OEJDYMYX	
FT	ME31	OLBA	OSDI	LOZZMMID	OLBAYZYX	The TAF for OSLK is included in two different bulletins from the MID region sent from different addresses.
FT	SY31	OSDI	OSDI	LOZZMMID	OSDIYMYX	
FT	SY31	OSDI	OSDI	LOWMYBYX	OSDIYMYX	
FT	ME31	OEJD	OSLK	LOZZMMID	OEJDYMYX	
FT	ME31	OLBA	OSLK	LOZZMMID	OLBAYZYX	
FT	SY31	OSDI	OSLK	LOZZMMID	OSDIYMYX	The TAF for OTBD is included in two different bulletins from the MID region sent from different addresses and in one compilation done by VOMM.
FT	SY31	OSDI	OSLK	LOWMYBYX	OSDIYMYX	
FT	AR20	OEJD	OTBD	LOZZMMID	OEJDYMYX	
FT	AR20	OEJD	OTBD	LOZZMMID	OLLYPYX	
FT	BN31	OBBI	OTBD	LOZZMMID	OBBITAFS	
FT	BN31	OBBI	OTBD	LOZZMMID	OBBIYPYX	The TAF for OYAA is included in two different bulletins from the MID region sent from different addresses.
FT	BN31	OBBI	OTBD	LOZZMMID	OLLYPYX	
FT	IN90	VOMM	OTBD	LOWMMMXX	EGGYBYA	
FT	AR20	OEJD	OYAA	LOZZMMID	OEJDYMYX	
FT	AR20	OEJD	OYAA	LOZZMMID	OLLYPYX	
FT	YE21	OYSN	OYAA	LOZZMMID	OLLYPYX	The bulletin is received more than once, sent by different centres. It is sufficient to receive it from only one centre.
FT	YE21	OYSN	OYAA	LOWMYBYX	OYSNMYX	
FT	YE21	OYSN	OYHD	LOZZMMID	OLLYPYX	
FT	YE21	OYSN	OYHD	LOWMYBYX	OYSNMYX	
FT	AR20	OEJD	OYSN	LOZZMMID	OEJDYMYX	
FT	AR20	OEJD	OYSN	LOZZMMID	OLLYPYX	The TAF for OKBK is included in three different bulletins from the MID region sent from different addresses.
FT	SD31	OEJD	OYSN	LOZZMMID	OEJDYMYX	
FT	SD31	OEJD	OYSN	LOZZMMID	OLLYPYX	

FT	YE21	OYSN	OYSN	LOZZMMID	OLLPPYX	
FT	YE21	OYSN	OYSN	LOWMYBYX	OYSNMYX	
SA	BN31	OBBI	OBBI	LOZZMMID	OBBIYRX	The bulletin is received more than once, sent by different centres. It is sufficient to receive it from only one centre.
SA	BN31	OBBI	OBBI	LOZZMMID	OLLPPYX	
SA	SD20	OEJD	OEAB	LOZZMMID	OEJDYMYX	The bulletin is received more than once, sent by different centres. It is sufficient to receive it from only one centre.
SA	SD20	OEJD	OEAB	LOZZMMID	OLLPPYX	
SA	BN31	OBBI	OEDF	LOZZMMID	OBBIYRX	The METAR for OEDF is included in three different bulletins from the MID region sent from different addresses.
SA	BN31	OBBI	OEDF	LOZZMMID	OLLPPYX	
SA	SD20	OEJD	OEDF	LOZZMMID	OEJDYMYX	
SA	SD20	OEJD	OEDF	LOZZMMID	OLLPPYX	
SA	SD31	OEJD	OEDF	LOZZMMID	OEJDYMYX	
SA	SD31	OEJD	OEDF	LOZZMMID	OLLPPYX	
SA	BN31	OBBI	OEDR	LOZZMMID	OBBIYRX	The METAR for OEDR is included in three different bulletins from the MID region sent from different addresses.
SA	BN31	OBBI	OEDR	LOZZMMID	OLLPPYX	
SA	SD20	OEJD	OEDR	LOZZMMID	OEJDYMYX	
SA	SD20	OEJD	OEDR	LOZZMMID	OLLPPYX	
SA	SD31	OEJD	OEDR	LOZZMMID	OEJDYMYX	
SA	SD31	OEJD	OEDR	LOZZMMID	OLLPPYX	
SA	SD20	OEJD	OEJN	LOZZMMID	OEJDYMYX	The METAR for OEJN is included in two different bulletins from the MID region sent from different addresses.
SA	SD20	OEJD	OEJN	LOZZMMID	OLLPPYX	
SA	SD31	OEJD	OEJN	LOZZMMID	OEJDYMYX	
SA	SD31	OEJD	OEJN	LOZZMMID	OLLPPYX	
SA	SD20	OEJD	OEMA	LOZZMMID	OEJDYMYX	The METAR for OEMA is included in two different bulletins from the MID region sent from different addresses.
SA	SD20	OEJD	OEMA	LOZZMMID	OLLPPYX	
SA	SD31	OEJD	OEMA	LOZZMMID	OEJDYMYX	
SA	SD31	OEJD	OEMA	LOZZMMID	OLLPPYX	
SA	SD20	OEJD	OERK	LOZZMMID	OEJDYMYX	The METAR for OERK is included in two different bulletins from the MID region sent from different addresses.
SA	SD20	OEJD	OERK	LOZZMMID	OLLPPYX	
SA	SD31	OEJD	OERK	LOZZMMID	OEJDYMYX	
SA	SD31	OEJD	OERK	LOZZMMID	OLLPPYX	
SA	SD20	OEJD	OETF	LOZZMMID	OEJDYMYX	The METAR for OETF is included in two different bulletins from the MID region sent from different addresses.
SA	SD20	OEJD	OETF	LOZZMMID	OLLPPYX	
SA	SD32	OEJD	OETF	LOZZMMID	OEJDYMYX	
SA	SD32	OEJD	OETF	LOZZMMID	OLLPPYX	
SA	JD20	OJAM	OJAI	LOWMMMXX	EDZWYMYX	The METAR for OJAI is included in four different bulletins from the MID region sent from different addresses.
SA	JD31	OJAI	OJAI	LOZZMMID	OJAMYMYX	
SA	ME31	OEJD	OJAI	LOZZMMID	OEJDYMYX	
SA	ME31	OLBA	OJAI	LOZZMMID	OEJDYMYX	
SA	ME31	OLBA	OJAI	LOZZMMID	OLBAYZYX	
SA	JD20	OJAM	OJAM	LOWMMMXX	EDZWYMYX	The METAR for OJAM is included in four different bulletins from the MID region sent from different addresses.
SA	JD31	OJAI	OJAM	LOZZMMID	OJAMYMYX	
SA	ME31	OEJD	OJAM	LOZZMMID	OEJDYMYX	
SA	ME31	OLBA	OJAM	LOZZMMID	OEJDYMYX	
SA	ME31	OLBA	OJAM	LOZZMMID	OLBAYZYX	
SA	JD20	OJAM	OJAM	LOWMMMXX	EDZWYMYX	
SA	JD31	OJAI	OJAM	LOZZMMID	OJAMYMYX	The METAR for OJAM is included in four different bulletins from the MID region sent from different addresses.
SA	ME31	OEJD	OJAM	LOZZMMID	OEJDYMYX	
SA	ME31	OLBA	OJAM	LOZZMMID	OEJDYMYX	
SA	ME31	OLBA	OJAM	LOZZMMID	OLBAYZYX	
SA	JD20	OJAM	OJAM	LOWMMMXX	EDZWYMYX	The METAR for OJAM is included in four different bulletins from the MID region sent from different addresses.
SA	JD31	OJAI	OJAM	LOZZMMID	OJAMYMYX	
SA	ME31	OEJD	OJAM	LOZZMMID	OEJDYMYX	
SA	ME31	OLBA	OJAM	LOZZMMID	OEJDYMYX	
SA	ME31	OLBA	OJAM	LOZZMMID	OLBAYZYX	
SA	BN31	OBBI	OKBK	LOZZMMID	OBBIYRX	The METAR for OKBK is included in two different bulletins from the MID region sent from different addresses.
SA	BN31	OBBI	OKBK	LOZZMMID	OLLPPYX	
SA	KW31	OKBK	OKBK	LOZZMMID	OLLPPYX	
SA	LB31	OLBA	OLBA	LOWMYMYX	OLBAYMYX	The METAR for OLBA is included in three different bulletins from the MID region sent from different addresses.
SA	ME31	OEJD	OLBA	LOZZMMID	OEJDYMYX	
SA	ME31	OLBA	OLBA	LOZZMMID	OEJDYMYX	
SA	ME31	OLBA	OLBA	LOZZMMID	OLBAYZYX	
SA	BN32	OBBI	OMAA	LOZZMMID	OBBIYRX	The bulletin is received more than once, sent by different centres. It is sufficient to receive it from only one centre.
SA	BN32	OBBI	OMAA	LOZZMMID	OLLPPYX	
SA	BN32	OBBI	OOMS	LOZZMMID	OBBIYRX	The METAR for OOMS is included in two different bulletins from the MID region sent from different addresses.
SA	BN32	OBBI	OOMS	LOZZMMID	OLLPPYX	
SA	OM20	OOMS	OOMS	LOZZMMID	OLLPPYX	The METAR for OOMS is included in two different bulletins from the MID region sent from different addresses.
SA	BN32	OBBI	OOSA	LOZZMMID	OBBIYRX	
SA	BN32	OBBI	OOSA	LOZZMMID	OLLPPYX	The METAR for OOSA is included in two different bulletins from the MID region sent from different addresses.
SA	OM20	OOMS	OOSA	LOZZMMID	OLLPPYX	
SA	ME31	OEJD	OSAP	LOZZMMID	OEJDYMYX	The METAR for OSAP is included in three different bulletins from the MID region sent from different addresses.
SA	ME31	OLBA	OSAP	LOZZMMID	OEJDYMYX	
SA	ME31	OLBA	OSAP	LOZZMMID	OLBAYZYX	
SA	SY31	OSDI	OSAP	LOZZMMID	OSDIYMYX	
SA	ME31	OEJD	OSDI	LOZZMMID	OEJDYMYX	The METAR for OSDI is included in three different bulletins from the MID region sent from different addresses.
SA	ME31	OLBA	OSDI	LOZZMMID	OEJDYMYX	
SA	ME31	OLBA	OSDI	LOZZMMID	OLBAYZYX	
SA	SY31	OSDI	OSDI	LOZZMMID	OSDIYMYX	
SA	ME31	OEJD	OSLK	LOZZMMID	OEJDYMYX	The METAR for OSLK is included in three different bulletins from the MID region sent from different addresses.
SA	ME31	OLBA	OSLK	LOZZMMID	OEJDYMYX	
SA	ME31	OLBA	OSLK	LOZZMMID	OLBAYZYX	
SA	SY31	OSDI	OSLK	LOZZMMID	OSDIYMYX	
SA	BN31	OBBI	OTBD	LOZZMMID	OBBIYRX	The bulletin is received more than once, sent by different centres. It is sufficient to receive it from only one centre.
SA	BN31	OBBI	OTBD	LOZZMMID	OLLPPYX	
SA	YE20	OYAA	OYAA	LOWMMMXX	EDZWYMYX	
SA	YE20	OYSC	OYAA	LOWMMMXX	EDZWYMYX	
SA	YE20	OYAG	OYAG	LOWMMMXX	EDZWYMYX	
SA	YE20	OYSC	OYAG	LOWMMMXX	EDZWYMYX	
SA	YE20	OYAS	OYAS	LOWMMMXX	EDZWYMYX	
SA	YE20	OYAS	OYAS	LOWMMMXX	EDZWYMYX	

SA	YE20	OYSC	OYAS	LOWMMMXX	EDZWYMYX	Two different bulletins are issued with the same content. One with only the TAF for the respective aerodrome. The second one is the compilation. Both bulletins are not addressed to Vienna but are received from Germany. According to an info from Germany they receive the bulletins via Madrid.
SA	YE20	OYAT	OYAT	LOWMMMXX	EDZWYMYX	
SA	YE20	OYSC	OYAT	LOWMMMXX	EDZWYMYX	
SA	YE20	OYHD	OYHD	LOWMMMXX	EDZWYMYX	
SA	YE20	OYSC	OYHD	LOWMMMXX	EDZWYMYX	
SA	YE20	OYMB	OYMB	LOWMMMXX	EDZWYMYX	
SA	YE20	OYSC	OYMB	LOWMMMXX	EDZWYMYX	
SA	YE20	OYRN	OYRN	LOWMMMXX	EDZWYMYX	
SA	YE20	OYSC	OYRN	LOWMMMXX	EDZWYMYX	Two different bulletins are issued with the same content. One with only the TAF for the respective aerodrome. The second one is the compilation. Both bulletins are not addressed to Vienna but are received from Germany. According to an info from Germany they receive the bulletins via Madrid. Furthermore the report is included in the compiation SASD31 OEJD. This is not necessary.
SA	SD31	OEJD	OYSN	LOZZMMID	OEJDYMYX	
SA	SD31	OEJD	OYSN	LOZZMMID	OLLLYPYX	
SA	YE20	OYSC	OYSN	LOWMMMXX	EDZWYMYX	
SA	YE20	OYSN	OYSN	LOWMMMXX	EDZWYMYX	
SA	YE20	OYAA	OYSQ	LOWMMMXX	EDZWYMYX	Two different bulletins are issued with the same content. One with only the TAF for the respective aerodrome. The second one is the compilation. Both bulletins are not addressed to Vienna but are received from Germany. According to an info from Germany they receive the bulletins via Madrid.
SA	YE20	OYSC	OYSQ	LOWMMMXX	EDZWYMYX	
SA	YE20	LOWM	OYSY	LOWMMMXX	EDZWYMYX	
SA	YE20	OYSC	OYSY	LOWMMMXX	EDZWYMYX	
SA	YE20	LOWM	OYTZ	LOWMMMXX	EDZWYMYX	
SA	YE20	OYSC	OYTZ	LOWMMMXX	EDZWYMYX	

- - - - -

MIDANPIRG/13
Appendix 4.6C to the Report on Agenda Item 4.6

NON RECEIPT OF REQUESTED OPMET DATA

- METAR requested, but not received for HEAZ, HEOW, OEJB (received only for 6 out of 16 exercises), ORNI
- FC requested but not received for OEYN (but FT is received – ICAO may need to update this table)
- FT requested but not received for HEAZ, HEOW, OIAA (received only for 5 out of 16 exercises), ORNI, ORSU, OYAD, OYRN, OYSY, OYTZ

Note that Egypt would inform ICAO RO-MET that OPMET is not provided for HEAZ and HEOW as they are used for military purposes

Note that Saudi Arabia would inform ICAO RO-MET that METAR is not provided for OEJB as it is used as a naval airbase

Note that Saudi Arabia demonstrated to the meeting that FC for OEYN is included in FCSD31 Jeddah bulletin and that this would be communicated to ROC Vienna

The Secretariat would then inform the SADISOPSG Secretariat of the above changes to the global OPMET database

MIDANPIRG/13

Appendix 4.6D to the Report on Agenda Item 4.6

7.5 Summary of OPMET data issuance

7.5.1 In response to APANPIRG/20 Conclusion 20/62, a summary of correct methods of issuing OPMET data are provided in the following two tables (adapted further with input provided by Regional OPMET Data Bank Singapore – highlighted in yellow)

METAR Observation, Compiling and Filing

Function	Responsible Entity	Explanation of Time	Time of task (min)
METAR Observation	Originating stations (AMS, AMO, forecast office, MWO, TCAC, VAAC)	State determines how often and when (emphasis on consistency, i.e. 50 minutes past the hour every hour every day) Examples : HH+00, HH+30, HH+10, HH+50 Note that the observation time is used in the METAR report	0
Send METAR observation to NOC	Orig station		<5
Send METAR observations to ROBEX Centre	NOC		
Bulletin compiling and filing	ROBEX Bulletin Compiling Centre	Up to 5 minutes after actual time of observation (ref.: Annex 3, App. 10, 2.1.2) Note that the observation time of the METAR is used in the DTG – YYGGgg of the bulletin header Note that the filing time is used in the AFTN header and should be up to 5 minutes after the observation time given in the bulletin header also referred to as the WMO Abbreviated Heading in the ROBEX HB	
Send METAR bulletin to: ROBEX Centres (predefined distribution list) RODBs NOCs Other MET offices	ROBEX Centre via AFTN	Up to 5 minutes (10 minutes for distances greater than 900 km) (ref.: Annex 3, App. 10, 1.1)	<5 (<10 for distances > 900 km)
Acceptable time from observation at originating stations to reception by user			<10 (<15 mins for distances > 900 km)

TAF Issuance, Compiling and Filing

Function	Responsible Entity	Explanation of Time	Time of task (min)
TAF Issuance	AMO or NOC	State determines time of 4 scheduled TAFs (emphasis on consistency, i.e. 00, 06, 12, 18Z every day) Note that issuance time of TAF (which is one hour before the start period of validity of the TAF) is used in the date/time group (DTG) (YYGGggZ) of TAF messages TAF is sent to ROBEX Centre before the cutoff time of accepting TAF for filing one hour before the start period of validity time (typically 15 minutes before filing)	(allow enough time to reach ROBEX Centre before cutoff time – typically 15 minutes before the filing time or one-hour and 15 minutes before the start period of validity) Ex: TAF to be valid at 0600 is sent to ROBEX Centre by 0445
Bulletin compiling and filing	ROBEX Centre	Bulletins are compiled during the 15 minutes before filing Note that the TAF issuance time (official filing time) is used in the DTG – YYGGgg of the bulletin header Note that the <u>actual</u> filing time is used in the AFTN header and should be after the time given in the bulletin header also referred to as the WMO Abbreviated Heading in the ROBEX HB TAF should be filed for transmission at least one hour before the commencement of their period of validity, unless otherwise determined by regional air navigation agreement. (ref.: Annex 3, App. 10, 2.1.2)	<15 Ex: TAF bulletin compiled between 0445 and 0500 and filed for transmission
Send TAF bulletin to: ROBEX Centres (predefined distribution list) RODBs NOCs Other MET offices	ROBEX Centre <i>via AFTN</i>	Up to 5 minutes (10 minutes for distances greater than 900 km) (ref.: Annex 3, App. 10, 1.1)	<5 (<10 for distances > 900 km)
Acceptable time for ROBEX BCC compiling and filing to reception by user			<20 (<25 for distances > 900 km)

MIDANPIRG/13
Appendix 4.6E to the Report on Agenda Item 4.6

METEOROLOGY SUB-GROUP (MET SG)

1. Terms of Reference

1.1 The terms of reference of the MET Sub-Group are:

- a) Ensure the continuous and coherent development of the MET Part of the MID Air Navigation Plan (Basic ANP and FASID, Doc 9708) taking into account the evolving operational requirements in the MID Region and the need for harmonization with the adjacent regions in compliance with the Global Air Navigation Plan.
- b) Monitor and coordinate implementation of the relevant ICAO SARPs and regional procedures, facilities and services on aeronautical meteorology by the MID States and pursue harmonization.
- c) Identify any deficiencies in the provision of meteorological service for air navigation in the MID Region and ensure the development and implementation of relevant action plans by the States to resolve them.
- d) Foster implementation by facilitating the exchange of know-how and transfer of knowledge and experience between the MID States.
- e) Provide input to the work of appropriate ICAO bodies in the field of aeronautical meteorology, according to the established procedures.

1.2 In order to meet the Terms of Reference, the MET SG shall:

- a) Monitor implementation of WAFS and SADIS by the MID States and provide guidance for timely implementation of changes to the systems that affect end users
- b) Foster implementation of IAVW:
 - Liaise with VAAC Toulouse
 - Organise VA SIGMET tests
 - Work towards enhancing the awareness of all IAVW stakeholders
 - Support regional volcanic ash contingency plan activities (e.g. adapting plan, volcanic ash exercises, workshops)
- c) Foster implementation of TC advisories and warnings:
 - Liaise with TCAC New Delhi
 - Organize TC SIGMET Tests
- d) Enhance the availability and quality of SIGMET:
 - Organize WS SIGMET Tests
- e) Monitor the OPMET exchange and improve the availability and reliability of OPMET information from the MID Region:
 - Ensure establishment of proper Regional OPMET Data Bank
 - Conduct regular monitoring of OPMET data

- Provide feed-back to States on observed deficiencies
 - Conduct feasibility study on the establishment of Regional OPMET Centres
- f) Maintain the MET part of the MID ANP:
- Ensure that FASID Tables are up-to-date
- g) Develop regional guidance on the provision of SIGWX forecasts for Low-level flights
- h) Facilitate the implementation of QMS for MET in the MID States:
- Organize a QMS Seminar/Workshop

2. Composition

2.1 The Sub-Group is composed of:

- a) MIDANPIRG Member States;
- b) concerned International/Regional Organizations as observers. (IATA, IFALPA, WMO); and
- c) Provider States of specific MET services to the MID Region, WAFC London, VAAC Toulouse, TCAC New Delhi, Vienna OPMET Databank, should be invited to attend meetings on a regular basis.

MIDANPIRG/13
Report on Agenda Item 4.7

**REPORT ON AGENDA ITEM 4: PERFORMANCE FRAMEWORK FOR REGIONAL AIR NAVIGATION
PLANNING AND IMPLEMENTATION**

4.7 TRAFFIC FORECASTING

4.7.1 The meeting was apprised of the outcome of the fourth meeting of the Traffic Forecasting Sub-Group (TF SG/4) held in Cairo, Egypt, 15-17 November 2011.

4.7.2 The meeting noted that the web-enabled ICAO Integrated Statistical Database (ISDB) was implemented in order to be used for the collection, processing and dissemination of all the aviation statistics submitted by States. Accordingly, the meeting urged States to submit the required aviation statistics online.

4.7.3 The meeting took note of recommendations of the Tenth Session of the Statistics Division (STA/10), as well as the Conclusions that pertain to new editions of the ICAO Air Transport Reporting Forms as at **Appendix 4.7A** to the Report on Agenda Item 4.7 which became effective **1 January 2012**. Recognizing the importance of these recommendations, the meeting agreed to the following Conclusion:

CONCLUSION 13/58: PROVISION OF STATISTICAL DATA

*That, States be urged to provide required airlines, airports and air navigation service providers statistical data to ICAO using the new revised forms as at **Appendix 4.7A** to the Report on Agenda Item 4.7.*

Assistance to States

4.7.4 The meeting recognized that many States need manpower training and short-term expert assistance for the organisation and development of their aviation statistics forecast and peak period analysis as well as manpower training on the ICAO statistical data new reporting forms. Accordingly, the meeting urged States to take advantage of ICAO offer for training and agreed to the following Conclusion:

**CONCLUSION 13/59: TRAFFIC FORECAST AND PEAK PERIOD ANALYSIS
WORKSHOP**

That, with a view to provide States with a better understanding of the ICAO Statistical data reporting forms and process of development of Traffic Forecasts and Peak Period Analysis:

- a) a MID Traffic Forecast and Peak Period Analysis Workshop be organised in 2013; and*
- b) States be invited to participate actively in the Workshop.*

4.7.5 The meeting encouraged States to host the above-mentioned Workshop.

MIDANPIRG/13
Report on Agenda Item 4.7

Review of updated Forecast

4.7.6 The meeting was presented with the passenger traffic forecast developed by ICAO and adopted by the TF SG/4 meeting for the five major route groups to, from and within the Middle East Region for the period 2010-2030 as at **Appendix 4.7B** to the Report on Agenda Item 4.7. According to these forecasts, the passenger traffic to, from and within the Middle East Region on the five major route groups concerned for the period 2010-2030 is expected to increase at an average annual rate of 9.1 per cent. The Middle East-Africa Route Group is expected to experience the highest average annual growth rate of 10.4 per cent per annum, followed by Intra Middle East, Asia/Pacific-Middle East, North America-Middle East and Europe-Middle East Route Groups with growth rates of 10.3 per cent, 9.2 per cent, 8.8 per cent and 7.3 per cent, respectively for the period concerned.

4.7.7 The total aircraft movements to/from and within the Middle East Region are estimated to increase at an average annual growth rate of 8.7 per cent over the same period. The forecasts excluded military, general aviation and freighters aircraft.

Peak-Period Analysis

4.7.8 The meeting noted the results of Peak Periods Analysis prepared by the secretariat on daily, hourly and monthly peaks based upon, the one month sample data obtained from the Middle East Regional Monitoring Agency (MIDRMA). The analysis intended to provide States with a better understanding of the individual States' planning requirements for their own FIRs. The meeting emphasized on the importance of the availability of complete and reliable traffic data for the development of traffic forecasts and reiterated its request to MID States to put more efforts to supply FIR traffic data in order to facilitate the timely and efficient development of Traffic Forecast and analysis of Peak Periods.

4.7.9 Based on all of the forgoing, the meeting recognized the importance of the availability of complete and reliable traffic data for the development of Traffic Forecasts as required by ICAO Statistics programme; and for conducting specific analyses for selected Flight Information Regions (FIRs) to establish peak-period and other parameters required for planning and implementation purposes. In this respect, the meeting noted with concern that despite the reminders sent by the ICAO MID Regional Office, only three States provided the requested data in a timely manner to meet the deadline for the development of the forecasts and Peak Period analysis.

4.7.10 The meeting raised concern about the completeness of the data used for the development of the forecasts and questioned if the statistics should include the general aviation and military operations. The meeting agreed that this should be addressed by the TF SG.

4.7.11 Based on the above, the meeting agreed to the following Conclusion:

**CONCLUSION 13/60: TRAFFIC FORECASTING AND PEAK PERIOD
ANALYSIS REQUIREMENTS IN THE MID REGION**

That, considering the on-going requirements for development of Traffic Forecasts and Peak Period analysis in the MID Region; States be urged to:

- a) provide required traffic data in order to facilitate the timely and efficient development of Traffic Forecasts and Peak Period analysis; and*

MIDANPIRG/13
Report on Agenda Item 4.7

- b) *continue their support to the Traffic Forecasting Sub-Group by ensuring that their respective nominees to the membership of the Sub-Group include, as much as possible, forecasting experts, air traffic management experts and, when required, financial analysts to carry out business case and cost/benefit analysis.*

MIDANPIRG/13
Appendix 4.7A to the Report on Agenda Item 4.7

FOURTH MEETING OF THE TRAFFIC FORECASTING SUB-GROUP

(TF SG/4)

**IMMEDIATE ACTION ON SPECIFIC STA/10
RECOMMENDATIONS**

RECOMMENDATION 1/2

The Division recommends that:

States should be reminded that under the current definitions, international traffic includes data for cabotage services and that these data should be reported whenever data for international traffic is requested for the relevant Air Transport Reporting Forms, in particular in Forms A — *Traffic, commercial air carriers*, B — *On-flight Origin and Destination (OFOD)* and C — *Traffic by Flight Stage (TFS)*.

Action by States — Review of definitions of domestic and cabotage air services

States are reminded that cabotage services data should be reported whenever data for international traffic is requested. In this regard, Recommendation 1/3 related to the adoption of a classification for statistical purposes should be noted.

RECOMMENDATION 1/3

The Division recommends that:

The proposed classification (as shown in the Appendix to the report on Agenda Item 1) of civil aviation activities be adopted for statistical purposes.

Action by States — Review of the Classification and Definitions Used for Civil Aviation activities

It is noteworthy that the proposed classification is applicable with immediate effect.

RECOMMENDATION 2/1 A) AND B)

The Division recommends that:

With regard to the On-flight Origin and Destination (OFOD) data collection, Air Transport Reporting Form B, ICAO should:

- a) remove all publication restrictions in the selection of the city-pairs for this data collection; and
- b) publish all data submitted six months after the end of the quarterly reporting period concerned.

Action by States — Review of on-flight origin and destination (OFOD) publication rules and data

It is noteworthy that the release of publication restrictions is applicable with immediate effect.

RECOMMENDATION 2/2

The Division recommends that:

- a) for statistical purposes ICAO should use the definition of low-cost carriers (LCCs) as shown in the *Manual on the Regulation of International Air Transport* (Doc 9626);
- b) ICAO should annually update the list of LCCs based on the feedback from Member States; and
- c) ICAO should show both the IATA and the ICAO codes associated with each LCC.

Action by States — Definition and identification of low-cost carriers (LCCs)

Low-cost carriers (LCCs) list (preliminary compilation established by the Secretariat) is posted on the STA/10 website at <http://www.icao.int/STA10/Documentation.htm>. States are requested to report on the appropriateness of the categorization of those carriers and provide other categorizations that are not listed to facilitate the updating of the list before it is posted on the ICAO Secure site.

RECOMMENDATION 3/1 B)

The Division recommends that:

- b) ICAO should implement a new quarterly survey to obtain basic financial parameters of major air carriers in their regions to be collected through the ICAO Regional offices.

Action by States — Quick monitoring system (QMS) of commercial air carrier financial data

ICAO Regional Offices will dispatch a new quarterly survey pertaining to basic financial parameters to be collected from major air carriers in their region (Attachment B refers).

RECOMMENDATION 12/1

The Division recommends that:

- a) Member States should name one or more focal contact points for aviation statistics within their national civil aviation administration; and
- b) the list of focal contact points should be made available through the ICAO secure website.

**Action by States — Review of the Current Reporting Status Commercial Air Carriers
and Review of the Current Reporting Status: Airports and Air
Navigation Service Providers**

States are requested to name one or more focal contact points for aviation statistics within national civil aviation administrations. The list of focal contact points will be made available through the ICAO secure website.

**LIST OF NEW AND REVISED FORMS AND
ASSOCIATED STA/10 RECOMMENDATIONS**

REVISED AND NEW FORMS	STA/10 RECOMMENDATIONS
Form A — Traffic — Commercial Air Carriers	R-1/1, R-1/3 and R-2/3
Form B — On-Flight Origin and Destination	R-2/1 c)
Form D — Fleet and Personnel — Commercial Air Carriers	R-1/3
Form EF — Financial Data — Commercial Air Carriers	R-3/1 a) and R-3/2
Form H — Civil Aircraft on Register	R-8/1 a) 1) and 2)
Forms I and I-S — Airport Traffic	R-4/1
Forms J — Airport Financial Data	Conclusions-5&6/1
Form K — Air Navigation Services Financial Data	Conclusions-5&6/1
Form M (New) — Fuel Consumption Data	R-10/1 and R-1/3
Form N (New) — Aviation Personnel Licensing and Training	R-9/1

MIDANPIRG/13
Appendix 4.7B to the Report on Agenda Item 4.7

**AIRCRAFT MOVEMENT FORECASTS
FOR THE MIDDLE EAST REGION
2010 - 2030**

Prepared by the Secretariat for
TF SG/4

1. INTRODUCTION

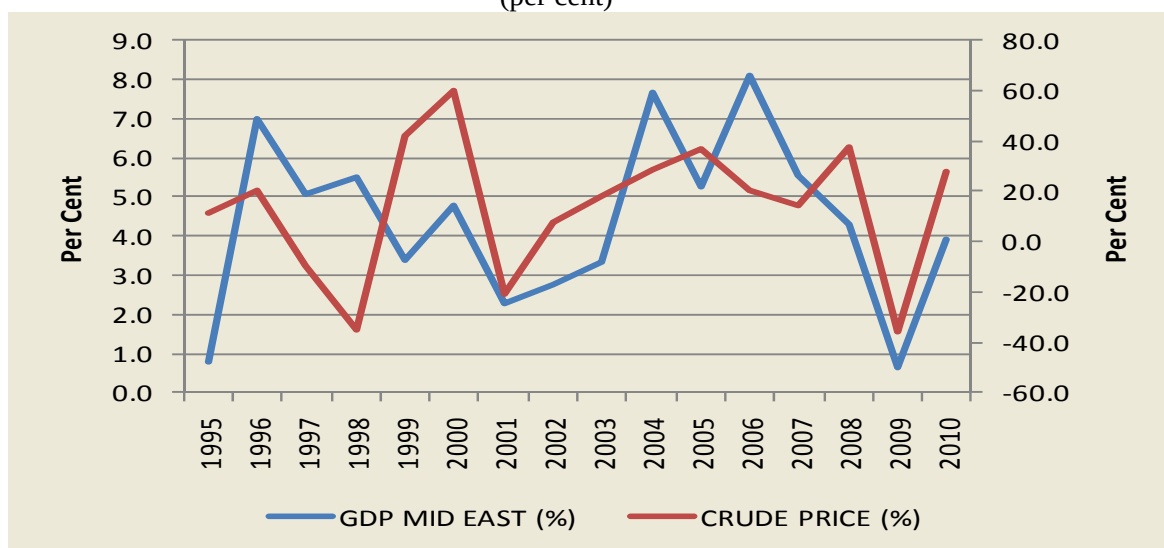
1.1 The MIDANPIRG Traffic Forecasting Sub-Group (TFSG) superseded, in 2004, the Middle East Traffic Forecasting Group (MID TFG) which was set up in 1998 with the objective of developing traffic forecasts and other planning parameters in support of the planning of air navigation services in the MID region. The TFSG has, so far, held three meetings in September 2004, in May 2006 and in April 2009.

1.2 This report provides forecasts prepared by the ICAO Secretariat for discussion by the TFSG/4 meeting in Cairo, 15-17 November 2011.

2. ECONOMIC TRENDS AND PROSPECTS FOR THE MIDDLE EAST REGION

2.1. The Middle East economy is largely driven by oil production and exports and as a result the region's economic growth is highly dependent on changes oil prices as illustrated in **Figure 1**.

FIGURE 1
Changes in Middle East GDP and Crude Oil Prices
(per cent)



2.2 The recent hike in oil prices, particularly in 2008 helped the economy of the region grow at faster rates through increased investment particularly in construction projects, higher trade volumes and tourism activity. The global economic crisis of 2009 had affected the economic growth of the region and as a result the region's GDP grew only about 0.6 per cent. This crisis had also led to shortages in labour and construction material. The combination of the increase in consumption, dominated by imported goods, and higher world commodity prices led to higher inflation, however, this trend was short lived and in 2010 the inflation rate in the region came down from 13 per cent in 2008 to about 5 percent in 2010. It is expected that the long term inflation rate will be between 4 to 5 per cent. The Middle East economy recovered from the previous year's economic crisis and posted a 4 per cent GDP growth in 2010. In the long run the Middle East economy is expected to maintain a higher than world average growth through to the end of the forecast period. The GDP for the region is expected to increase at an average annual rate of 4.1 per cent for the 2010-2030 periods.

3. GEOGRAPHICAL SCOPE AND HISTORICAL DATA

3.1 Geographical Scope

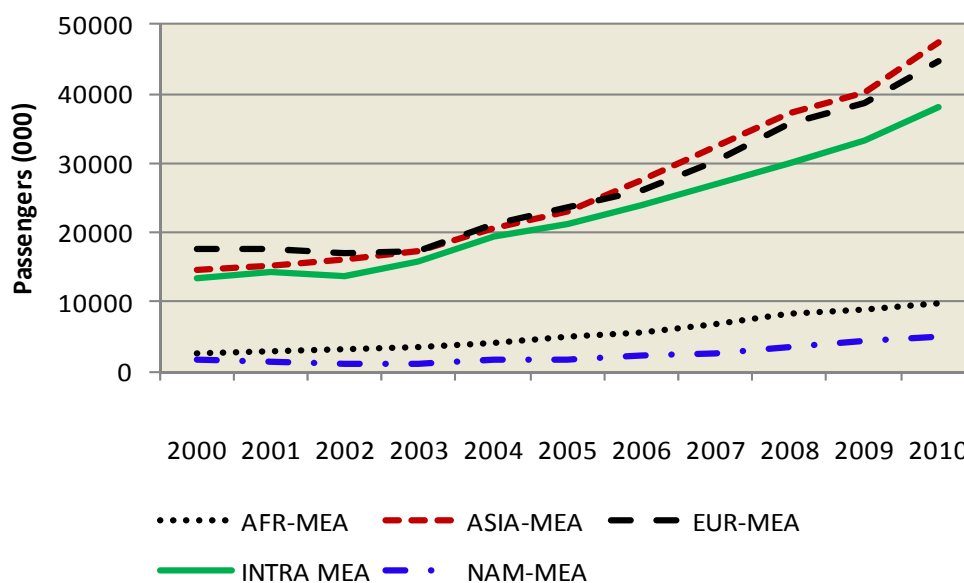
3.1.1 In order to facilitate the group's work and the forecasting process, the following major route groups to; from and within the Middle East Region have been identified. It is to be noted that according to the conclusion 3/1 of TF SG/3, Egypt has been included in the Middle East Region:

- Between Middle East - Europe
- Between Middle East - Africa
- Between Middle East - Asia/Pacific
- Between Middle East - North America
- Intra Middle East

3.2 Historical Passengers Traffic on Major Identified Route Groups

3.2.1 According to the historic air traffic trends on the identified five major route groups to, from and within the Middle East region the passenger traffic increased from 50 million in 2000 to about 145 million passengers in 2010 at an average annual growth rate of 11.2 per cent. The annual passengers carried and growth rates for each of the route groups concerned are illustrated in **Figure 2**.

FIGURE 2
Traffic by Major Route Group – 2000 -2010
(thousand passengers)



3.2.2 All route groups grew at an average annual rate ranging from 9.8 per cent to 14.1 per cent.

3.2.3 In 2010, the Middle East-Asia/Pacific route group had the highest share in passenger traffic (32.7 per cent), followed by Middle East-Europe (31 per cent) and Intra Middle East (26 per cent). The combined Middle East-Africa and Middle East-North America route groups share was about 10.2 per cent.

3.3 Historical Average Aircraft Seating Capacity on Major Identified Route Groups

3.3.1 During the 2000-2010 period, the average aircraft seating capacity decreased significantly on the Middle East –North America, while a moderate decrease took place on Intra Middle East and Middle East-Asia Pacific route groups. This average has fluctuated in the range of 204-207 seats per aircraft for the Middle East Africa and the Middle East-Europe route groups. The historical trends of the average aircraft seating capacity by route group are provided in **Table 1** below.

TABLE 1
Average aircraft seating capacity by route group

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
AFR-MEA	198	204	206	201	196	202	214	208	205	205	204
ASIA-MEA	243	247	242	242	238	233	234	239	230	230	232
EUR-MEA	194	195	198	201	202	202	208	209	208	208	207
INTRA MEA	177	178	183	185	187	188	186	186	179	176	173
NAM-MEA	307	300	305	300	290	290	289	291	290	291	295

3.4 Historical Load Factor on Major Identified Route Groups

3.4.1 All route groups experienced increases in the Load Factors during the period 2000 to 2010. The highest load factors are those achieved on the Middle East-North America and Middle East-Asia route groups followed by load factors on the Middle East – Europe route group. Load factors on the Middle East-Africa and Intra-Middle East route groups are the lowest.

3.4.2 The historical trends in load factors for the route groups concerned are presented in **Table 2** below.

TABLE 2
LOAD FACTORS FOR THE YEARS 2000-2010

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
AFR-MEA	59.6	62.4	65.1	66.4	70.0	71.3	69.1	71.3	72.5	69.4	71.1
ASIA-MEA	70.4	71.2	74.2	71.3	73.6	75.8	78.8	81.2	79.1	76.8	79.0
EUR-MEA	69.0	67.2	70.0	69.0	71.5	73.0	71.3	75.7	78.7	76.2	78.4
INTRA MEA	61.5	63.4	62.7	65.4	67.7	68.3	67.6	66.3	68.7	65.9	67.5
NAM-MEA	72.2	73.3	76.0	76.2	79.1	82.2	81.1	80.8	80.6	81.2	81.5

4. METHODOLOGY

4.1 The demand for air travel is primarily determined by economic developments, notably the growth of world and regional income levels as measured by the aggregate economic activities (GDP), demographic trends, and the cost of air travel measured by airline yields (gross passenger revenue per passenger kilometre flown). It is also assumed that the political and general economic climate are conducive to growth, however, no specific assumptions are made about possible political and economic scenarios beyond those implicit in the basic GDP growth rates forecast. World energy demand, supply, and prices are important to both economic progress and to the cost of air travel. It is assumed that during the forecast period there will be no major disruptions in the availability of fuel.

4.2 Econometric models were developed wherever possible to understand the cause and effect relationship between traffic and other causal factors. It was recognized, however, that even where models were developed, the forecasts should incorporate a significant element of judgement.

4.3 In route groups where consistent data were not available, forecasts were developed based on general assessments of traffic trends, economic and other relevant factors.

4.4 Forecasts of aircraft movements in a particular route-group can be derived from forecasts of passengers and assumptions about future trends in load factors and average aircraft seating capacity. The link between these variables is given by:

$$\begin{aligned} \text{Aircraft movements} &= \frac{\text{passenger numbers}}{(\text{passenger/seats}) \cdot (\text{seats/aircraft})} \\ &= \frac{\text{passenger numbers}}{(\text{load factor}) \cdot (\text{aircraft seating capacity})} \end{aligned}$$

4.5 The relationship between changes in the same variables can therefore be deduced:

$$Y = X1 - X2 - X3$$

Where:

Y = change in aircraft movements (%)
 X1 = change in passenger numbers (%)
 X2 = change in load factor (%)
 X3 = change in average aircraft seats (%)

4.6 Judgements would be necessary about whether gradual improvements in load factors could be expected from marketing initiatives and yield programs. Assumptions were made about future trends in average aircraft seating capacity based on expectations about the types of aircraft that might be introduced to the route over the forecast period. Historical trends as well as data concerning aircraft orders were also factored into the development of future trends.

4.7 Having established the aircraft movement growth rates for each of the route-groups concerned, in the manner described above, aircraft movements forecasts for the year 2030 were estimated. These forecasts were developed for each of the major route groups concerned using the 2010 OAG (Official Airline Guide) data as the base year.

5. PASSENGER TRAFFIC FORECASTS

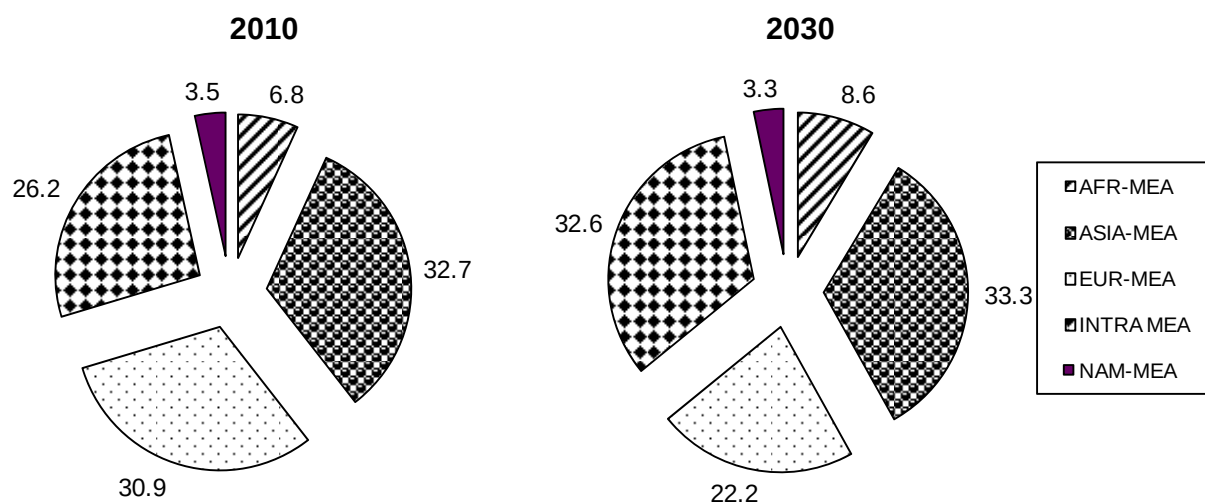
5.1 Based on the methodology described above, passenger traffic forecasts were developed for the major route groups concerned. The traffic to, from and within the Middle East region on the five major route groups concerned for the period 2010-2030 is expected to increase at an average annual rate of 9.1 per cent. The Middle East-Africa route group is expected to experience the highest average annual growth rate of 10.4 per cent per annum, followed by Intra Middle East, Asia/Pacific-Middle East, North America-Middle East and Europe-Middle East route groups with growth rates of 10.3 per cent, 9.2 per cent, 8.8 per cent and 7.3 per cent respectively for the period concerned as illustrated in **Table 3**.

TABLE 3
PASSENGER FORECAST TO THE YEAR 2030
(thousand passengers)

	ACTUAL		FORTECAST	AVERAGE ANNUAL GROWTH	
	2000	2010		(per cent)	
	2000	2010	2030	2000-2010	2010-2030
AFR-MEA	2622	9837	71161	14.1	10.4
ASIA-MEA	14696	47362	275350	12.4	9.2
EUR-MEA	17627	44774	183240	9.8	7.3
INTRA MEA	13468	37959	269666	10.9	10.3
NAM-MEA	1620	5005	27039	11.9	8.8
TOTAL	50033	144937	826456	11.2	9.1

5.2 These forecasts result in a change in the shares of the various route groups in terms of passenger traffic as depicted in **Figure 3**.

FIGURE 3
Shares of selected route groups in passenger traffic



6. FORECASTS OF AIRCRAFT MOVEMENTS

6.1 In order to develop aircraft movements forecasts for the major route groups assumptions were made regarding the evolution of the average aircraft seating capacity and load factors. These assumptions are depicted in **Table 4**.

TABLE 4

ASSUMPTIONS ON THE EVOLUTION OF THE AVERAGE AIRCRAFT SEATING CAPACITY AND LOAD FACTOR OVER THE 2010-2030 PERIOD

		AVERAGE SEATS					LOAD FACTORS		
		2000	2010	2030			2000	2010	2030
AFR-MEA		198	204	217		AFR-MEA	59.6	71.1	75.0
ASIA-MEA		243	232	250		ASIA-MEA	70.4	79.0	81.0
EUR-MEA		194	207	237		EUR-MEA	69.0	78.4	80.0
INTRA MEA		177	173	170		INTRA MEA	61.5	67.5	75.0
NAM-MEA		307	295	310		NAM-MEA	72.2	81.5	81.0

6.2 Using the methodology described above, movement forecasts for the major route groups for the 2010-2030 period are depicted in **Table 5**.

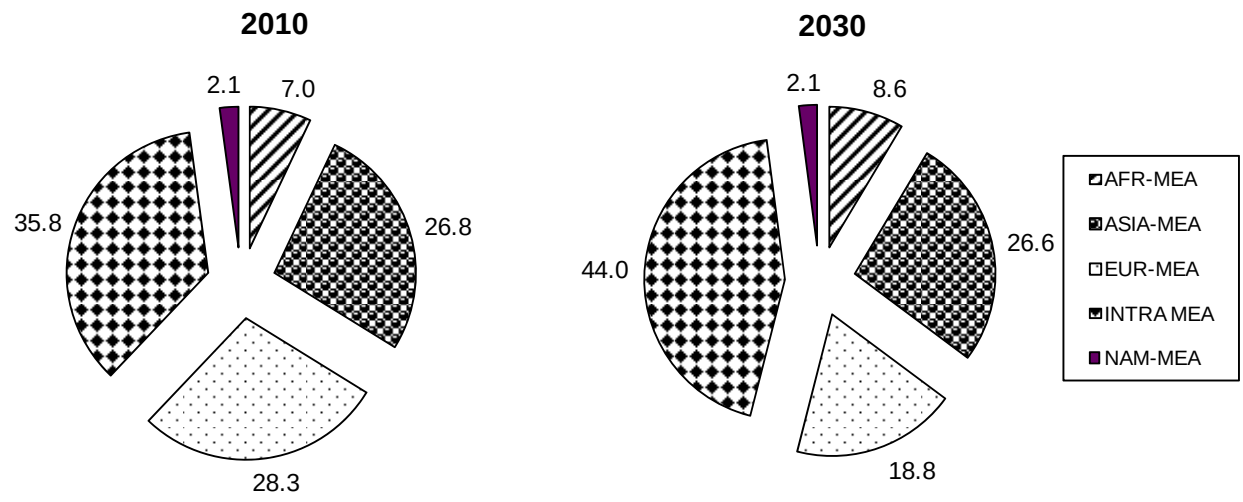
TABLE 5

AIRCRAFT MOVEMENTS FORECAST TO THE YEAR 2030

		Actual		Forecast	Average Annual Growth	
					2010-2030	
		2010		2030	(per cent)	
AFR-MEA		68588		446722	9.8	
ASIA-MEA		261359		1384191	8.7	
EUR-MEA		276285		977855	6.5	
INTRA MEA		349324		2287506	9.9	
NAM-MEA		20843		107917	8.6	
TOTAL		976399		5204191	8.7	

6.3 The total aircraft movements to/from and within the Middle East region are estimated to increase from some 976400 in 2010 to slightly above 5204000 in 2030 at an average annual growth rate of 8.7 per cent. The movements' shares for the years 2010 and 2030 are depicted in **Figure 4**.

FIGURE 4
Shares of selected route groups in aircraft movements



APPENDIX B

**BETWEEN MIDDLE EAST AND ASIA /PACIFIC
TOP 25 CITY-PAIRS RANKED BY 2010 MOVEMENTS**

Rank	City-Pair	No of aircraft movements		Average growth (Percent)
		2010	2030	
1	Mumbai - Dubai	7231	39788	8.9
2	Kabul - Dubai	5926	31431	8.7
3	Karachi - Dubai	5815	22502	7.0
4	Dubai - Delhi	5779	53788	11.8
5	Sharjah - Kochi	3667	36658	12.2
6	Hyderabad - Dubai	3666	19444	8.7
7	Dubai - Chennai	3650	25930	10.3
8	Dubai - Bangkok	3644	15479	7.5
9	Dubai - Colombo	3181	14827	8.0
10	Mumbai - Bahrain	3031	8844	5.5
11	Dubai - Dhaka	3007	20230	10.0
12	Muscat- Mumbai	2920	24848	11.3
13	Singapore(Changi) - Dubai	2884	8101	5.3
14	Kuala Lumpur - Dubai	2771	14697	8.7
15	Dubai - Bengaluru	2770	18635	10.0
16	Dubai - Beijing(Capital)	2673	26249	12.1
17	Kozhikode - Dubai	2617	13880	8.7
18	Thiruvananthapuram - Sharjah	2588	13726	8.7
19	Doha - Colombo	2252	15150	10.0
20	Kochi - Dubai	2251	18478	11.1
21	Hong Kong - Dubai	2189	14461	9.9
22	Riyadh - Mumbai	2189	12268	9.0
23	Sharjah - Kozhikode	2186	12251	9.0
24	Kathmandu - Doha	2184	11584	8.7
25	Delhi - Abu Dhabi	2036	22246	12.7
Total above		83107	515496	9.6
All other		178252	868695	8.2
TOTAL		261359	1384191	8.7

**BETWEEN MIDDLE EAST AND EUROPE
TOP 25 CITY-PAIRS RANKED BY 2010 MOVEMENTS**

Rank	City-Pair	No of aircraft movements		Average growth (Percent)
		2010	2030	
1	London(Heathrow) - Dubai	7327	25818	6.5
2	Tel Aviv - Paris(Charles De Gaulle)	3967	14243	6.6
3	Tel Aviv - Moscow(Domodedovo)	3731	13147	6.5
4	Tel Aviv - Rome(Fiumicino)	3511	10640	5.7
5	Istanbul - Dubai	3168	19104	9.4
6	Istanbul - Cairo	3056	19115	9.6
7	London(Heathrow) - Abu Dhabi	2920	7748	5.0
8	London(Heathrow) - Doha	2914	14897	8.5
9	Zurich - Tel Aviv	2663	5197	3.4
10	Tel Aviv - London(Heathrow)	2592	4247	2.5
11	Tel Aviv - Istanbul	2551	5590	4.0
12	Paris(Charles De Gaulle) - Beirut	2538	4584	3.0
13	Tehran - Istanbul	2447	8622	6.5
14	London(Heathrow) - Cairo	2419	9717	7.2
15	Istanbul - Amman	2416	13540	9.0
16	Tel Aviv - Madrid	2411	12325	8.5
17	Paris(Charles De Gaulle) - Dubai	2345	9961	7.5
18	Istanbul - Beirut	2315	8958	7.0
19	Frankfurt - Dubai	2312	8147	6.5
20	London(Heathrow) - Bahrain	2312	6619	5.4
21	London(Gatwick) - Dubai	2292	14077	9.5
22	Rome(Fiumicino) - Cairo	2275	8016	6.5
23	Dubai - Amsterdam	2228	13684	9.5
24	Tel Aviv - Kiev	2202	7759	6.5
25	Zurich - Dubai	2190	10991	8.4
Total above		71102	276745	7.0
All other		205183	701110	6.3
TOTAL		276285	977855	6.5

INTRA MIDDLE EAST (INTERNATIONAL)
TOP 25 CITY-PAIRS RANKED BY 2010 MOVEMENTS

Rank	City-Pair	No of aircraft movements		Average growth (Percent)
		2010	2030	
1	Kuwait - Dubai	12872	107583	11.2
2	Dubai - Doha(Intl)	12461	91791	10.5
3	Doha - Bahrain	11880	79923	10.0
4	Dubai - Bahrain	10103	66743	9.9
5	Kuwait - Bahrain	7971	49857	9.6
6	Jeddah - Cairo	7611	42655	9.0
7	Muscat - Dubai	7287	48140	9.9
8	Bahrain - Abu Dhabi	7010	29777	7.5
9	Doha(Intl) - Abu Dhabi	6595	43568	9.9
10	Damman - Bahrain	6414	42372	9.9
11	Muscat - Abu Dhabi	6382	42161	9.9
12	Tehran - Dubai	5794	31301	8.8
13	Dubai - Beirut	4999	25555	8.5
14	Beirut - Amman	4972	36625	10.5
15	Kuwait - Beirut	4804	38731	11.0
16	Kuwait - Doha	4687	34526	10.5
17	Kuwait - Cairo	4517	20667	7.9
18	Cairo - Amman	4363	29352	10.0
19	Muscat - Bahrain	4318	22074	8.5
20	Dubai - Amman	4175	39560	11.9
21	Riyadh - Cairo	3817	25216	9.9
22	Muscat - Doha	3739	34184	11.7
23	Riyadh - Dubai	3701	27262	10.5
24	Kuwait - Abu Dhabi	3405	25082	10.5
25	Jeddah - Dubai	3361	22204	9.9
Total above		157238	1056908	10.0
All other		192086	1230598	9.7
TOTAL		349324	2287506	9.9

**BETWEEN MIDDLE EAST AND AFRICA
TOP 25 CITY-PAIRS RANKED BY 2010 MOVEMENTS**

Rank	City-Pair	No of aircraft movements		Average growth (Percent)
		2010	2030	
1	Khartoum - Cairo	4164	47982	13.0
2	Tripoli - Cairo	2500	16218	9.8
3	Nairobi - Dubai	2249	9553	7.5
4	Dubai - Addis Ababa	2236	21569	12.0
5	Johannesburg - Dubai	2192	11001	8.4
6	Khartoum - Dubai	1954	18849	12.0
7	Lagos - Dubai	1616	10108	9.6
8	Tripoli - Dubai	1589	6750	7.5
9	Khartoum - Doha	1505	5303	6.5
10	Khartoum - Jeddah	1465	10792	10.5
11	Casablanca - Cairo	1197	5683	8.1
12	Tunis - Dubai	1049	6805	9.8
13	Mauritius - Dubai	944	6124	9.8
14	Cairo - Algiers	934	9849	12.5
15	Khartoum - Bahrain	928	9277	12.2
16	Sanaa - Addis Ababa	844	6217	10.5
17	Tripoli - Amman	833	4258	8.5
18	Jeddah - Casablanca	820	3483	7.5
19	Riyadh - Khartoum	804	4187	8.6
20	Tunis - Cairo	790	2784	6.5
21	Sharjah - Khartoum	776	5034	9.8
22	Nairobi - Doha	772	3404	7.7
23	Cairo - Benghazi	754	2657	6.5
24	Jeddah - Asmara	745	2174	5.5
25	Dubai - Dar Es Salaam	734	5214	10.3
Total above		34394	235274	10.1
All other		34194	211448	9.5
TOTAL		68588	446722	9.8

**BETWEEN MIDDLE EAST AND NORTH AMERICA
TOP 25 CITY-PAIRS RANKED BY 2010 MOVEMENTS**

Rank	City-Pair	No of aircraft movements		Average growth (Percent)
		2010	2030	
1	Tel Aviv - Newark/New York	2063	4105	3.5
2	Tel Aviv - New York(Kennedy)	1926	5727	5.6
3	New York(Kennedy) - Dubai	1460	14337	12.1
4	New York(Kennedy) - Cairo	1340	10421	10.8
5	Los Angeles - Dubai	854	5245	9.5
6	Houston - Dubai	852	5233	9.5
7	New York(Kennedy) - Amman	847	5202	9.5
8	Toronto - Tel Aviv	809	4213	8.6
9	Chicago(O'Hare) - Abu Dhabi	730	4483	9.5
10	Dubai - Atlanta	730	3801	8.6
11	Houston - Doha	730	3801	8.6
12	New York(Kennedy) - Abu Dhabi	730	3801	8.6
13	New York(Kennedy) - Doha	730	3801	8.6
14	San Francisco - Dubai	730	3801	8.6
15	Washington(Dulles) - Doha	730	3801	8.6
16	Washington(Dulles) - Kuwait	730	3801	8.6
17	Tel Aviv-Philadelphia	726	3780	8.6
18	Washington(Dulles) - Dubai	718	3739	8.6
19	Tel Aviv - Atlanta	563	2932	8.6
20	Chicago(O'Hare) - Amman	542	2670	8.3
21	Tel Aviv - Los Angeles	402	1173	5.5
22	New York(Kennedy) - Kuwait	314	1215	7.0
23	Toronto - Dubai	314	1635	8.6
24	Toronto - Abu Dhabi	312	1625	8.6
25	New York(Kennedy) - Jeddah	245	591	4.5
Total above		20127	104933	8.6
All other		716	2984	7.4
TOTAL		20843	107917	8.6

MIDANPIRG/13
Report on Agenda Item 5.1

REPORT ON AGENDA ITEM 5: AIR NAVIGATION DEFICIENCIES AND SAFETY MATTERS

5.1 AIR NAVIGATION DEFICIENCIES

Transition from Five Regional Databases into a Central Database

5.1.1 The meeting was informed that ICAO has developed a prototype system for the management of air navigation deficiencies at the global level based on the current Planning and Implementation Regional Group (PIRG)/regional efforts which are using their respective regional air navigation deficiency databases to support the implementation of the Uniform Methodology. Although the regional approach has been satisfactory, it needs to extend globally in order to be consistent with the principles of sharing safety information worldwide leading to a complete transparency.

5.1.2 The meeting noted that the centralized system to manage deficiencies at the global level has been incorporated into the integrated Safety Trend Analysis and Reporting System (iSTARS) framework (access through the ICAO safety page www.icao.int) to provide uniform access to the respective Regional Offices, Member States and other authorized users.

5.1.3 On the basis of regional coordination and the feedback received, the centralized air navigation deficiency database on iSTARS is now ready for evaluation by States utilizing the User Guide at **Appendix 5.1A** to the Report on Agenda Item 5.1. The complete transition from the current five regional air navigation databases to single centralized database on iSTARS is scheduled for December 2012.

5.1.4 The meeting was of the opinion that ICAO HQ should issue a State Letter for all member States for the launch of the centralized air navigation deficiency database on iSTARS with more detailed information on the access rights and workflow related to the addition, update and deletion of air navigation deficiencies.

5.1.5 Based on the above, the meeting agreed to the following Conclusion:

**CONCLUSION13/61: CENTRALIZED AIR NAVIGATION DEFICIENCY
DATABASE**

That, States and international organizations be invited to:

- a) test the centralized air navigation deficiency database on iSTARS platform using the guidance in **Appendix 5.1A** to the Report on Agenda Item 5.1;*
- b) update the data as necessary in coordination with the ICAO MID Regional Office; and*
- c) provide feedback to the ICAO MID Regional Office by **31 August 2012**.*

Review of deficiencies in the air navigation fields

5.1.6 The meeting recalled that the DGCA-MID/1 meeting noted the concerns expressed by the various ICAO organs including the Council, the Air Navigation Commission (ANC) and MIDANPIRG on the serious impact the long standing deficiencies have on safety.

MIDANPIRG/13
Report on Agenda Item 5.1

5.1.7 The meeting recalled that the lack of sufficient number of qualified technical staff was the main contributing factor for the non-elimination of the safety deficiencies in the MID Region (both air navigation deficiencies and USOAP findings).

5.1.8 The meeting noted that the DGCA-MID/1 meeting was of the view that a number of deficiencies were common to many States and accordingly encouraged States to work cooperatively towards the elimination of such deficiencies, in particular with a joint effort for the training of technical staff. It was also highlighted that the Regional Safety Oversight Organizations (RSOOs) could play an important and effective role in this respect.

5.1.9 In connection with the above, and taking into consideration the information contained in ICAO DOC 9956 (Global and Regional 20-year forecasts), the meeting noted that an annual increase in traffic of 5.2% is expected in the Middle East over the next 20 years. Accordingly, the meeting recognized that the demand for qualified and well trained aviation personnel would be challenging to meet the air traffic growth.

5.1.10 The meeting recalled that in order to address the expected shortage of skilled aviation professionals in the near future, ICAO launched the Next Generation of Aviation Professionals (NGAP) initiative to ensure that enough qualified and competent aviation professionals are available to operate, manage and maintain the future international air transport system. This is critical, as a large contingent of the current generation of aviation professionals will retire, access to affordable training and education is increasingly problematic, and aviation competes with other industry sectors for highly skilled professionals. The lack of harmonized competencies in some aviation disciplines and the lack of awareness by the “next generation” of the types of aviation jobs available, further compound the problem. More information on NGAP is available at: <http://www.icao.int/safety/ngap/Pages/default.aspx>.

5.1.11 In the same vein, the meeting recalled that ICAO on 2 February 2012 launched the NGAP YouTube video contest (www.icao.int/contest2012).

5.1.12 Based on the above, the meeting agreed that it is imperative that States endorse a proactive approach and develop national plans for human resources related to aviation personnel in order to cope with the expected future growth of air traffic and associated high demand for air traffic controllers, pilots, and aviation professionals in the other aviation sectors. Failure to do so may result in widening the gap between available and required personnel, which could not only constrain air traffic growth, but also adversely affect the safety and efficiency of air transport operations.

5.1.13 The meeting agreed that the subject should be raised to the attention of the DGCA-MID/2 meeting and agreed to the following Conclusion:

MIDANPIRG/13
Report on Agenda Item 5.1

CONCLUSION 13/62: NGAP NATIONAL PLANS

That, in order to ensure that enough qualified and competent aviation professionals are available to operate, manage and maintain the future international air transport system, States be urged to:

- a) develop Next Generation of Aviation Professionals (NGAP) National Plan;*
- b) use the ICAO guidance material for the development of the NGAP National Plans, including the information contained in ICAO DOC 9956 (Global and Regional 20-year forecasts) and the traffic forecasts and peak period analysis developed by the TF SG/4 meeting for the period 2010-2030; and*
- c) provide feedback to the ICAO MID Regional Office before 31 January 2013, for review by the DGCA-MID/2 meeting.*

5.1.14 The meeting re-iterated that the identification and reporting of Air Navigation Deficiencies by User Organizations contribute significantly to the enhancement of air navigation safety in the MID Region. Nevertheless, the meeting noted with concern that the use of the MID Air Navigation Deficiency Database (MANDD) is far below expectations. Accordingly, the meeting urged States and other authorized Users to use the MANDD for the submission of requests for additions, updates and elimination of Air Navigation Deficiencies.

5.1.15 The meeting reviewed and updated the list of deficiencies in the AIS/MAP, AOP, ATM, SAR, CNS and MET fields as at **Appendices 5.1B, 5.1C, 5.1D, 5.1E, 5.1F and 5.1G**, to the Report on Agenda Item 5.1, respectively.

5.1.16 The analysis of the MID States' air navigation deficiencies is shown in the tables and graphs presented at **Appendices 5.1H and 5.1I** to the Report on Agenda Item 5.1. In particular, it was highlighted that:

- The total number of air navigation deficiencies approved by the meeting is **153** deficiencies compared to 165 deficiencies approved by MIDANPIRG/12. However, it was noted that with the transfer of Israel to the EUR ANP, the associated deficiencies (19) are no longer part of the MID air navigation deficiencies.
- **33** new deficiencies have been approved by the meeting: **27** deficiencies in the **SAR** field and **6** deficiencies in the **ATM** field.
- **30** deficiencies from those approved by MIDANPIRG/12 have been eliminated: **5** in the **AOP** field, **7** in the **AIS/MAP** field, **8** in the **ATM** field, **7** in the **CNS** field and all the **3** deficiencies in the **MET** field.
- The total number of deficiencies varies between **3** and **33** deficiencies per State as shown in **Appendix 5.1I** to the Report on Agenda Item 5.1.
- The distribution of air navigation deficiencies by field is shown in **Appendix 5.1H** to the Report on Agenda Item 5.1 as follows: AIS/MAP: **24%**, AOP: **13%**, ATM: **27%**, SAR: **26%**, CNS: **10%**, and MET: **0%**.

MIDANPIRG/13
Report on Agenda Item 5.1

- The distribution of air navigation deficiencies by priority is shown in **Appendix 5.1H** to the Report on Agenda Item 5.1: **29%** “U”, **54%** “A”, and **17%** “B”.

5.1.17 The meeting noted that since MIDANPIRG/12 only **7** deficiencies priority “U” have been eliminated, which represents around **5%**. However, the total number of eliminated deficiencies was **30**, which represents around **21%**.

5.1.18 The meeting re-iterated the DGCA-MID/1 Conclusion 1/2 and urged States to review their respective lists of identified deficiencies, develop associated Corrective Action Plans and forward them to the ICAO MID Regional Office prior to **15 June 2012**.

5.1.19 Based on all of the foregoing, the meeting agreed to the following Conclusion to replace and supersede the MIDANPIRG/12 Conclusion 12/75:

**CONCLUSION 13/63: ELIMINATION OF AIR NAVIGATION DEFICIENCIES IN
THE MID REGION**

That, States be urged to:

- a) review their respective lists of identified deficiencies, develop associated Corrective Action Plans and forward them to the ICAO MID Regional Office prior to **15 June 2012**; and*
- b) use the ICAO MID Air Navigation Deficiency Database (MANDD) for submitting online requests for addition, update, and elimination of air navigation deficiencies, until the official launch of the Centralized Air Navigation Deficiency Database on iSTARS.*



ICAO

Air Navigation Deficiencies

ANDEF

User Guide

Table of Contents

[ANDEF- Access](#)

[ANDEF- Initial Page View](#)

[ANDEF- How to Display Deficiencies for a Region](#)

[ANDEF- How to List more Deficiencies per Page](#)

[ANDEF- How to Scroll Deficiencies list Pages](#)

[ANDEF- How to Expand Deficiency List View](#)

[ANDEF- How to edit/ update deficiencies](#)

[ANDEF- How to Clear Filters](#)

[ANDEF- How to Search Deficiencies list](#)

[ANDEF- How to Sort deficiencies](#)

[ANDEF- How to Filter Data](#)

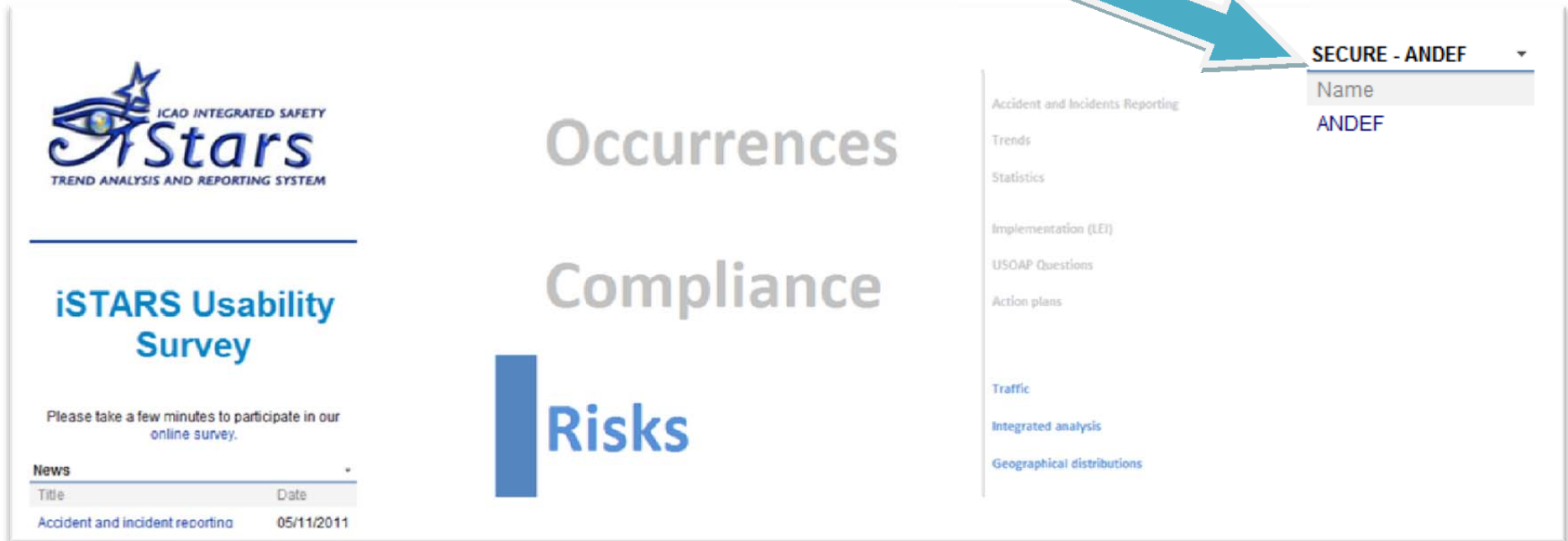
[Filtering Data: Using Graph](#)

[Filtering Data: Using Filtering Box](#)

[ANDEF- How to Report a Problem](#)

ANDEF- Access

Click on ANDEF Link on the right hand side on iStars home page



The screenshot shows the iStars home page. On the left, there is a logo for 'iStars' with the text 'ICAO INTEGRATED SAFETY' and 'TREND ANALYSIS AND REPORTING SYSTEM'. Below the logo is a section titled 'iSTARS Usability Survey' with a request to participate in an online survey. At the bottom left, there is a 'News' section with a table containing one entry: 'Accident and incident reporting' dated '05/11/2011'.

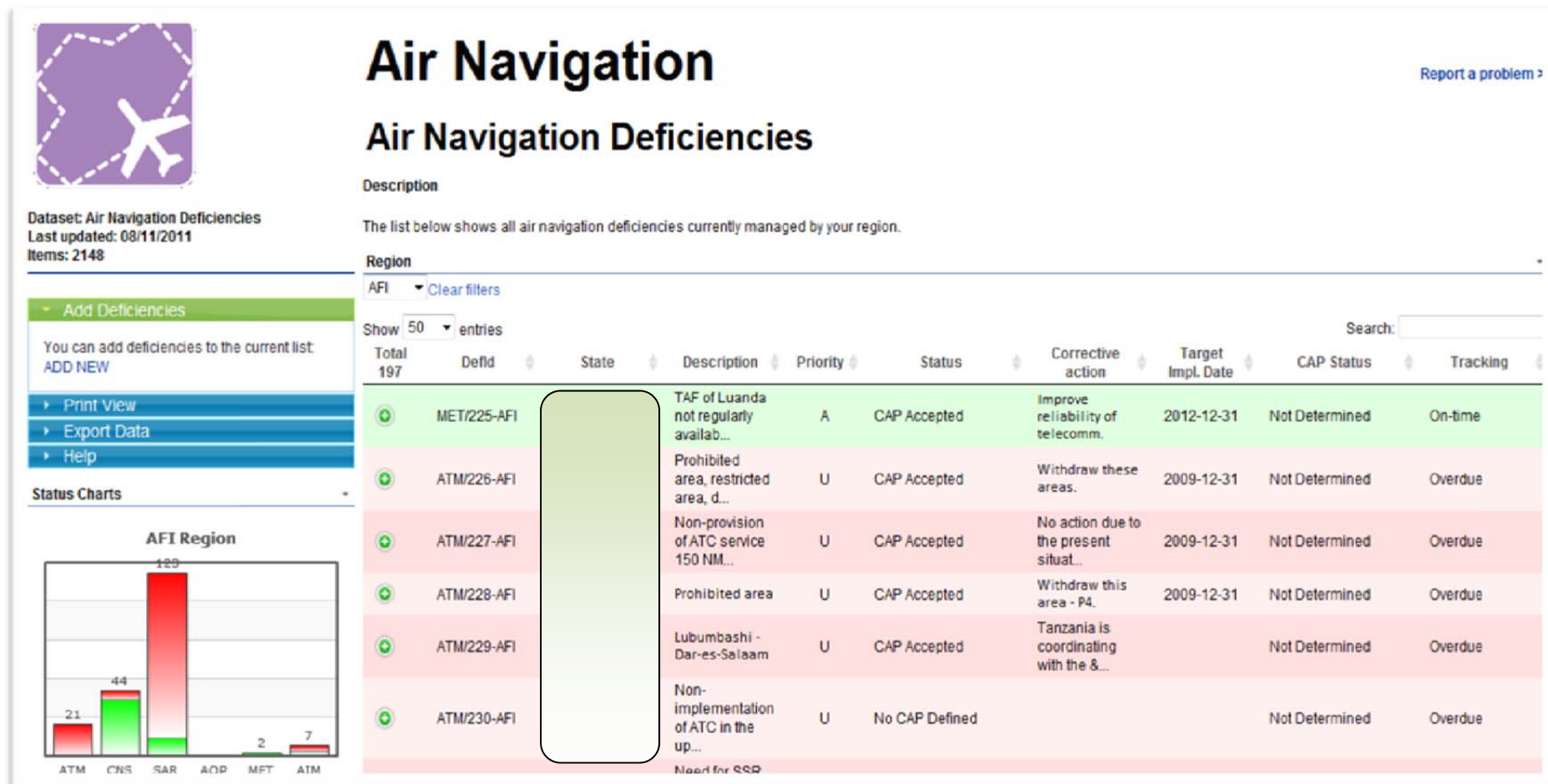
In the center, there are three large, stacked text elements: 'Occurrences', 'Compliance', and 'Risks'. The 'Risks' element is preceded by a blue vertical bar.

On the right side, there is a navigation menu. At the top of this menu is a dropdown labeled 'SECURE - ANDEF'. Below it, the word 'Name' is displayed, followed by the link 'ANDEF'. Other links in the menu include 'Accident and Incidents Reporting', 'Trends', 'Statistics', 'Implementation (LEI)', 'USOAP Questions', 'Action plans', 'Traffic', 'Integrated analysis', and 'Geographical distributions'.

A large blue arrow points from the text 'Click on ANDEF Link on the right hand side on iStars home page' to the 'ANDEF' link in the navigation menu.

ANDEF- Initial View

When you login to ANDEF this is your home page. By default the deficiencies listed will be for the AFI Region...



ANDEF- Select Region View

To select a different region, use the dropdown menu and choose the region you want:



The ANDEF interface displays a sidebar on the left and a main content area on the right.

Left Sidebar:

- Add Deficiencies:** You can add deficiencies to the current list. [ADD NEW](#)
- [Print View](#)
- [Export Data](#)
- [Help](#)
- Status Charts:**
 - MID Region:** A bar chart showing deficiency counts for different categories: ATM (48), CNS (21), SAR (12), AOP (25), MET (3), and AIM (45).

Main Content Area:

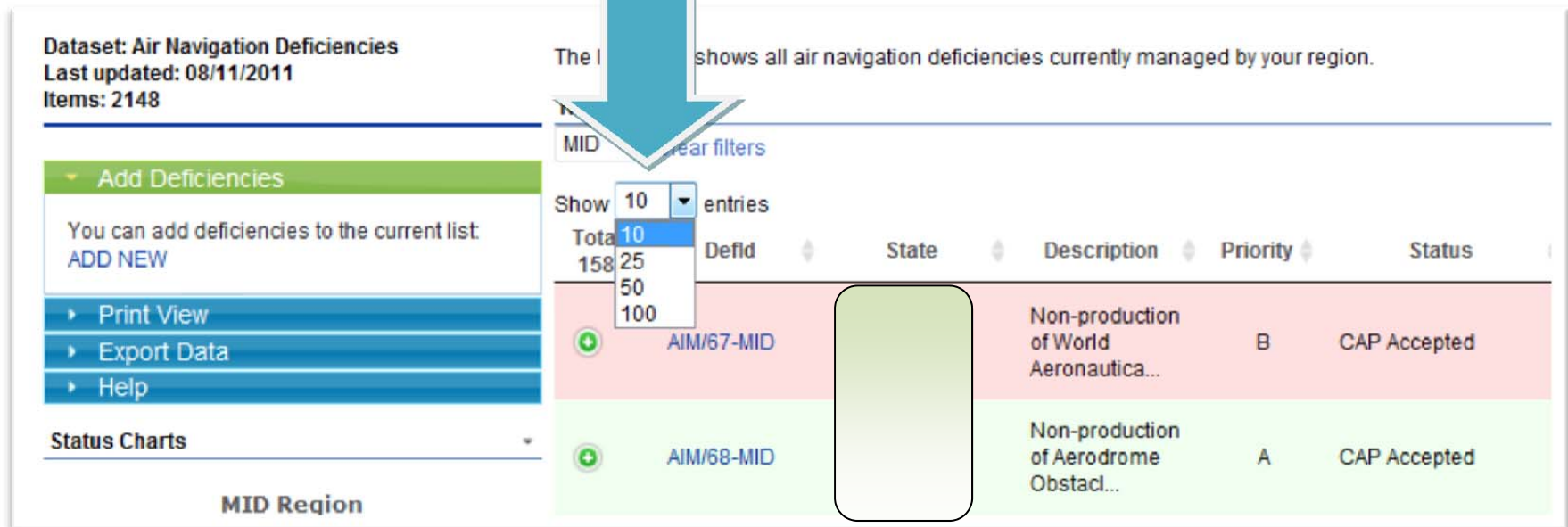
Region: A dropdown menu is open, showing options: MID (selected), AFI, APAC, CAR, EUR, MID, NAT, NAM, and SAM. A [Clear filters](#) link is also present.

Table:

Defid	State	Description	Priority	Status
AIM/67-MID		Non-production of World Aeronautica...	B	CAP Accepted
AIM/68-MID		Non-production of Aerodrome Obstacl...	A	CAP Accepted
AIM/69-MID		Lack of AIS automation	A	CAP Accepted
AIM/70-MID		Lack of implementation of AIRAC Sys...	U	CAP Accepted
AIM/71-MID		Non-production of World Aeronautica...	B	CAP Accepted

ANDEF- List Deficiencies

To increase the number of entries listed you can select the number of entries you prefer from the drop down menu (Options available are: 10, 25, 50 or 100 deficiencies displayed per page).



The screenshot shows the ANDEF- List Deficiencies interface. On the left, there is a sidebar with the following content:

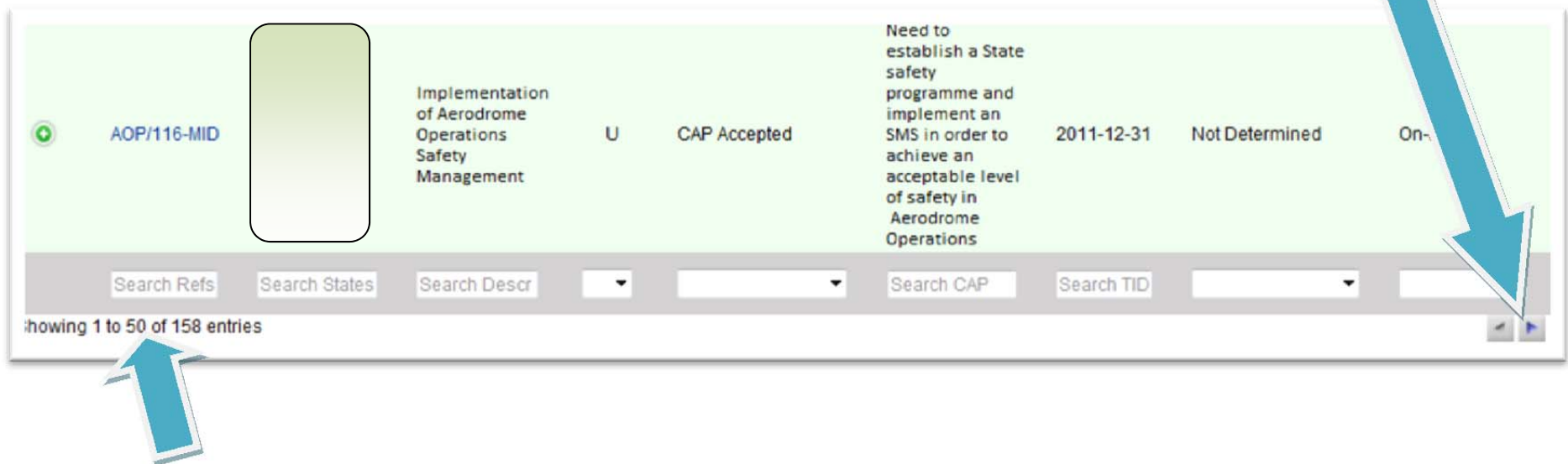
- Dataset: Air Navigation Deficiencies**
- Last updated: 08/11/2011**
- Items: 2148**
- Add Deficiencies** (green button)
- You can add deficiencies to the current list:**
- ADD NEW** (blue button)
- Print View** (blue button)
- Export Data** (blue button)
- Help** (blue button)
- Status Charts** (dropdown menu)
- MID Region** (text)

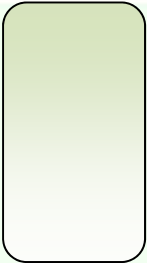
The main content area displays a table of deficiencies. A large blue arrow points to the 'Show' dropdown menu, which is currently set to '10'. The dropdown menu options are 10, 25, 50, and 100. The table has the following columns: MID, Defid, State, Description, Priority, and Status. The table contains two entries:

MID	Defid	State	Description	Priority	Status
+	AIM/67-MID		Non-production of World Aeronautica...	B	CAP Accepted
+	AIM/68-MID		Non-production of Aerodrome Obstacl...	A	CAP Accepted

ANDEF- Scroll Deficiencies

To scroll for more deficiencies listing press the arrow at the bottom of the page to go right and left



	AOP/116-MID		Implementation of Aerodrome Operations Safety Management	U	CAP Accepted	Need to establish a State safety programme and implement an SMS in order to achieve an acceptable level of safety in Aerodrome Operations	2011-12-31	Not Determined	On-
Showing 1 to 50 of 158 entries Search Refs Search States Search Descr Search CAP Search TID									

The information bar at the bottom will display the number of deficiencies listed and total number of entries.

ANDEF- Expand view

By selecting a region you will have a list of all deficiencies reported in that region.

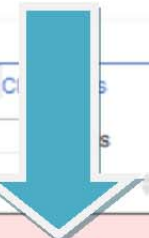
Click on the **Green button** to display the full deficiency listing for that specific deficiency

The screenshot displays the ANDEF system interface. At the top, a list of deficiencies is shown. A blue arrow points to a green button (a circle with a green dot) next to the first deficiency entry, labeled 'AOP/1279-SAM'. Below this list, a detailed view of the selected deficiency is shown. A green rectangular box highlights the 'Green button' in the list and the 'Reference:' field in the detailed view. Another green rectangular box highlights the 'Location:' field in the detailed view. The detailed view includes the following information:

Reference:	1996-01-01
Date reported:	1996-01-01
Reported by:	
Deficiency type:	
Description:	A deep V-shaped channel 80-100 m from threshold RWY 30 potentially dangerous in event of RTO
Requirements:	RWY end safety area (Annex 14, Vol. I, Chap. 3)
Location:	
Remarks:	IFALPA CAR/SAM Meeting, 98REG049, Buenos Aires, 9/10 Dic. 1997, ICAO Mission to Bogotá and Río Negro from 16 to 19 July 2001 and ICAO Regular Mission (15/16 MAY 2003, Recommended Action AGA/17 of its respective Report) ASBE: StateLetter sent Results:No results Difficulties:
Rational:	
Recommendation:	Deviate that channel "PENDING ACTION PLAN" CORRECTED (AEROCIVIL 2002-1272, 23 NOV 2004)
Corrective action:	Deviate that channel "PENDING ACTION PLAN" CORRECTED (AEROCIVIL 2002-1272, 23 NOV 2004)
Exercuting body:	
Target implementation date:	2009-02-28

ANDEF- Edit/ Update Deficiency

To update a deficiency click on the deficiency ID



Region									
MID									
Show 10									
Total 158									
	State	Description	Priority	Status	Corrective action	Target Impl. Date	CAP Status	Tracking	
 AIM/67-MID		Non-production of World Aeronautica...	B	CAP Accepted	Need to produce the assigned sheets...	2011-06-30	Not Determined	Overdue	
 AIM/68-MID		Non-production of Aerodrome Obstacle...	A	CAP Accepted	Need to produce Aerodrome Obstacle	2011-12-31	Not Determined	On-time	

A new window will open to perform all required updates

Attach File | X Delete Item | Spelling...

Region: MID
ICAO Region in charge of this deficiency

State:

Area: AIM
The technical area the deficiency is related to

Description:
Non-production of World Aeronautical Chart – ICAO 1:1 000 000
Describe clearly what the deficiency is about.

Reported By:
The organisation or person who reported the deficiency

Def Type:
Subject which best categorizes the type of deficiency

Requirements:
ANNEX 4: Para. 16.2
Reference to ANP paragraphs or ICAO SARPS

Recommendation:
Need to produce the assigned sheets of the World Aeronautical Chart – ICAO 1:1 000 000
ICAO recommendation to the State when considering corrective actions

Priority: B
Priority attached to the resolution of the deficiency (U=Urgent, A=Top priority, B)

Status: CAP Accepted

Corrective action:
Need to produce the assigned sheets of the World Aeronautical Chart – ICAO 1:1 000 000

Executing Body: Iran+neighboring states

Target Implementation Date: 30/06/2011

CAP Status: Not Determined

Reference:

State Code: IRN

OK Cancel

ANDEF- Clear Filters

To clear all previously applied filters just press on the “clear filters” text and it will reset all your filters back to initial view.



Add Deficiencies

You can add deficiencies to the current list:
[ADD NEW](#)

[Print View](#)

[Export Data](#)

[Help](#)

Status Charts

MID Region

MID [Clear filters](#)

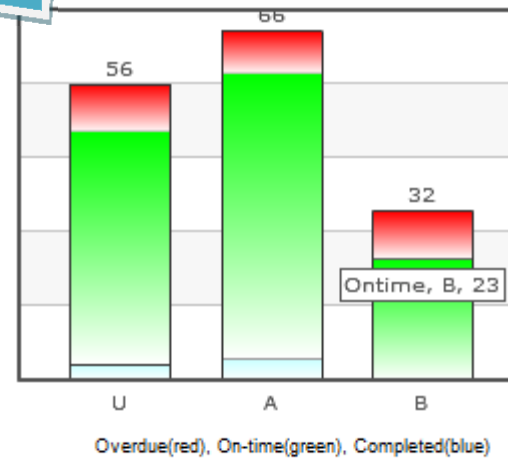
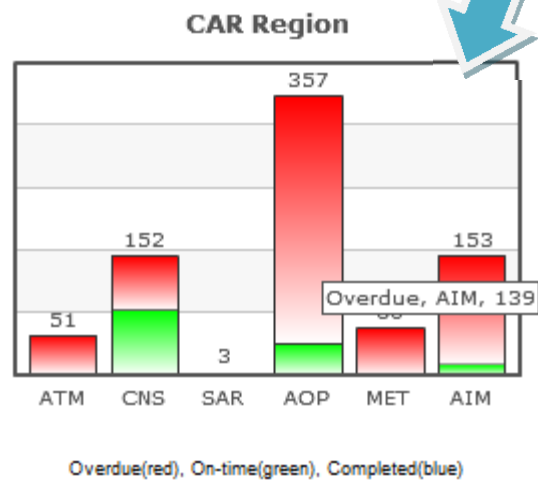
Show entries

Total
158

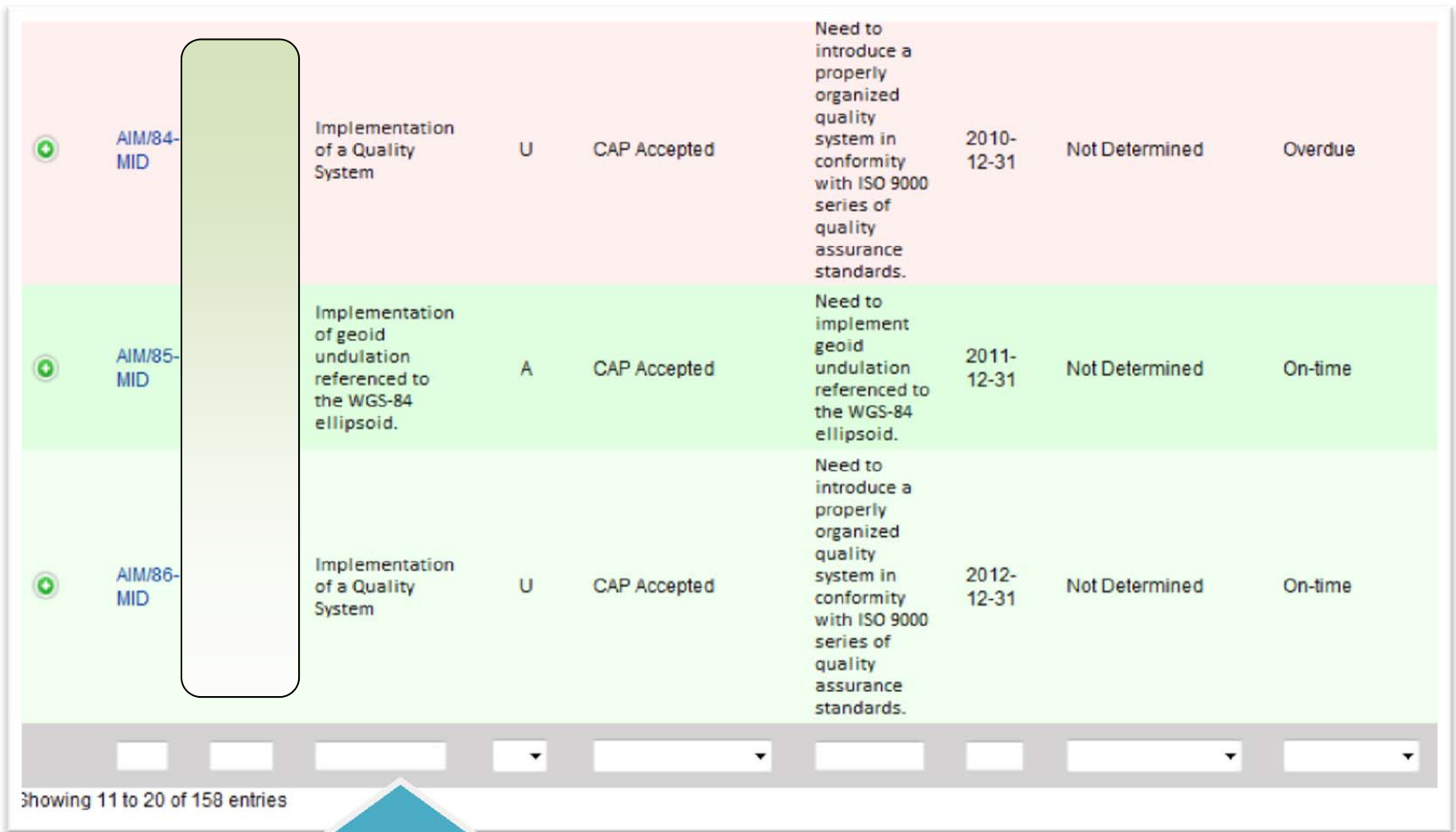
Defid	State	Description	Priority	Status
AIM/67-MID		Non-production of World Aeronautica...	B	CAP Accepted
AIM/68-MID		Non-production of Aerodrome Obstacl...	A	CAP Accepted

ANDEF- Filtering data: Using Graphs

Click on the graph to filter data and display: completed deficiencies, on-time or overdue.
Data on the graphs is sorted by Area or by Priority.



ANDEF- Filtering Data: Using Filtering box



AIM/84-MID	Implementation of a Quality System	U	CAP Accepted	Need to introduce a properly organized quality system in conformity with ISO 9000 series of quality assurance standards.	2010-12-31	Not Determined	Overdue
AIM/85-MID	Implementation of geoid undulation referenced to the WGS-84 ellipsoid.	A	CAP Accepted	Need to implement geoid undulation referenced to the WGS-84 ellipsoid.	2011-12-31	Not Determined	On-time
AIM/86-MID	Implementation of a Quality System	U	CAP Accepted	Need to introduce a properly organized quality system in conformity with ISO 9000 series of quality assurance standards.	2012-12-31	Not Determined	On-time

Showing 11 to 20 of 158 entries

Filtering text boxes type a value in the appropriate field or choose a value from the list to filter your data, accordingly

ANDEF- Sorting Data

You can sort deficiencies using any of the fields in the display bar just press the arrow up/ down to sort data ascending or descending.

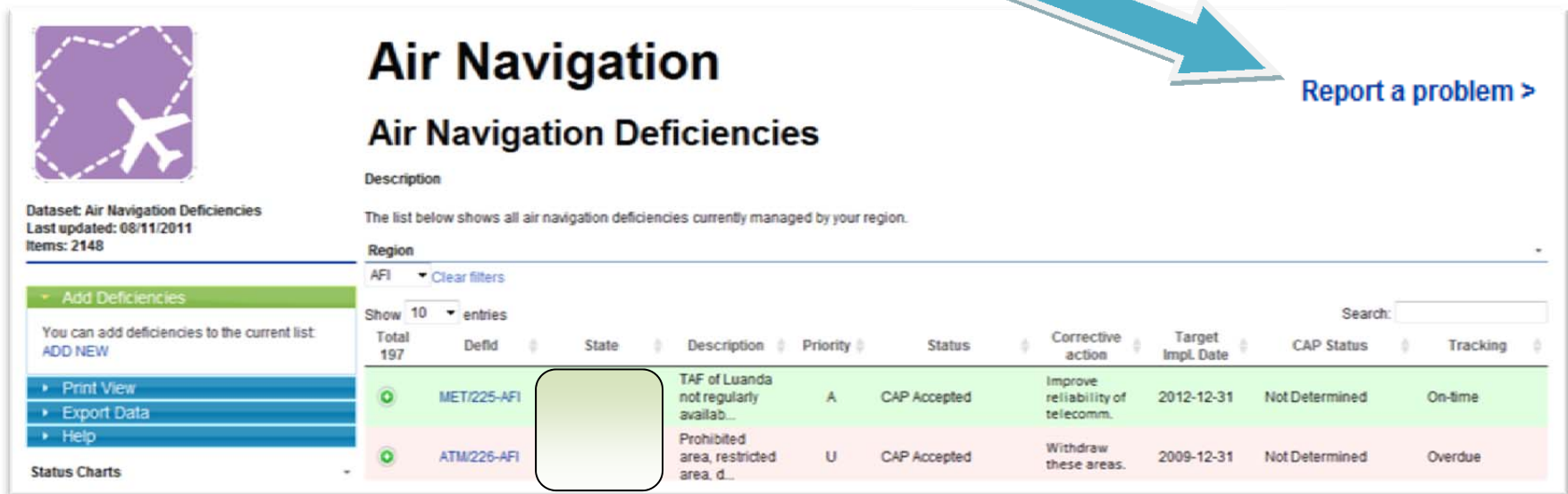
Show 50 entries	Search:									
Total 121	Defid	State	Description	Priority	Status	Corrective action	Target Impl. Date	CAP Status	Tracking	

Data will be automatically sorted accordingly

region										
APAC	Clear filters									
Show 10 entries	Search:									
Total 80	Defid	State	Description	Priority	Status	Corrective action	Target Impl. Date	CAP Status	Tracking	
	ATM/437-APAC		Annex 6 requirement not implemented...	U	No CAP Defined			Not Determined	Overdue	
	ATM/439-APAC		Annex 6 requirement not implemented...	U	No CAP Defined			Not Determined	Overdue	
	MET/481-APAC		Requirements for meteorological watch office (MWO) to be established at Phnom-Penh international airport have not been met.	U	CAP Accepted	Bilateral agreement Cambodia-China became effective on 1 June 2009. ATC project proposal submitted to SSCA Cambodia. In process of establishing MWO with target date of 2011.		Not Determined	Overdue	

ANDEF- Report a Problem

Facing any technical difficulty with the system, you need help with any system component or you have a general comment/ request just press the **“Report a Problem”** on the right hand side of the screen.



Air Navigation
Air Navigation Deficiencies

Dataset: Air Navigation Deficiencies
Last updated: 08/11/2011
Items: 2148

[Add Deficiencies](#)
You can add deficiencies to the current list.
[ADD NEW](#)

[Print View](#)
[Export Data](#)
[Help](#)

Status Charts

Description
The list below shows all air navigation deficiencies currently managed by your region.

Region
AFI [Clear filters](#)

Show 10 entries

Total	Defid	State	Description	Priority	Status	Corrective action	Target Impl. Date	CAP Status	Tracking
197									
	MET/225-AFI		TAF of Luanda not regularly availab...	A	CAP Accepted	Improve reliability of telecomm.	2012-12-31	Not Determined	On-time
	ATM/226-AFI		Prohibited area, restricted area. d...	U	CAP Accepted	Withdraw these areas.	2009-12-31	Not Determined	Overdue

Search:

MIDANPIRG/13
Appendix 5.1B to the Report on Agenda Item 5.1

Deficiencies in the AIS/MAP Field

BAHRAIN

Item No	Identification		Deficiencies			Corrective Action			
	Requirement	Facilities/ Services	Description	Date First Reported	Remarks/ Rationale for Non-elimination	Description	Executing Body	Date of Completion	Priority for Action
No Deficiencies Reported									

⁽¹⁾ Rationale for non-elimination: “F”= Financial

“H”= Human Resources

“S”= State (Military/political)

“O”= Other unknown causes

Deficiencies in the AIS/MAP Field

EGYPT

Item No	Identification		Deficiencies			Corrective Action			
	Requirement	Facilities/ Services	Description	Date First Reported	Remarks/ Rationale for Non-elimination	Description	Executing Body	Date of Completion	Priority for Action
No Deficiencies Reported									

⁽¹⁾ Rationale for non-elimination: “F”= Financial

“H”= Human Resources

“S”= State (Military/political)

“O”= Other unknown causes

5.1B-3

Deficiencies in the AIS/MAP Field

IRAN

Item No	Identification		Deficiencies				Corrective Action			
	Requirement	Facilities/ Services	Description	Date First Reported	Remarks/ Rationale for Non-elimination		Description	Executing Body	Date of Completion	Priority for Action
1	ANNEX 4: Para. 16.2	-	Non-production of World Aeronautical Chart – ICAO 1:1 000 000	May, 1995	Coordination with neighboring States required	O	Need to produce the assigned sheets of the World Aeronautical Chart – ICAO 1:1 000 000	Iran	Dec, 2012	B
2	ANNEX 4: Para. 3.2	-	Non-production of Aerodrome Obstacle Chart-ICAO Type A	May, 1995	-	O	Need to produce Aerodrome Obstacle Chart-ICAO Type A for all Int'l Airports RWYs, except if a notification to this effect is published in the AIP (if no significant obstacles exist)	Iran	Dec, 2012	A
3	ANNEX 15: Para. 3.6.5	-	Lack of AIS automation	Dec, 2007	-	O	AIS automation should be introduced with the objective of improving the speed, accuracy, efficiency and cost-effectiveness of aeronautical information services	Iran	Dec, 2012	A

⁽¹⁾ Rationale for non-elimination: “F”= Financial

“H”= Human Resources

“S”= State (Military/political)

“O”= Other unknown causes

Deficiencies in the AIS/MAP Field

IRAQ

Item No	Identification		Deficiencies				Corrective Action			
	Requirement	Facilities/ Services	Description	Date First Reported	Remarks/ Rationale for Non-elimination		Description	Executing Body	Date of Completion	Priority for Action
1	ANNEX 15: Para 6.	-	Lack of implementation of AIRAC System	May, 1995	-	F H O	Need to fully comply with the AIRAC procedure	Iraq	Jan, 2013	U
2	ANNEX 4: Para. 16.2	-	Non-production of World Aeronautical Chart – ICAO 1:1 000 000	May, 1995	-	F H S	Need to produce the assigned sheets of the World Aeronautical Chart – ICAO 1:1 000 000	Iraq	Jan, 2013	B
3	ANNEX 4: Para. 7.2	-	Non-production of the Enroute Chart-ICAO	May, 1995	-	F H O	Need to produce the Enroute Chart-ICAO	Iraq	Jan, 2013	A
4	ANNEX 4: Para. 13.2	-	Non-production of Aerodrome/ Heliport Chart - ICAO	May, 1995	-	F H O	Need to produce Aerodrome/ Heliport Chart - ICAO for all Int'l Aerodromes	Iraq	Jan, 2013	A
5	ANNEX 15: Para 4.1.1	-	Newly Restructured AIP	Jun, 1996	An incomplete electronic version of the AIP is available on the web	F H O	Need to produce and issue the new restructured AIP	Iraq	Jan, 2013	U
6	ANNEX 15: Para 3.7.1	-	Implementation of WGS-84	Dec, 1997	-	F H O	Need to complete implementation of WGS-84	Iraq	Jan, 2013	U

⁽¹⁾ Rationale for non-elimination: “F”= Financial

“H”= Human Resources

“S”= State (Military/political)

“O”= Other unknown causes

5.1B-5

Item No	Identification		Deficiencies				Corrective Action			
	Requirement	Facilities/ Services	Description	Date First Reported	Remarks/ Rationale for Non-elimination		Description	Executing Body	Date of Completion	Priority for Action
7	ANNEX 15: Para. 3.2	-	Implementation of a Quality System	Jan, 2003	-	F H O	Need to introduce a properly organized quality system in conformity with ISO 9000 series of quality assurance standards.	Iraq	Jan, 2013	U
8	ANNEX 15: Para. 4.2.9 & 4.3.7	-	Lack of regular and effective updating of the AIP	Jan, 2003	ICAO to follow up with State	F H O	Need to update the AIP on a regular basis	Iraq	Jan, 2013	U
9	ANNEX 15: Para. 5.2.8.3	-	Non-production of the monthly printed plain language summary of NOTAM	Jan, 2003	-	H O	Need to produce the monthly printed plain language summary of NOTAM	Iraq	Jan, 2013	A
10	ANNEX 4: Para. 11.2	-	Non-production of Instrument Approach Chart-ICAO	Jan, 2003	-	F H O	Need to produce Instrument Approach Chart-ICAO for all Int'l Aerodromes	Iraq	Jan, 2013	A
11	ANNEX 15: Para. 8.1	-	Non provision of pre-flight information service at international airports	Mar, 2004	-	F H O	Need to provide a pre-flight information service at all aerodromes used for international air operations.	Iraq	Jan, 2013	A

⁽¹⁾ Rationale for non-elimination: “F”= Financial

“H”= Human Resources

“S”= State (Military/political)

“O”= Other unknown causes

Deficiencies in the AIS/MAP Field

JORDAN

Item No	Identification		Deficiencies				Corrective Action			
	Requirement	Facilities/ Services	Description	Date First Reported	Remarks/ Rationale for Non-elimination		Description	Executing Body	Date of Completion	Priority for Action
1	ANNEX 4: Para. 16.2	-	Non-production of World Aeronautical Chart – ICAO 1:1 000 000	Feb, 2008	-	H	Need to produce the assigned sheets of the World Aeronautical Chart – ICAO 1:1 000 000	Jordan	Jun, 2012	B

⁽¹⁾ Rationale for non-elimination: “F”= Financial

“H”= Human Resources

“S”= State (Military/political)

“O”= Other unknown causes

5.1B-7

Deficiencies in the AIS/MAP Field

KUWAIT

Item No	Identification		Deficiencies				Corrective Action			
	Requirement	Facilities/ Services	Description	Date First Reported	Remarks/ Rationale for Non-elimination		Description	Executing Body	Date of Completion	Priority for Action
1	ANNEX 15: Para. 3.2	-	Implementation of a Quality System	Jan, 2003	Work in progress	H	Need to introduce a properly organized quality system in conformity with ISO 9000 series of quality assurance standards.	Kuwait	Dec, 2013	U

⁽¹⁾ Rationale for non-elimination: “F”= Financial

“H”= Human Resources

“S”= State (Military/political)

“O”= Other unknown causes

Deficiencies in the AIS/MAP Field

LEBANON

Item No	Identification		Deficiencies				Corrective Action			
	Requirement	Facilities/ Services	Description	Date First Reported	Remarks/ Rationale for Non-elimination		Description	Executing Body	Date of Completion	Priority for Action
1	ANNEX 4 Para. 16.2	-	Non-production of World Aeronautical Chart – ICAO 1:1 000 000	May, 1995	-	H	Difference published in the AIP. There's no plan to produce the required sheets of the WAC 1:1000 000	Lebanon	Dec, 2015	B
2	ANNEX 15:Para. 3.2	-	Implementation of a Quality System	Jan, 2003	-	H	Need to introduce a properly organized quality system in conformity with ISO 9000 series of quality assurance standards.	Lebanon	Dec, 2012	U
3	ANNEX 15:Para. 3.7.2.4	-	Implementation of geoid undulation referenced to the WGS-84 ellipsoid.	Jan, 2003	-	H	Need to implement geoid undulation referenced to the WGS-84 ellipsoid.	Lebanon	Jun, 2012	A

⁽¹⁾ Rationale for non-elimination: “F”= Financial

“H”= Human Resources

“S”= State (Military/political)

“O”= Other unknown causes

5.1B-9

Deficiencies in the AIS/MAP Field

OMAN

Item No	Identification		Deficiencies				Corrective Action			
	Requirement	Facilities/ Services	Description	Date First Reported	Remarks/ Rationale for Non-elimination		Description	Executing Body	Date of Completion	Priority for Action
1	ANNEX 15:Para. 3.2	-	Implementation of a Quality System	Jan, 2003	-	O	Need to introduce a properly organized quality system in conformity with ISO 9000 series of quality assurance standards.	Oman	Dec, 2012	U
2	ANNEX 15: Para. 3.6.5and 8.2	-	Lack of AIS automation	Jul, 2005	-	O	AIS automation should be introduced with the objective of improving the speed, accuracy, efficiency and cost-effectiveness of aeronautical information services	Oman	Dec, 2014	A

⁽¹⁾ Rationale for non-elimination: “F”= Financial

“H”= Human Resources

“S”= State (Military/political)

“O”= Other unknown causes

Deficiencies in the AIS/MAP Field

QATAR

Item No	Identification		Deficiencies			Corrective Action			
	Requirement	Facilities/ Services	Description	Date First Reported	Remarks/ Rationale for Non-elimination	Description	Executing Body	Date of Completion	Priority for Action
No Deficiencies Reported									

⁽¹⁾ Rationale for non-elimination: “F”= Financial

“H”= Human Resources

“S”= State (Military/political)

“O”= Other unknown causes

5.1B-11

Deficiencies in the AIS/MAP Field

SAUDI ARABIA

Item No	Identification		Deficiencies				Corrective Action			
	Requirement	Facilities/ Services	Description	Date First Reported	Remarks/ Rationale for Non-elimination		Description	Executing Body	Date of Completion	Priority for Action
1	ANNEX 4: Para. 16.2	-	Non-production of World Aeronautical Chart – ICAO 1:1 000 000	May, 1995	-	O	Need to produce the assigned sheets of the World Aeronautical Chart – ICAO 1:1 000 000	Saudi Arabia	Jan, 2013	B
2	ANNEX 15: Para. 8.1	-	Pre-flight information service not provided at International Airports	Nov, 2007	-	O	Need to provide a pre-flight information service at all aerodromes used for international air operations.	Saudi Arabia	Jan, 2013	A

⁽¹⁾ Rationale for non-elimination: “F”= Financial

“H”= Human Resources

“S”= State (Military/political)

“O”= Other unknown causes

Deficiencies in the AIS/MAP Field

SYRIA

Item No	Identification		Deficiencies				Corrective Action			
	Requirement	Facilities/ Services	Description	Date First Reported	Remarks/ Rationale for Non-elimination		Description	Executing Body	Date of Completion	Priority for Action
1	ANNEX 15: Para. 6.	-	Lack of implementation of AIRAC System	May, 1995	-	F H	Need to fully comply with the AIRAC procedure	Syria	Jan, 2013	U
2	ANNEX 4: Para. 16.2	-	Non-production of World Aeronautical Chart – ICAO 1:1 000 000	May, 1995	-	F H S	Need to produce the assigned sheets of the World Aeronautical Chart – ICAO 1:1 000 000	Syria	Jan, 2013	B
3	ANNEX 15: Para. 3.2	-	Implementation of a Quality System	Jan, 2003	-	F H	Need to introduce a properly organized quality system in conformity with ISO 9000 series of quality assurance standards.	Syria	Jan, 2013	U
4	ANNEX 15: Para. 3.7.2.4	-	Implementation of geoid undulation referenced to the WGS-84 ellipsoid.	Jan, 2003	-	F H	Need to implement geoid undulation referenced to the WGS-84 ellipsoid.	Syria	Jan, 2013	A
5	ANNEX 15: Para. 4.2.9 & 4.3.7	-	Lack of regular and effective updating of the AIP	Jul, 2005	-	F H O	Need to update the AIP on a regular basis	Syria	Jan, 2013	U
6	ANNEX 15 Para. 3.1.1.2, 3.1.5, 3.1.6 & 4.1	-	Lack of consistency between the different Sections of the AIP containing the same information.	Jul, 2005	-	H	Need to review the AIP for consistency	Syria	Jan, 2013	U

⁽¹⁾ Rationale for non-elimination: “F”= Financial

“H”= Human Resources

“S”= State (Military/political)

“O”= Other unknown causes

5.1B-13

Item No	Identification		Deficiencies				Corrective Action			
	Requirement	Facilities/ Services	Description	Date First Reported	Remarks/ Rationale for Non-elimination		Description	Executing Body	Date of Completion	Priority for Action
7	ANNEX 15: Para. 3.6.5	-	Lack of AIS automation	Jul, 2005	-	F H	AIS automation should be introduced with the objective of improving the speed, accuracy, efficiency and cost-effectiveness of aeronautical information services	Syria	Jan, 2013	A
8	ANNEX 15: Para. 8.1	-	Non provision of pre-flight information service at international airports	Jul, 2005	-	F H	Need to provide a pre-flight information service at all aerodromes used for international air operations.	Syria	Jan, 2013	A

⁽¹⁾ Rationale for non-elimination: “F”= Financial

“H”= Human Resources

“S”= State (Military/political)

“O”= Other unknown causes

Deficiencies in the AIS/MAP Field

UAE

Item No	Identification		Deficiencies			Corrective Action			
	Requirement	Facilities/ Services	Description	Date First Reported	Remarks/ Rationale for Non-elimination	Description	Executing Body	Date of Completion	Priority for Action
No Deficiencies Reported									

⁽¹⁾ Rationale for non-elimination: “F”= Financial “H”= Human Resources “S”= State (Military/political) “O”= Other unknown causes

5.1B-15

Deficiencies in the AIS/MAP Field

YEMEN

Item No	Identification		Deficiencies				Corrective Action			
	Requirement	Facilities/ Services	Description	Date First Reported	Remarks/ Rationale for Non-elimination		Description	Executing Body	Date of Completion	Priority for Action
1	ANNEX 15: Para. 6.	-	Lack of implementation of AIRAC System	May, 1995	-	H O	Need to fully comply with the AIRAC procedure	Yemen	Jan, 2013	U
2	ANNEX 4: Para. 16.2	-	Non-productionof World Aeronautical Chart – ICAO1:1 000 000	May, 1995	-	F	Need to produce the assigned sheets of the World Aeronautical Chart – ICAO 1:1 000 000	Yemen	Dec, 2013	B
3	ANNEX 15: Para. 3.2	-	Implementation of a Quality System	Jan, 2003	-	F	Need to introduce a properly organized quality system in conformity with ISO 9000 series of quality assurance standards.	Yemen	Dec, 2013	U
4	ANNEX 4: Para. 11.2	-	Non-productionof Instrument Approach Chart-ICAO	Jan, 2003	Yemen has produced the Instrument Approach Chart-ICAO except for TAIZ Intl Airport	O	RNAV procedures are under development for Taiz airport	Yemen	Dec, 2012	A
5	ANNEX 15: Para. 8.1	-	Non provision of pre-flight information service at international airports	Mar, 2004	-	F H	Need to provide a pre-flight information service at all aerodromes used for international air operations.	Yemen	Jan, 2013	A

⁽¹⁾ Rationale for non-elimination: “F”= Financial

“H”= Human Resources

“S”= State (Military/political)

“O”= Other unknown causes

Item No	Identification		Deficiencies				Corrective Action			
	Requirement	Facilities/ Services	Description	Date First Reported	Remarks/ Rationale for Non-elimination		Description	Executing Body	Date of Completion	Priority for Action
6	ANNEX 15: Para. 3.6.5	-	Lack of AIS automation	Jul, 2005	-	F	AIS automation should be introduced with the objective of improving the speed, accuracy, efficiency and cost-effectiveness of aeronautical information services	Yemen	Dec, 2013	A

⁽¹⁾ Rationale for non-elimination: “F”= Financial

“H”= Human Resources

“S”= State (Military/political)

“O”= Other unknown causes

MIDANPIRG/13
Appendix 5.1C to the Report on Agenda Item 5.1

Deficiencies in the AOP Field

BAHRAIN

Item No	Identification		Deficiencies			Corrective Action			
	Requirement	Facilities/ Services	Description	Date First Reported	Remarks/ Rationale for Non-elimination	Description	Executing Body	Date of Completion	Priority for Action
No Deficiencies Reported									

⁽¹⁾ Rationale for non-elimination: “F”= Financial

“H”= Human Resources

“S”= State (Military/political)

“O”= Other unknown causes

Deficiencies in the AOP Field

EGYPT

Item No	Identification		Deficiencies				Corrective Action			
	Requirement	Facilities/ Services	Description	Date First Reported	Remarks/ Rationale for Non-elimination		Description	Executing Body	Date of Completion	Priority for Action
1	MID Basic ANP & FASID (Doc 9708)	Alexandria Int'l Airport	Runway is short and current distance is 7221 FT with runway all up weight maximum 68000kgs	Jul, 2004	Cannot be served as an alternate	F O	Plan to extend Runway	Egypt	Jan, 2013	A
2	Annex 14 Vol. 1.5.1, 1.5.2, 1.5.3 & 1.5.4	Luxor, Aswan, Borg El Arab, Alexandria, ALamainTaba, El-Arish, Shark El Owenat, Port Said, St. Cathrine Intl. Airports	Implementation of Aerodrome Operations Safety Management	Nov, 2006	-	F H	Need to establish a State safety programme and implement an SMS in order to achieve an acceptable level of safety in Aerodrome Operations. State: Implemented for 4 Airports .Cairo, Sharm El Sheikh,, Hurghada, Maersa Alam In Progress ASWAN, LuXer, Borg El-Arab, Taba, The rest is planned for Nov 2014	Egypt	Nov, 2014	U

⁽¹⁾ Rationale for non-elimination: “F”= Financial

“H”= Human Resources

“S”= State (Military/political)

“O”= Other unknown causes

5.1C-3

Item No	Identification		Deficiencies				Corrective Action			
	Requirement	Facilities/ Services	Description	Date First Reported	Remarks/ Rationale for Non-elimination		Description	Executing Body	Date of Completion	Priority for Action
3	Annex 14 Vol. 1.4.1, 1.4.4	Luxor, Aswan, Borg El Arab, Alexandria, Almaza, Taba, Alamain, El-Arish, Shark El Owenat, Port Said, St. Cathrine Intl. Airports	Implementation of Certification of Aerodromes used for international operations	Nov, 2006	-	F H	Need to develop an Aerodrome Manual for each listed international aerodrome and insure it includes a safety management system prior to granting the aerodrome certificate. State: implemented: Cairo, Sharm El-Sheikh, Hurghada, Mersa Alam, In Progress: Luxor, Aswan Borg Al-Arab, Taba The rest is planned for Nov 2014	Egypt	Nov, 2014	U
4	Annex 14 Vol. IFASID Table AOP-1MID/3 Rec. 1/3	Alexandria Int'l Airport	No runway demarcation lines available on RWY 18/36, to identify the entry position to RWY 04/22	May, 2007	-	F	Runway is closed for extension and upgrade	Egypt	Jan, 2013	U

⁽¹⁾ Rationale for non-elimination: “F”= Financial

“H”= Human Resources

“S”= State (Military/political)

“O”= Other unknown causes

Deficiencies in the AOP Field

IRAN

Item No	Identification		Deficiencies				Corrective Action			
	Requirement	Facilities/ Services	Description	Date First Reported	Remarks/ Rationale for Non-elimination		Description	Executing Body	Date of Completion	Priority for Action
1	Annex 14 Vol. 1.5.1, 1.5.2, 1.5.3 & 1.5.4	Emam Khomeini, Mehrabad, Esfhan, Shahid Hashmi Nejad, Shiraz, Tabriz and Zahedan Intl. Airports	Implementation of Aerodrome Operations Safety Management	Nov, 2006	-	F H	Need to establish a State safety programme and implement an SMS in order to achieve an acceptable level of safety in Aerodrome Operations	Iran	Jan, 2013	U
2	Annex 14 Vol. 1.4.1, 1.4.3, 1.4.4	Emam Khomeini, Mehrabad, Esfhan, Shahid Hashmi Nejad, Shiraz, Tabriz and Zahedan Intl. Airport,	Implementation of Certification of Aerodromes used for international operations	Nov, 2006	-	F H	Need to establish an appropriate regulatory framework. Need to establish a criteria for the certification of aerodromes. Need to develop an Aerodrome Manual for each international aerodrome and insure it includes a safety management system prior to granting Certification of Aerodrome.	Iran	Jan, 2013	U

⁽¹⁾ Rationale for non-elimination: “F”= Financial

“H”= Human Resources

“S”= State (Military/political)

“O”= Other unknown causes

5.1C-5

Deficiencies in the AOP Field

IRAQ

Item No	Identification		Deficiencies				Corrective Action			
	Requirement	Facilities/ Services	Description	Date First Reported	Remarks/ Rationale for Non-elimination		Description	Executing Body	Date of Completion	Priority for Action
1	Annex 14 Vol. 1.5.1, 1.5.2, 1.5.3 & 1.5.4	Baghdad /Basrah/Erbil /Sulaymaniyah/ Al Najaf Int'l. Airports	Implementation of Aerodrome Operations Safety Management Implementation of Certification of Aerodromes used for international operations	Nov, 2006	-	F H O	Need to establish a State safety programme and implement an SMS in order to achieve an acceptable level of safety in Aerodrome OperationsDec, State: Dec 2010 except for Baghdad & Najaf June 2011	Iraq	Dec, 2014	U
2	Annex 14 Vol. 1.4.1, 1.4.3, 1.4.4	Baghdad/ Basrah/ Erbil /Sulaymaniyah / Al Najaf Intl. Airports	Implementation of Certification of Aerodromes used for international operations	Nov, 2006	-	F H O	Need to establish an appropriate regulatory framework. Need to establish a criteria for the certification of aerodromes. Need to develop an Aerodrome Manual for each international aerodrome and insure it includes a safety management system prior to granting certification of aerodrome. State: Dec, 2010 except for Baghdad & Najaf June 2011	Iraq	Jan, 2014	U

⁽¹⁾ Rationale for non-elimination: “F”= Financial

“H”= Human Resources

“S”= State (Military/political)

“O”= Other unknown causes

Deficiencies in the AOP Field

JORDAN

Item No	Identification		Deficiencies				Corrective Action			
	Requirement	Facilities/ Services	Description	Date First Reported	Remarks/ Rationale for Non-elimination		Description	Executing Body	Date of Completion	Priority for Action
1	Annex 14 Vol. 1.5.1, 1.5.2, 1.5.3 & 1.5.4	Amman/Queen Alia, Amman/Marka, King Hussien/Aqaba Intl. Airports	Implementation of Aerodrome Operations Safety Management	Nov, 2006	State Safety Programme has been established, SMS is implemented at King Hussein Int.l Aerodrome only.	S	Need to ensure implementation of SMS for aerodrome operations at Queen Alia, and Marka Int'l Aerodromes in order to achieve an acceptable level of safety	Jordan CARC	Sep, 2013	U

⁽¹⁾ Rationale for non-elimination: “F”= Financial

“H”= Human Resources

“S”= State (Military/political)

“O”= Other unknown causes

5.1C-7

Deficiencies in the AOP Field

KUWAIT

Item No	Identification		Deficiencies			Corrective Action			
	Requirement	Facilities/ Services	Description	Date First Reported	Remarks/ Rationale for Non-elimination	Description	Executing Body	Date of Completion	Priority for Action
No Deficiencies Reported									

⁽¹⁾ Rationale for non-elimination: “F”= Financial

“H”= Human Resources

“S”= State (Military/political)

“O”= Other unknown causes

Deficiencies in the AOP Field

LEBANON

Item No	Identification		Deficiencies				Corrective Action			
	Requirement	Facilities/ Services	Description	Date First Reported	Remarks/ Rationale for Non-elimination		Description	Executing Body	Date of Completion	Priority for Action
1	Annex 14 Vol. 1.4.1, 1.4.4	R.B.H. Beirut Intl. Airport	Implementation of Certification of Aerodromes used for international operations	Nov, 2006	-	F H	Need to develop an Aerodrome Manual for each international aerodrome and insure it includes a safety management system prior to granting the aerodrome certificate	Lebanon	Jan, 2013	U
2	Annex 14 Vol. 1.5.1, 1.5.2, 1.5.3 & 1.5.4	R.B.H. Beirut Intl. Airport	Implementation of Aerodrome Operations Safety Management	Nov, 2006	-	F H	Need to establish a State safety programme and implement an SMS in order to achieve an acceptable level of safety in Aerodrome Operations	Lebanon	Jan, 2013	U

⁽¹⁾ Rationale for non-elimination: “F”= Financial

“H”= Human Resources

“S”= State (Military/political)

“O”= Other unknown causes

5.1C-9

Deficiencies in the AOP Field

OMAN

Item No	Identification		Deficiencies				Corrective Action			
	Requirement	Facilities/ Services	Description	Date First Reported	Remarks/ Rationale for Non-elimination		Description	Executing Body	Date of Completion	Priority for Action
1	Annex 14 Vol. 1.4.1, 1.4.4	Muscat/ Salalah Intl. Airports	Implementation of Certification of Aerodromes used for international operations	Nov, 2006	-	H	Need to develop an Aerodrome Manual for each international aerodrome and insure it includes a safety management system prior to granting the aerodrome certificate	Oman	Dec, 2013	U
2	Annex 14 Vol. 1.5.1, 1.5.2, 1.5.3 & 1.5.4	Muscat/ Salalah Intl. Airports	Implementation of Aerodrome Operations Safety Management	Nov, 2006	-	H	Need to establish a State safety programme and implement an SMS in order to achieve an acceptable level of safety in Aerodrome Operations	Oman	Dec, 2013	U

⁽¹⁾ Rationale for non-elimination: “F”= Financial

“H”= Human Resources

“S”= State (Military/political)

“O”= Other unknown causes

Deficiencies in the AOP Field

QATAR

Item No	Identification		Deficiencies			Corrective Action			
	Requirement	Facilities/ Services	Description	Date First Reported	Remarks/ Rationale for Non-elimination	Description	Executing Body	Date of Completion	Priority for Action
No Deficiencies Reported									

⁽¹⁾ Rationale for non-elimination: “F”= Financial

“H”= Human Resources

“S”= State (Military/political)

“O”= Other unknown causes

5.1C-11

Deficiencies in the AOP Field

SAUDI ARABIA

Item No	Identification		Deficiencies			Corrective Action			
	Requirement	Facilities/ Services	Description	Date First Reported	Remarks/ Rationale for Non-elimination	Description	Executing Body	Date of Completion	Priority for Action
No Deficiencies Reported									

⁽¹⁾ Rationale for non-elimination: “F”= Financial

“H”= Human Resources

“S”= State (Military/political)

“O”= Other unknown causes

Deficiencies in the AOP Field

SYRIA

Item No	Identification		Deficiencies				Corrective Action			
	Requirement	Facilities/ Services	Description	Date First Reported	Remarks/ Rationale for Non-elimination		Description	Executing Body	Date of Completion	Priority for Action
1	Annex 14 Vol. IFASID Table AOP-1MID/3 Rec. 1/3	Damascus int'l Airport	Apron lighting inadequate	Sep, 2003	-	F H	Apron lighting is to be improved	Syria	Jan, 2013	U
2	Annex 14 Vol. IFASID Table AOP-1MID/3 Rec. 1/3	Damascus int'l Airport	Runway surface rough and damaged. Runway markings unsatisfactory	Sep, 2003	-	F H	RWY Surface to be repaired and refurbished, Markings are to be improved	Syria	Jan, 2013	A
3	Annex 14 Vol. IFASID Table AOP-1MID/3 Rec. 1/3	Damascus int'l Airport	DAM/DVOR 116 MHZ Out of Service	Jun, 2004	-	F	The VOR/DME to be replaced	Syria	Jan, 2013	A
4	Annex 14 Vol. 1.4.1, 1.4.4	Damascus, Aleppo, Bassel Al-Assad Int'l. Airports	Implementation of Certification of Aerodromes used for international operations	Nov, 2006	-	F H	Need to develop an Aerodrome Manual for each international aerodrome and insure it includes a safety management system prior to granting the aerodrome certificate	Syria	Jan, 2013	U
5	Annex 14 Vol. 1.5.1, 1.5.2, 1.5.3 & 1.5.4	Damascus, Aleppo, Bassel Al-Assad Intl. Airports	Implementation of Aerodrome Operations Safety Management	Nov, 2006	-	F H	Need to establish a State safety programme and implement an SMS in order to achieve an acceptable level of safety in Aerodrome Operations	Syria	Jan, 2013	U

⁽¹⁾ Rationale for non-elimination: “F”= Financial

“H”= Human Resources

“S”= State (Military/political)

“O”= Other unknown causes

5.1C-13

Deficiencies in the AOP Field

UAE

Item No	Identification		Deficiencies			Corrective Action			
	Requirement	Facilities/ Services	Description	Date First Reported	Remarks/ Rationale for Non-elimination	Description	Executing Body	Date of Completion	Priority for Action
No Deficiencies Reported									

⁽¹⁾ Rationale for non-elimination: “F”= Financial

“H”= Human Resources

“S”= State (Military/political)

“O”= Other unknown causes

Deficiencies in the AOP Field

YEMEN

Item No	Identification		Deficiencies				Corrective Action			
	Requirement	Facilities/ Services	Description	Date First Reported	Remarks/ Rationale for Non-elimination		Description	Executing Body	Date of Completion	Priority for Action
1	Annex 14 Vol. 1.5.1, 1.5.2, 1.5.3 & 1.5.4	Sanaa, Aden, Hodeibah, Taiz Intl. Airports	Implementation of Aerodrome Operations Safety Management	Nov, 2006	-	F H	Need to establish a State safety programme and implement an SMS in order to achieve an acceptable level of safety in Aerodrome Operations	Yemen	Jan, 2013	U
2	Annex 14 Vol. 1.4.1, 1.4.3, 1.4.4	Sanaa, Aden, Hodeibah, Taiz Intl. Airports	Implementation of Certification of Aerodromes used for international operations	Nov, 2006	-	F H	Need to establish an appropriate regulatory framework. Need to establish a criteria for the certification of aerodromes. Need to develop an Aerodrome Manual for each international aerodrome and insure it includes a safety management system prior to granti	Yemen	Jan, 2013	U

⁽¹⁾ Rationale for non-elimination: “F”= Financial

“H”= Human Resources

“S”= State (Military/political)

“O”= Other unknown causes

MIDANPIRG/13
Appendix 5.1D to the Report on Agenda Item 5.1

Deficiencies in the ATM Field

BAHRAIN

Item No	Identification		Deficiencies			Corrective Action			
	Requirement	Facilities/ Services	Description	Date First Reported	Remarks/ Rationale for Non-elimination	Description	Executing Body	Date of Completion	Priority for Action
No Deficiencies Reported									

⁽¹⁾ Rationale for non-elimination: “F”= Financial

“H”= Human Resources

“S”= State (Military/political)

“O”= Other unknown causes

Deficiencies in the ATM Field

EGYPT

Item No	Identification		Deficiencies				Corrective Action			
	Requirement	Facilities/ Services	Description	Date First Reported	Remarks/ Rationale for Non-elimination		Description	Executing Body	Date of Completion	Priority for Action
1	Annex 11 Para. 2.30	-	Development of contingency plan	Nov, 2006	-Developed and sent to ICAO MID Regional Office - signed with Greece, Libya and Saudi Arabia	H	developed and promulgated contingency plans for implementation in the event of disruption of ATS and related supporting services	Egypt ICAO	Jan, 2013	A

⁽¹⁾ Rationale for non-elimination: “F”= Financial

“H”= Human Resources

“S”= State (Military/political)

“O”= Other unknown causes

5.1D-3

Deficiencies in the ATM Field

IRAN

Item No	Identification		Deficiencies				Corrective Action			
	Requirement	Facilities/ Services	Description	Date First Reported	Remarks/ Rationale for Non-elimination		Description	Executing Body	Date of Completion	Priority for Action
1	Annex 11 Para. 2.30	-	Development of contingency plans	Nov, 2006	Ongoing - sent to ICAO MID Regional Office - signed with Bahrain, Oman and Pakistan	H	Need to develop and promulgate contingency plans for implementation in the event of disruption of ATS and related supporting services	Iran	Jun, 2012	A
2	Annex 11 para. 2.27	-	Implementation of ATS Safety Management	Nov, 2006	Ongoing	O	Need to establish a safety programme in order to achieve an acceptable level of safety in the provision of ATS	Iran	Jun, 2012	U
3	MID ANP Table ATS-1 Plan of ATS routes	Iran / UAE	ATS routes A418/UP574 not implemented KUMUN – PAPAR	Dec, 2006	KUMUN-PAPAR segment not implemented	S O	States to continue negotiations with one another. Iran has no plan to implement the route segment	Iran and UAE	Dec, 2012	B
4	MID ANP Table ATS - 1 Plan of ATS Routes	Iran / Iraq	ATS route L126 MIGMI - ILM not implemented	Dec, 2011	MIGMI - ILM not implemented	S	States to continue negotiations with one another.	Iran / Iraq	Dec, 2012	B

⁽¹⁾ Rationale for non-elimination: “F”= Financial

“H”= Human Resources

“S”= State (Military/political)

“O”= Other unknown causes

Deficiencies in the ATM Field

IRAQ

Item No	Identification		Deficiencies				Corrective Action			
	Requirement	Facilities/ Services	Description	Date First Reported	Remarks/ Rationale for Non-elimination		Description	Executing Body	Date of Completion	Priority for Action
1	MID ANP Table ATS-1 Plan of ATS Routes	-	ATS route G667 not implemented	Sep, 2006	Iraq has no plan to open the route Iraq requested that Airway be suspended until adequate radar coverage exists and RVSM has been implemented in the Baghdad (FIR). not supported by Kuwait due Military restrictions	S	-	Iraq Iran Kuwait	Jan, 2013	B
2	Annex 11 Para. 2.30	-	Development of contingency plan	Nov, 2006	-sent to ICAO MID Regional Office	S	Need to develop and promulgate contingency plan for implementation in the event of disruption of ATS and related supporting services	Iraq ICAO	Jan, 2013	A
3	Annex 11 para. 2.27	-	Implementation of ATS Safety Management	Nov, 2006	-	H	Need to establish a safety programme in order to achieve an acceptable level of safety in the provision of ATS	Iraq	Jan, 2013	U

⁽¹⁾ Rationale for non-elimination: “F”= Financial

“H”= Human Resources

“S”= State (Military/political)

“O”= Other unknown causes

5.1D-5

Item No	Identification		Deficiencies				Corrective Action			
	Requirement	Facilities/ Services	Description	Date First Reported	Remarks/ Rationale for Non-elimination		Description	Executing Body	Date of Completion	Priority for Action
4	MID ANP Table ATS-1 Plan of ATS routes	Iraq and Syria	ATS route UL602 not implemented in the Baghdad and Damascus FIRs	Dec, 2003	Coordination between Iraq and Syria. Notam issued opening route in Baghdad FIR	S	States to negotiate with one another and coordinate opening of the route	Iraq/Syria	Jan, 2013	B
5	MID ANP Table ATS-1 Plan of ATS routes	-	ATS route G795 Rafha- Basrah segment not implemented	May, 2008	Coordination between Iraq and Saudi Arabia.	S	States to negotiate coordination issues between the two FIRs, update LoA and coordinate opening of the route	Iraq and Saudi Arabia	Jan, 2013	B
6	MID ANP Table ATS-1 Plan of ATS routes	-	ATS route A424 LOTAN - LOVEK segment (Baghdad FIR) not implemented	May, 2008	Communication problems between concerned FIRs	O	No plan to open the route. Saudi Arabia has no objections to extend the route in Baghdad FIR Proposed AIRAC date 1 July 2010	Iraq	Jan, 2013	B
7	MID ANP Table ATS-1 Plan of ATS routes	Iraq	ATS Route G669 segment Rafha SOLAT not implemented	May, 2008	Airspace restrictions	S	Airspace restrictions to be addressed	Iraq	Jan, 2013	B
8	Annex 11 Para 3.3.4.1	Iraq	Non-provision of required data to the MIDRMA on regular basis and in a timely manner	Nov, 2011	-	O	Need to provide the MIDRMA with required data on regular basis in order to enable it to discharge its functions and responsibilities	Iraq MIDRMA	Dec, 2012	A
9	MID ANP Table ATS - 1 Plan of ATS routes	Iraq/Iran	ATS routes L126 not implemented MIGMI – ILM	Dec, 2011	MIGMI – ILM segment not implemented	S	States to continue negotiations with one another.	Iraq/Iran	Dec, 2012	B

⁽¹⁾ Rationale for non-elimination: “F”= Financial

“H”= Human Resources

“S”= State (Military/political)

“O”= Other unknown causes

5.1D-6

Item No	Identification		Deficiencies				Corrective Action			
	Requirement	Facilities/ Services	Description	Date First Reported	Remarks/ Rationale for Non-elimination		Description	Executing Body	Date of Completion	Priority for Action
10	MID ANP Table ATS-1 Plan of ATS routes	Iraq	ATS routes M320 implemented with variance to Table ATS 1, Causing a Safety concern due duplication.	Dec, 2011	RUGIR to RAPLU implemented at variance with the Plan. affecting safety due duplication.	S	Iraq to negotiate with Kuwait for the extention of the route into Baghdad FIR as depicted in Iraq AIP and proposed for an amendment to the MID ANP.	Iraq	Dec, 2012	B
11	MID ANP Table ATS-1 Plan of ATS routes	Iraq	ATS routes R652 GIBUX - IVANO implemented at variance with the ANP Causing a safety concern due duplication	Dec, 2011	GIBUX - IVANO implemented at variance with the Plan. Affecting safety	S	To delete Segment from the AIP or use a temporary route designator.	Iraq	Dec, 2012	B

⁽¹⁾ Rationale for non-elimination: “F”= Financial

“H”= Human Resources

“S”= State (Military/political)

“O”= Other unknown causes

5.1D-7

Deficiencies in the ATM Field

JORDAN

Item No	Identification		Deficiencies				Corrective Action			
	Requirement	Facilities/ Services	Description	Date First Reported	Remarks/ Rationale for Non-elimination		Description	Executing Body	Date of Completion	Priority for Action
1	Annex 11 Para. 2.30	-	Development of contingency plan	Nov, 2006	National Contingency plan developed sent to ICAO MID Regional Office - signed with Saudi Arabia	H	Need to develop and promulgate contingency plan for implementation in the event of disruption of ATS and related supporting services	Jordan	Jan, 2013	A
2	Annex 11 para. 2.27	-	Implementation of ATS Safety Management	Nov, 2006	Work in progres -- SMS developed and details will be forwarded to ICAO	H	Need to establish a safety programme in order to achieve an acceptable level of safety in the provision of ATS	Jordan	Jun, 2012	U
3	MID ANP Table ATS-1	-	ATS Route UP559 not implemented	Mar, 2007	The segments TURAIF-TONTU-DAMASCUS-DAKWE-KHALDEH-KUKLA-LARNACA are not implemented. Jordan Has no plans to implement	S	-The segments TURAIF-TONTU-DAMASCUS-DAKWE-KHALDEH-KUKLA-LARNACA are not implemented	Jordan-Lebanon and Syria	Dec, 2012	B

⁽¹⁾ Rationale for non-elimination: “F”= Financial

“H”= Human Resources

“S”= State (Military/political)

“O”= Other unknown causes

5.1D-8

Deficiencies in the ATM Field

KUWAIT

Item No	Identification		Deficiencies				Corrective Action			
	Requirement	Facilities/ Services	Description	Date First Reported	Remarks/ Rationale for Non-elimination		Description	Executing Body	Date of Completion	Priority for Action
1	Annex 11 para. 2.27	-	Implementation of ATS Safety Management	Nov, 2006	Implementation of SMS is expected to start in DEC 2013	H	Need to establish a safety programme in order to achieve an acceptable level of safety in the provision of ATS	Kuwait	Dec, 2014	U
2	Annex 11 Para. 2.30	-	Development of contingency plan	Nov, 2006	Contingency Plan was signed with Bahrain and Saudi Arabia. Contingency Plan with Iraq and Iran is still awaited to be signed	S	Need to develop and promulgate contingency plan for implementation in the event of disruption of ATS and related supporting services	Kuwait	Dec, 2012	A
3	MID ANP Table ATS-1 Plan of ATS routes	-	ATS route G669 segment Rafha SOLAT not implemented	May, 2008	Airspace restrictions	S	- Airspace restrictions to be addressed -- Kuwait has no plan to activate the route segment. - Iraq ready to implement segment Rafha - SOLAT	Kuwait/Iraq	Jan, 2013	B

⁽¹⁾ Rationale for non-elimination: “F”= Financial

“H”= Human Resources

“S”= State (Military/political)

“O”= Other unknown causes

5.1D-9

Item No	Identification		Deficiencies				Corrective Action			
	Requirement	Facilities/ Services	Description	Date First Reported	Remarks/ Rationale for Non-elimination		Description	Executing Body	Date of Completion	Priority for Action
4	MID ANP Table ATS - 1 Plan of ATS Routes	-	ATS Route G667 not implemented Abadan (ABD0 ALSAN	Jan, 2006	Iraq has no plan to open the route Iraq requested that Airway be suspended until adequate radar coverage exists and RVSM has been implemented in the Baghdad (FIR). not supported by Kuwait due Military restrictions	S	ATS Route G667 not implemented Abadan (ABD0 ALSAN	Iraq/Kuawit/Iran	Jan, 2013	B

⁽¹⁾ Rationale for non-elimination: “F”= Financial

“H”= Human Resources

“S”= State (Military/political)

“O”= Other unknown causes

Deficiencies in the ATM Field

LEBANON

Item No	Identification		Deficiencies				Corrective Action			
	Requirement	Facilities/ Services	Description	Date First Reported	Remarks/ Rationale for Non-elimination		Description	Executing Body	Date of Completion	Priority for Action
1	Annex 11 Para. 2.30	-	Development of contingency plan	Nov, 2006	A plan has been developed and will be forwarded to the MID Regional Office	S	Need to develop and promulgate contingency plan for implementation in the event of disruption of ATS and related supporting services	Lebanon ICAO	Jun, 2012	A
2	Annex 11 para. 2.27	-	Implementation of ATS Safety Management	Nov, 2006	-	H	Need to establish a safety programme in order to achieve an acceptable level of safety in the provision of ATS	Lebanon	Jun, 2012	U
3	MID ANP Table ATS-1	-	ATS Route UP559 not implemented	Mar, 2007	The segments TURAIF-TONTU-DAMASCUS-DAKWE-KHALDEH-KUKLA-LARNACA are not implemented	S	-	Jordan-Lebanon and Syria	Jun, 2012	B

⁽¹⁾ Rationale for non-elimination: “F”= Financial

“H”= Human Resources

“S”= State (Military/political)

“O”= Other unknown causes

5.1D-11

Deficiencies in the ATM Field

OMAN

Item No	Identification		Deficiencies				Corrective Action			
	Requirement	Facilities/ Services	Description	Date First Reported	Remarks/ Rationale for Non-elimination		Description	Executing Body	Date of Completion	Priority for Action
1	Annex 11 Para. 2.30	-	Development of contingency plans	Nov, 2006	Under development: sent to ICAO MID Regional Office - signed with Bahrain,Iran,UAE and Yement. Agreement yet to be signed with , Pakistan and India	S	Need to develop and promulgate contingency plans for implementation in the event of disruption of ATS and related supporting services	Oman	Jan, 2013	A

⁽¹⁾ Rationale for non-elimination: “F”= Financial

“H”= Human Resources

“S”= State (Military/political)

“O”= Other unknown causes

Deficiencies in the ATM Field

QATAR

Item No	Identification		Deficiencies				Corrective Action			
	Requirement	Facilities/ Services	Description	Date First Reported	Remarks/ Rationale for Non-elimination		Description	Executing Body	Date of Completion	Priority for Action
1	Annex 11 Para. 2.30	-	Development of contingency plan	Nov, 2006	Work in progress; agreement signed with Bahrain	S	Need to develop and promulgate contingency plans for implementation in the event of disruption of ATS and related supporting services	Qatar Bahrain ICAO	Jan, 2013	A
2	MID ANP Table ATS - 1	-	ATS Route L/UL443 not implemented	Nov, 2011	The segment KUPSA AMBEK LAGVA LOPOK TAMRI are not implemented	S	need to establish the route	Qatar	Dec, 2012	B

⁽¹⁾ Rationale for non-elimination: “F”= Financial

“H”= Human Resources

“S”= State (Military/political)

“O”= Other unknown causes

5.1D-13

Deficiencies in the ATM Field

SAUDI ARABIA

Item No	Identification		Deficiencies				Corrective Action			
	Requirement	Facilities/ Services	Description	Date First Reported	Remarks/ Rationale for Non-elimination		Description	Executing Body	Date of Completion	Priority for Action
1	Annex 11 Para. 2.30	-	Development of contingency plan	Nov, 2006	A draft contingency plan not fully compliant with the agreed template has been developed. Further work being done in coordination with adjacent States signed with Bahrain, Jordan, Kuwait and Egypt	S	Need to develop and promulgate contingency plan for implementation in the event of disruption of ATS and related supporting services	Saudi Arabia	Dec, 2012	A
2	Annex 11 para. 2.27	-	Implementation of ATS Safety Management	Nov, 2006	QMS Department established. SMS development plan adopted in November 2007	H	Need to establish a safety programme in order to achieve an acceptable level of safety in the provision of ATS	Saudi Arabia	Dec, 2013	U

⁽¹⁾ Rationale for non-elimination: “F”= Financial

“H”= Human Resources

“S”= State (Military/political)

“O”= Other unknown causes

Deficiencies in the ATM Field

SYRIA

Item No	Identification		Deficiencies				Corrective Action			
	Requirement	Facilities/ Services	Description	Date First Reported	Remarks/ Rationale for Non-elimination		Description	Executing Body	Date of Completion	Priority for Action
1	MID ANP Table ATS-1 Plan of ATS routes	Lebanon Syria	ATS route G202 not implemented	Dec, 1997	Not implemented DAKWE - Damascus Economic impact- alternative routes available but longer- Not affecting safety	S	ICAO to follow-up -- Syria has no plan to implement the route	Lebanon Syria	Jan, 2013	B
2	MID ANP Table ATS-1 Plan of ATS routes	Iraq Syria	ATS route UL602 not implemented in the Baghdad and Damascus FIRs	Dec, 2003	Coordination between Iraq and Syria	S	States to negotiate with one another and coordinate opening of the routes	Iraq and Syria	Jan, 2013	B
3	Annex 11 Para. 2.30	-	Development of contingency plans	Nov, 2006	Draft available	H O	Need to develop and promulgate contingency plans for implementation in the event of disruption of ATS and related supporting services	Syria	Jan, 2013	A
4	Annex 11 para. 2.27	-	Implementation of ATS Safety Management	Nov, 2006	Committee established	H	Need to establish a safety programme in order to achieve an acceptable level of safety in the provision of ATS	Syria	Jan, 2013	U

⁽¹⁾ Rationale for non-elimination: “F”= Financial

“H”= Human Resources

“S”= State (Military/political)

“O”= Other unknown causes

5.1D-15

Item No	Identification		Deficiencies				Corrective Action			
	Requirement	Facilities/ Services	Description	Date First Reported	Remarks/ Rationale for Non-elimination		Description	Executing Body	Date of Completion	Priority for Action
5	MID ANP Table ATS-1	-	ATS Route UP559 not implemented	Mar, 2007	The segments TURAIF-TONTU-DAMASCUS-DAKWE-KHALDEH-KUKLA-LARNACA are not implemented	S	Syria has no plan to implement the route.	Jordan-Lebanon and Syria	Jan, 2013	B

⁽¹⁾ Rationale for non-elimination: “F”= Financial

“H”= Human Resources

“S”= State (Military/political)

“O”= Other unknown causes

Deficiencies in the ATM Field

UAE

Item No	Identification		Deficiencies				Corrective Action			
	Requirement	Facilities/ Services	Description	Date First Reported	Remarks/ Rationale for Non-elimination		Description	Executing Body	Date of Completion	Priority for Action
1	Annex 11 Para. 2.30	-	Development of contingency plan	Nov, 2006	Plan completed and Agreements signed with Bahrain and Oman. Others pending	O	Need to develop and promulgate contingency plans for implementation in the event of disruption of ATS and related supporting services signed with Oman, pending signature with Bahrain, Iran and Qatar	UAE	Dec, 2012	A
2	MID ANP Table ATS-1 Plan of ATS routes	Iran / UAE	ATS routes A418/UP574 not implemented KUMUN – PAPAR	Dec, 2006	KUMUN-PAPAR segment not implemented	S	States to continue negotiations with one another The UAE considers options for a resolution to be exhausted	Iran and UAE	Dec, 2012	B

⁽¹⁾ Rationale for non-elimination: “F”= Financial

“H”= Human Resources

“S”= State (Military/political)

“O”= Other unknown causes

5.1D-17

Deficiencies in the ATM Field

YEMEN

Item No	Identification		Deficiencies				Corrective Action			
	Requirement	Facilities/ Services	Description	Date First Reported	Remarks/ Rationale for Non-elimination		Description	Executing Body	Date of Completion	Priority for Action
1	Annex 11 para. 2.27	-	Implementation of ATS Safety Management	Nov, 2006	-	H	Need to establish a safety programme in order to achieve an acceptable level of safety in the provision of ATS	Yemen	Jan, 2013	U
2	Annex 11 Para. 2.30	-	Development of contingency plan	Nov, 2006	Ongoing - signed with Oman	H O	Need to develop and promulgate contingency plan for implementation in the event of disruption of ATS and related supporting services	Yemen	Jan, 2013	A
3	Annex 11 Para. 3.3.4.1	-	Non-provision of required data to the MID RMA on regular basis and in a timely manner	Oct, 2010	-	O	Need to provide the MID RMA with required data on regular basis, in order to enable it to discharge its functions and responsibilities -- Completion date not given	Yemen, MID RMA, ICAO	Jan, 2013	A

⁽¹⁾ Rationale for non-elimination: “F”= Financial

“H”= Human Resources

“S”= State (Military/political)

“O”= Other unknown causes

MIDANPIRG/13
Appendix 5.1E to the Report on Agenda Item 5.1

Deficiencies in the SAR Field

BAHRAIN

Item No	Identification		Deficiencies				Corrective Action			
	Requirement	Facilities/ Services	Description	Date First Reported	Remarks/ Rationale for Non-elimination		Description	Executing Body	Date of Completion	Priority for Action
1	Annex 12 Para.. 3.1.1 & 3.1.5	-	Lack of Search and Rescue Agreements with neighbouring States	Nov, 1994	-	S	Work ongoing to sign agreements	Bahrain	Jun, 2012	A
2	Annex 12 Para. 4.2.1 & 4.4	-	Lack of Plans of operations for the conduct of SAR operations and SAR exercises	Apr, 2012	-	O	-	Bahrain	Jan, 2013	A

⁽¹⁾ Rationale for non-elimination: “F”= Financial

“H”= Human Resources

“S”= State (Military/political)

“O”= Other unknown causes

5.1E-2

Deficiencies in the SAR Field

EGYPT

Item No	Identification		Deficiencies				Corrective Action			
	Requirement	Facilities/ Services	Description	Date First Reported	Remarks/ Rationale for Non-elimination		Description	Executing Body	Date of Completion	Priority for Action
1	Annex 12 Para.. 3.1.1 & 3.1.5	-	Lack of Search and Rescue Agreements with neighboring States	Nov, 1994	-	S	Egypt has promulgated regulations and started development of SAR agreement with Cyprus and other States	Egypt with neighboring States	Dec, 2012	A
2	Annex 12 Para. 4.2.1 & 4.4	-	Lack of Plans of operations for the conduct of SAR operations and SAR exercises	Apr, 2012	-	O	-	Egypt	Jan, 2013	A

⁽¹⁾ Rationale for non-elimination: “F”= Financial

“H”= Human Resources

“S”= State (Military/political)

“O”= Other unknown causes

5.1E-3

Deficiencies in the SAR Field

IRAN

Item No	Identification		Deficiencies				Corrective Action			
	Requirement	Facilities/ Services	Description	Date First Reported	Remarks/ Rationale for Non-elimination		Description	Executing Body	Date of Completion	Priority for Action
1	Annex 12 Para.. 3.1.1 & 3.1.5	-	Lack of Search and Rescue Agreements with neighboring States	Nov, 1994	-	S	Work ongoing to sign agreements	Iran with neighboring States	Dec, 2012	A
2	Annex 12 Para. 2.1	-	Lack of provision of required SAR services	Apr, 2012	-	O	-	Iran	Jan, 2013	A
3	Annex 12 Para. 3.2.5	-	Non designation of SAR Point of Contact (SPOC)	Apr, 2012	-	O	-	Iran	Jan, 2013	A
4	Annex 6 Vol I, para. 6.17 Annex 10, Vol III, para. 5.1 Annex 12 para. 2.6.4	ELT	Non-compliance with carriage of Emergency Locator Transmitter (ELT) requirements	Apr, 2012	-	O	-	Iran	Jan, 2013	A
5	Annex 12 Para. 4.2.1 & 4.4	-	Lack of Plans of operations for the conduct of SAR operations and SAR exercises	Apr, 2012	-	O	-	Iran	Jan, 2013	A

⁽¹⁾ Rationale for non-elimination: “F”= Financial

“H”= Human Resources

“S”= State (Military/political)

“O”= Other unknown causes

5.1E-4

Deficiencies in the SAR Field

IRAQ

Item No	Identification		Deficiencies				Corrective Action			
	Requirement	Facilities/ Services	Description	Date First Reported	Remarks/ Rationale for Non-elimination		Description	Executing Body	Date of Completion	Priority for Action
1	Annex 12 Para.. 3.1.1 & 3.1.5	-	Lack of Search and Rescue Agreements with neighboring States	Nov, 1994	-	S	Work ongoing to sign agreements	Iraq with neighboring States	Jan, 2013	A
2	Annex 12 Para. 2.1	-	Lack of provision of required SAR services	Apr, 2012	-	O	-	Iraq	Jan, 2013	A
3	Annex 12 Para. 3.2.5	-	Non designation of SAR Point of Contact (SPOC)	Apr, 2012	-	O	-	Iraq	Jan, 2013	A
4	Annex 6 Vol I, para. 6.17 Annex 10, Vol III, para. 5.1 Annex 12 para. 2.6.4	ELT	Non-compliance with carriage of Emergency Locator Transmitter (ELT) requirements	Apr, 2012	-	O	-	Iraq	Jan, 2013	A

⁽¹⁾ Rationale for non-elimination: “F”= Financial

“H”= Human Resources

“S”= State (Military/political)

“O”= Other unknown causes

5.1E-5

Item No	Identification		Deficiencies				Corrective Action			
	Requirement	Facilities/ Services	Description	Date First Reported	Remarks/ Rationale for Non-elimination		Description	Executing Body	Date of Completion	Priority for Action
5	Annex 12 Para. 4.2.1 & 4.4	-	Lack of Plans of operations for the conduct of SAR operations and SAR exercises	Apr, 2012	-	O	-	Iraq	Jan, 2013	A

⁽¹⁾ Rationale for non-elimination: “F”= Financial

“H”= Human Resources

“S”= State (Military/political)

“O”= Other unknown causes

5.1E-6

Deficiencies in the SAR Field

JORDAN

Item No	Identification		Deficiencies				Corrective Action			
	Requirement	Facilities/ Services	Description	Date First Reported	Remarks/ Rationale for Non-elimination		Description	Executing Body	Date of Completion	Priority for Action
1	Annex 12 Para.. 3.1.1 & 3.1.5	-	Lack of Search and Rescue Agreements with neighboring States	Nov, 1994	-	S	Work ongoing to sign agreements	Jordan	Jun, 2012	A

⁽¹⁾ Rationale for non-elimination: “F”= Financial

“H”= Human Resources

“S”= State (Military/political)

“O”= Other unknown causes

5.1E-7

Deficiencies in the SAR Field

KUWAIT

Item No	Identification		Deficiencies				Corrective Action			
	Requirement	Facilities/ Services	Description	Date First Reported	Remarks/ Rationale for Non-elimination		Description	Executing Body	Date of Completion	Priority for Action
1	Annex 12 Para.. 3.1.1 & 3.1.5	-	Lack of Search and Rescue Agreements with neighboring States	Nov, 1994	-	S	Work ongoing to sign agreements	Kuwait with neighboring States	Dec, 2013	A
2	Annex 6 Vol I, para. 6.17 Annex 10, Vol III, para. 5.1 Annex 12 para. 2.6.4	ELT	Non-compliance with carriage of Emergency Locator Transmitter (ELT) requirements	Apr, 2012	-	O	-	Kuwait	Jan, 2013	A
3	Annex 12 Para. 4.2.1 & 4.4	-	Lack of Plans of operations for the conduct of SAR operations and SAR exercises	Apr, 2012	-	O	-	Kuwait	Jan, 2013	A

⁽¹⁾ Rationale for non-elimination: “F”= Financial

“H”= Human Resources

“S”= State (Military/political)

“O”= Other unknown causes

5.1E-8

Deficiencies in the SAR Field

LEBANON

Item No	Identification		Deficiencies				Corrective Action			
	Requirement	Facilities/ Services	Description	Date First Reported	Remarks/ Rationale for Non-elimination		Description	Executing Body	Date of Completion	Priority for Action
1	Annex 12 Para.. 3.1.1 & 3.1.5	-	Lack of Search and Rescue Agreements with neighboring States	Nov, 1994	-	S	Work ongoing to sign agreements. Agreement signed with Cyprus.	Lebanon with neighboring States	Dec, 2012	A
2	Annex 12 Para. 2.1	-	Lack of provision of required SAR services	Apr, 2012	-	O	-	Lebanon	Jan, 2013	A
3	Annex 12 Para. 3.2.5	-	Non designation of SAR Point of Contact (SPOC)	Apr, 2012	-	O	-	Lebanon	Jan, 2013	A
4	Annex 12 Para. 4.2.1 & 4.4	-	Lack of Plans of operations for the conduct of SAR operations and SAR exercises	Apr, 2012	-	O	-	Lebanon	Jan, 2013	A

⁽¹⁾ Rationale for non-elimination: “F”= Financial

“H”= Human Resources

“S”= State (Military/political)

“O”= Other unknown causes

5.1E-9

Item No	Identification		Deficiencies				Corrective Action			
	Requirement	Facilities/ Services	Description	Date First Reported	Remarks/ Rationale for Non-elimination		Description	Executing Body	Date of Completion	Priority for Action
5	Annex 6 Vol I, para. 6.17 Annex 10, Vol III, para. 5.1 Annex 12 para. 2.6.4	ELT	Non-compliance with carriage of Emergency Locator Transmitter (ELT) requirements	Apr, 2012	-	O	-	Lebanon	Jan, 2013	A

⁽¹⁾ Rationale for non-elimination: “F”= Financial

“H”= Human Resources

“S”= State (Military/political)

“O”= Other unknown causes

5.1E-10

Deficiencies in the SAR Field

OMAN

Item No	Identification		Deficiencies				Corrective Action			
	Requirement	Facilities/ Services	Description	Date First Reported	Remarks/ Rationale for Non-elimination		Description	Executing Body	Date of Completion	Priority for Action
1	Annex 12 Para.. 3.1.1 & 3.1.5	-	Lack of Search and Rescue Agreements with neighboring States	Nov, 1994	-	S	Work ongoing to sign agreements	Oman with neighboring States	Dec, 2012	A

⁽¹⁾ Rationale for non-elimination: “F”= Financial

“H”= Human Resources

“S”= State (Military/political)

“O”= Other unknown causes

5.1E-11

Deficiencies in the SAR Field

QATAR

Item No	Identification		Deficiencies				Corrective Action			
	Requirement	Facilities/ Services	Description	Date First Reported	Remarks/ Rationale for Non-elimination		Description	Executing Body	Date of Completion	Priority for Action
1	Annex 12 Para.. 3.1.1 & 3.1.5	-	Lack of Search and Rescue Agreements with neighboring States	Nov, 1994	-	S	-	Qatar and Bahrain	Jan, 2013	A
2	Annex 12 Para. 2.1	-	Lack of provision of required SAR services	Apr, 2012	-	O	-	Qatar	Jan, 2013	A
3	Annex 6 Vol I, para. 6.17 Annex 10, Vol III, para. 5.1 Annex 12 para. 2.6.4	ELT	Non-compliance with carriage of Emergency Locator Transmitter (ELT) requirements	Apr, 2012	-	O	-	Qatar	Jan, 2013	A
4	Annex 12 Para. 4.2.1 & 4.4	-	Lack of Plans of operations for the conduct of SAR operations and SAR exercises	Apr, 2012	-	O	-	Qatar	Jan, 2013	A

⁽¹⁾ Rationale for non-elimination: “F”= Financial

“H”= Human Resources

“S”= State (Military/political)

“O”= Other unknown causes

5.1E-12

Deficiencies in the SAR Field

SAUDI ARABIA

Item No	Identification		Deficiencies				Corrective Action			
	Requirement	Facilities/ Services	Description	Date First Reported	Remarks/ Rationale for Non-elimination		Description	Executing Body	Date of Completion	Priority for Action
1	Annex 12 Para.. 3.1.1 & 3.1.5	-	Lack of Search and Rescue Agreements with neighboring States	Nov, 1994	-	S	Work ongoing to sign agreements. Ready to sign agreement as per drafted (model) agreement presented at ATM/SAR/AIS SG/10 SAR National Board established	Saudi Arabia with neighboring States	Dec, 2012	A
2	Annex 12 Para. 4.2.1 & 4.4	-	Lack of Plans of operations for the conduct of SAR operations and SAR exercises	Apr, 2012	-	O	-	Saudi Arabia	Jan, 2013	A

⁽¹⁾ Rationale for non-elimination: “F”= Financial

“H”= Human Resources

“S”= State (Military/political)

“O”= Other unknown causes

5.1E-13

Deficiencies in the SAR Field**SYRIA**

Item No	Identification		Deficiencies				Corrective Action			
	Requirement	Facilities/ Services	Description	Date First Reported	Remarks/ Rationale for Non-elimination		Description	Executing Body	Date of Completion	Priority for Action
1	Annex 12 Para.. 3.1.1 & 3.1.5	-	Lack of Search and Rescue Agreements with neighboring States	Nov, 1994	-	S	Work ongoing to sign agreements. Agreement with Turkey and Cyprus completed. Agreement with Iraq, Jordan and Lebanon pending	Syria with neighboring States	Jan, 2013	A
2	Annex 12 Para. 2.1	-	Lack of provision of required SAR services	Apr, 2012	-	O	-	Syria	Jan, 2013	A
3	Annex 6 Vol I, para. 6.17 Annex 10, Vol III, para. 5.1 Annex 12 para. 2.6.4	ELT	Non-compliance with carriage of Emergency Locator Transmitter (ELT) requirements	Apr, 2012	-	O	-	Syria	Jan, 2013	A
4	Annex 12 Para. 4.2.1 & 4.4	-	Lack of Plans of operations for the conduct of SAR operations and SAR exercises	Apr, 2012	-	O	-	Syria	Jan, 2013	A

Deficiencies in the SAR Field⁽¹⁾ Rationale for non-elimination: “F”= Financial

“H”= Human Resources

“S”= State (Military/political)

“O”= Other unknown causes

5.1E-14

UAE

Item No	Identification		Deficiencies				Corrective Action			
	Requirement	Facilities/ Services	Description	Date First Reported	Remarks/ Rationale for Non-elimination		Description	Executing Body	Date of Completion	Priority for Action
1	Annex 12 Para.. 3.1.1 & 3.1.5	-	Lack of Search and Rescue Agreements with neighboring States	Nov, 1994	-	S	Work ongoing. The agreement with Bahrain and Oman to be updated and the one with Iran is being coordinated.	UAE with neighboring States	Dec, 2012	A

⁽¹⁾ Rationale for non-elimination: “F”= Financial

“H”= Human Resources

“S”= State (Military/political)

“O”= Other unknown causes

5.1E-15

Deficiencies in the SAR Field

YEMEN

Item No	Identification		Deficiencies				Corrective Action			
	Requirement	Facilities/ Services	Description	Date First Reported	Remarks/ Rationale for Non-elimination		Description	Executing Body	Date of Completion	Priority for Action
1	Annex 12 Para.. 3.1.1 & 3.1.5	-	Lack of Search and Rescue Agreements with neighboring States	Nov, 1994	-	S	-	Yemen with neighboring States	Jan, 2013	A
2	Annex 12 Para. 2.1	-	Lack of provision of required SAR services	Apr, 2012	-	O	-	Yemen	Jan, 2013	A
3	Annex 12 Para. 3.2.5	-	Non designation of SAR Point of Contact (SPOC)	Apr, 2012	-	O	-	Yemen	Jan, 2013	A
4	Annex 6 Vol I, para. 6.17 Annex 10, Vol III, para. 5.1 Annex 12 para. 2.6.4	ELT	Non-compliance with carriage of Emergency Locator Transmitter (ELT) requirements	Apr, 2012	-	O	-	Yemen	Jan, 2013	A
5	Annex 12 Para. 4.2.1 & 4.4	-	Lack of Plans of operations for the conduct of SAR operations and SAR exercises	Apr, 2012	-	O	-	Yemen	Jan, 2013	A

⁽¹⁾ Rationale for non-elimination: “F”= Financial

“H”= Human Resources

“S”= State (Military/political)

“O”= Other unknown causes

MIDANPIRG/13
Appendix 5.1F to the Report on Agenda Item 5.1

Deficiencies in the CNS Field

BAHRAIN

Item No	Identification		Deficiencies				Corrective Action			
	Requirement	Facilities/ Services	Description	Date First Reported	Remarks/ Rationale for Non-elimination		Description	Executing Body	Date of Completion	Priority for Action
1	AFTN Rationalized Plan (LIM MID RAN Rec 6/6, 6/9 and MIDANPIRG/4 Conclusion 4/19)	Afghanistan-Bahrain-Kabul-Bahrain AFTN Circuit	The circuit is not yet implemented	Oct, 1998	Bahrain is ready to implement the circuit	O	Follow-up the matter with IATA concerning Afghanistan VSAT are available and now checking compatibility	Afghanistan Bahrain	Jan, 2013	A

⁽¹⁾ Rationale for non-elimination: “F”= Financial

“H”= Human Resources

“S”= State (Military/political)

“O”= Other unknown causes

Deficiencies in the CNS Field

EGYPT

Item No	Identification		Deficiencies			Corrective Action			
	Requirement	Facilities/ Services	Description	Date First Reported	Remarks/ Rationale for Non-elimination	Description	Executing Body	Date of Completion	Priority for Action
No Deficiencies Reported									

⁽¹⁾ Rationale for non-elimination: “F”= Financial

“H”= Human Resources

“S”= State (Military/political)

“O”= Other unknown causes

5.1F-3

Deficiencies in the CNS Field

IRAN

Item No	Identification		Deficiencies				Corrective Action			
	Requirement	Facilities/ Services	Description	Date First Reported	Remarks/ Rationale for Non-elimination		Description	Executing Body	Date of Completion	Priority for Action
1	AFTN Rationalized Plan (LIM MID RAN Rec 6/6, 6/9 and MIDANPIRG/4 Conclusion 4/19)	Afghanistan-Iran-Kabul-Tehran AFTN Circuit	The circuit is not yet implemented	Oct, 1998	VSAT network to be implemented	S	Iran advised that they are ready	Afghanistan Iran	Jan, 2013	A

⁽¹⁾ Rationale for non-elimination: “F”= Financial

“H”= Human Resources

“S”= State (Military/political)

“O”= Other unknown causes

Deficiencies in the CNS Field

IRAQ

Item No	Identification		Deficiencies				Corrective Action			
	Requirement	Facilities/ Services	Description	Date First Reported	Remarks/ Rationale for Non-elimination		Description	Executing Body	Date of Completion	Priority for Action
1	ATS Direct Speech circuit	Iraq - Syria	ATS Direct Speech circuit between adjacent centers is needed	Oct, 2008	New reported	O	Iraq Advise they can provide VSAT	Iraq and Syria	Jan, 2013	U
2	ATS Direct Speech circuit	Iraq - Jordan	ATS Direct Speech circuit between adjacent centers is needed	Jan, 2009	newly reported	O	Iraq advised they can provide VSAT. However the VSAT was not provided yet and Jordan prepared the site.	Iraq and Jordan	Jan, 2013	U
3	MID FASID	Baghdad VOR	VOR not installed	Jan, 2009	Newly Reported	O	Iraq advised that all NAV AIDs will be installed according to the master plan	Iraq	Jan, 2013	U
4	MID FASID	Baghdad DME	DME not installed	Jan, 2009	Newly reported	O	Iraq advised that all NAV AIDs will be installed according to the master plan	Iraq	Jan, 2013	U

⁽¹⁾ Rationale for non-elimination: “F”= Financial

“H”= Human Resources

“S”= State (Military/political)

“O”= Other unknown causes

5.1F-5

Deficiencies in the CNS Field

JORDAN

Item No	Identification		Deficiencies				Corrective Action			
	Requirement	Facilities/ Services	Description	Date First Reported	Remarks/ Rationale for Non-elimination		Description	Executing Body	Date of Completion	Priority for Action
1	AFTN Rationalized Plan (LIM MID RAN Rec 6/6, 6/9 and MIDANPIRG/4 Conclusion 4/19)	Jordan-Lebanon-Amman-Beirut AFTN Circuit	The circuit is not yet implemented	Oct, 1998	Jordan is ready to implement the circuit and already sent official letter to Lebanon in June 2010	S	Jordan is already co-ordinating with Lebanon	Jordan - Lebanon	Jan, 2013	A
2	ATS Direct Speech circuit	Iraq - Jordan	ATS Direct Speech circuit between adjacent centers is needed	Jan, 2009	Newly reported	O	Iraq advise they can provide VSAT, Jordan Prepared the site and waiting for Iraq to install the VSAT	Iraq - Jordan	Jan, 2013	U

⁽¹⁾ Rationale for non-elimination: “F”= Financial

“H”= Human Resources

“S”= State (Military/political)

“O”= Other unknown causes

Deficiencies in the CNS Field

KUWAIT

Item No	Identification		Deficiencies			Corrective Action			
	Requirement	Facilities/ Services	Description	Date First Reported	Remarks/ Rationale for Non-elimination	Description	Executing Body	Date of Completion	Priority for Action
No Deficiencies Reported									

⁽¹⁾ Rationale for non-elimination: “F”= Financial

“H”= Human Resources

“S”= State (Military/political)

“O”= Other unknown causes

5.1F-7

Deficiencies in the CNS Field

LEBANON

Item No	Identification		Deficiencies				Corrective Action			
	Requirement	Facilities/ Services	Description	Date First Reported	Remarks/ Rationale for Non-elimination		Description	Executing Body	Date of Completion	Priority for Action
1	AFTN Rationalized Plan (LIM MID RAN Rec 6/6, 6/9 and MIDANPIRG/4 Conclusion 4/19)	Jordan-Lebanon Amman-Beirut AFTN Circuit	The circuit is not yet implemented	Oct, 1998	Lebanon is getting ready to implement the circuit	S	If problem persist, another alternative should be proposed in the MID AFTN Plan	Jordan Lebanon	Jan, 2013	A

⁽¹⁾ Rationale for non-elimination: “F”= Financial

“H”= Human Resources

“S”= State (Military/political)

“O”= Other unknown causes

Deficiencies in the CNS Field

OMAN

Item No	Identification		Deficiencies				Corrective Action			
	Requirement	Facilities/ Services	Description	Date First Reported	Remarks/ Rationale for Non-elimination		Description	Executing Body	Date of Completion	Priority for Action
1	Direct Speech circuit (LIM MID RAN)	Oman - Yemen	Direct Speech circuit is required	Oct, 1998	under Implementation	O	Oman confirm they are ready and advised direct Speech circuit will be operational when Yemen is ready	Oman - Yemen	Jan, 2013	A

⁽¹⁾ Rationale for non-elimination: “F”= Financial

“H”= Human Resources

“S”= State (Military/political)

“O”= Other unknown causes

5.1F-9

Deficiencies in the CNS Field

QATAR

Item No	Identification		Deficiencies			Corrective Action			
	Requirement	Facilities/ Services	Description	Date First Reported	Remarks/ Rationale for Non-elimination	Description	Executing Body	Date of Completion	Priority for Action
No Deficiencies Reported									

⁽¹⁾ Rationale for non-elimination: “F”= Financial

“H”= Human Resources

“S”= State (Military/political)

“O”= Other unknown causes

Deficiencies in the CNS Field

SAUDI ARABIA

Item No	Identification		Deficiencies			Corrective Action			
	Requirement	Facilities/ Services	Description	Date First Reported	Remarks/ Rationale for Non-elimination	Description	Executing Body	Date of Completion	Priority for Action
No Deficiencies Reported									

⁽¹⁾ Rationale for non-elimination: “F”= Financial

“H”= Human Resources

“S”= State (Military/political)

“O”= Other unknown causes

5.1F-11

Deficiencies in the CNS Field

SYRIA

Item No	Identification		Deficiencies				Corrective Action			
	Requirement	Facilities/ Services	Description	Date First Reported	Remarks/ Rationale for Non-elimination		Description	Executing Body	Date of Completion	Priority for Action
1	ATS Direct Speech circuit	Syria - IRAQ	Direct Speech circuit required between Syria and Iraq	Oct, 2008	-	O	Iraq advise they are ready to provide VSAT for the implementation	Syria-Iraq	Jan, 2013	U

⁽¹⁾ Rationale for non-elimination: “F”= Financial

“H”= Human Resources

“S”= State (Military/political)

“O”= Other unknown causes

Deficiencies in the CNS Field

UAE

Item No	Identification		Deficiencies			Corrective Action			
	Requirement	Facilities/ Services	Description	Date First Reported	Remarks/ Rationale for Non-elimination	Description	Executing Body	Date of Completion	Priority for Action
No Deficiencies Reported									

⁽¹⁾ Rationale for non-elimination: “F”= Financial

“H”= Human Resources

“S”= State (Military/political)

“O”= Other unknown causes

5.1F-13

Deficiencies in the CNS Field

YEMEN

Item No	Identification		Deficiencies				Corrective Action			
	Requirement	Facilities/ Services	Description	Date First Reported	Remarks/ Rationale for Non-elimination		Description	Executing Body	Date of Completion	Priority for Action
1	Direct Speech Circuit with Adjacent center Djibouti	Yemen - Djibouti	requirement for a Direct Speech Circuit with Adjacent center Djibouti	Oct, 1998	-	O	Establishment of direct Speech circuit between Yemen and Djibouti	Yemen - Djibouti	Jan, 2013	A
2	Direct Speech Circuit with Adjacent center India	Yemen - India	Direct Speech Circuit with Adjacent center India	Oct, 1998	-	O	Establishments of a Direct Speech Circuit with Adjacent center in India	Yemen - India	Jan, 2013	A
3	Direct Speech Circuit with Adjacent center Oman	Yemen - Oman	Requirement for a Direct Speech Circuit with Adjacent center Oman	Oct, 1998	-	O	Establish a direct Speech Circuit with Adjacent center Oman	Yemen - Oman	Jan, 2013	A
4	Direct Speech Circuit with Adjacent center with Eritrea and Somalia	Yemen - Eritrea , Somalia	requirement for a direct Speech Circuit with Adjacent center in Eritrea and Somalia	Oct, 1998	-	O	Establishment of direct Speech Circuit with Adjacent center in Eritrea and Somalia	Yemen - Eritrea , Somalia	Jan, 2013	A

⁽¹⁾ Rationale for non-elimination: “F”= Financial

“H”= Human Resources

“S”= State (Military/political)

“O”= Other unknown causes

MIDANPIRG/13
 Appendix 5.1G to the Report on Agenda Item 5.1

No Deficiencies identified in the MET Field

Item No	Identification		Deficiencies			Corrective Action			
	Requirement	Facilities/ Services	Description	Date First Reported	Remarks/ Rationale for Non-elimination	Description	Executing Body	Date of Completion	Priority for Action
No Deficiencies Reported									

⁽¹⁾ Rationale for non-elimination: “F”= Financial

“H”= Human Resources

“S”= State (Military/political)

“O”= Other unknown causes

Note:* Priority for action to remedy a deficiency is based on the following safety assessments:

'U' priority = Urgent requirements having a direct impact on safety and requiring immediate corrective actions.

Urgent requirement consisting of any physical, configuration, material, performance, personnel or procedures specification, the application of which is urgently required for air navigation safety.

'A' priority = Top priority requirements necessary for air navigation safety.

Top priority requirement consisting of any physical, configuration, material, performance, personnel or procedures specification, the application of which is considered necessary for air navigation safety.

'B' priority = Intermediate requirements necessary for air navigation regularity and efficiency.

Intermediate priority requirement consisting of any physical, configuration, material, performance, personnel or procedures specification, the application of which is considered necessary for air navigation regularity and efficiency.

Definition:

A deficiency is a situation where a facility, service or procedure does not comply with a regional air navigation plan approved by the Council, or with related ICAO Standards and Recommended Practices, and which situation has a negative impact on the safety, regularity and/or efficiency of international civil aviation.

⁽¹⁾ Rationale for non-elimination: “F”= Financial

“H”= Human Resources

“S”= State (Military/political)

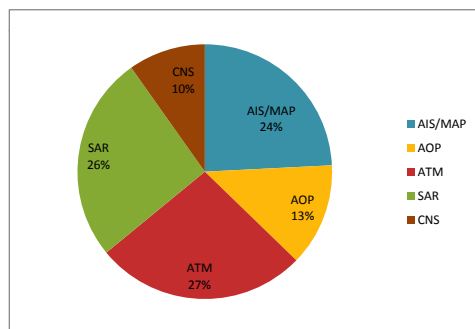
“O”= Other unknown causes

MIDANPIRG/13
Appendix 5.1H to the Report on Agenda Item 5.1

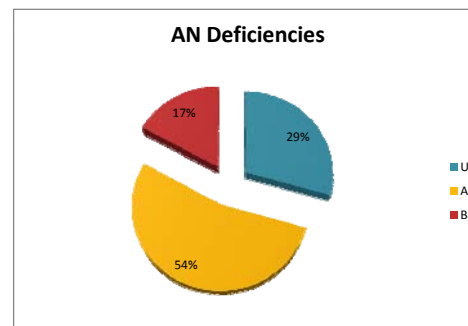
AIR NAVIGATION DEFICIENCIES IN THE THE MID REGION

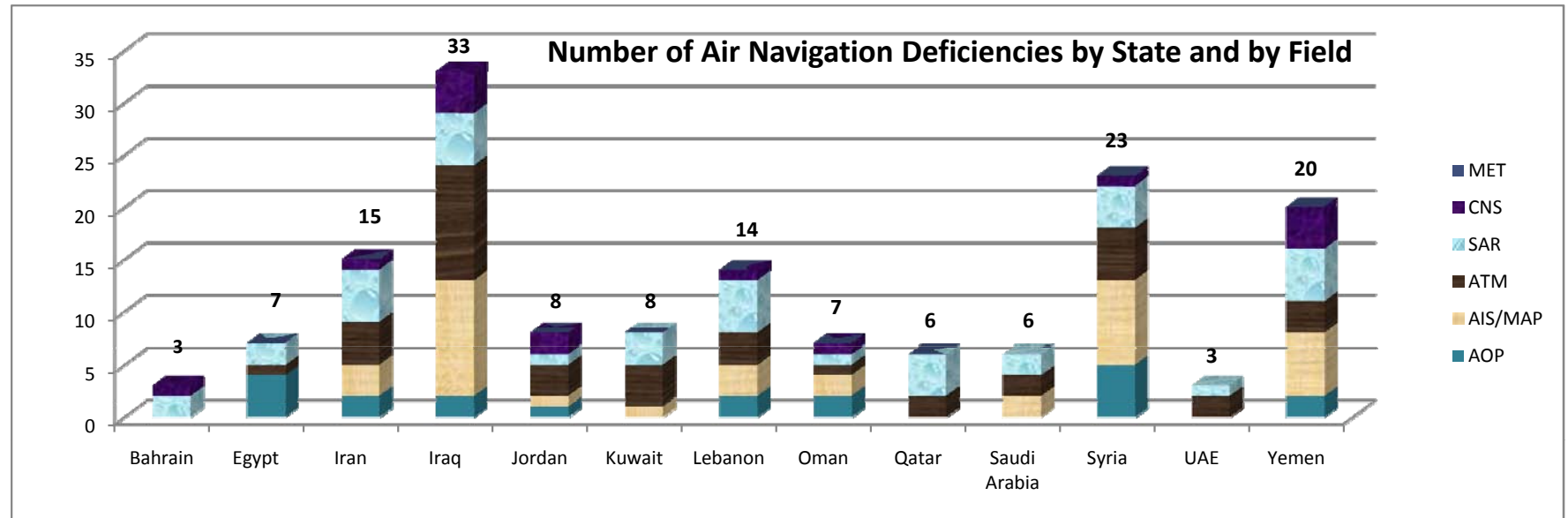
STATE	AIS						Total AIS	AOP						Total AOP	ATM						Total ATM	SAR						Total SAR	CNS						Total CNS	MET						Total MET						
	Priority			Rational				Priority			Rational				Priority			Rational				Priority			Rational				Priority			Rational				Priority			Rational									
	U	A	B	F	H	S		O	U	A	B	F	H		S	O	U	A	B	F		H	S	O	U	A	B		F	H	S	O	U	A		B	F	H	S	O								
Bahrain							0					1			0							0		2		F	H	S	O	1	1	2		1							0							
Egypt							0	3	1			4	2		1	4	1			1	1		1	2						1	2									0								
Iran		2	1				3	3	2			2	2		2	1	1	2		1	2	2	4	5						1	4	5								0								
Iraq	5	5	1	10	11	11	11	11	2			2	2		2	2	1	2	8		1	8	2	11	5					1	4	5	4			1	4	1			0							
Jordan			1				1	1						1	1	1	1	1		2	1		3	1						1	1	1				1	1	2			0							
Kuwait	1						1								0	1	1	2		1	3		4	3						1	3	3									0							
Lebanon	1	1	1		3		3	2			2	2			2	1	1	1		1	2		3	5						1	4	5			1			1	1		0							
Oman	1	1					2	2	2			2			2	1				1			1	1						1	1	1			1			1	1		0							
Qatar							0								0		1	1		2			2	4							1	3	4			1					0							
Saudi Arabia		1	1				2	2	0						0	1	1			1	1		2	2							1	1	2								0							
Syria	4	3	1	7	8	1	1	8	3	2		5	4			5	1	1	3		2	3	1	5	4					1	3	4	1					1	1			0						
UAE							0								0			1	1			1	1	2	1							1										0						
Yemen	2	3	1	4	2		2	6	2			2	2		2	1	2			2	2		3	5							1	4	5			4			4	4		0						
Total	14	16	7	21	26	12	21	37	17	3	0	17	17	1	3	20	8	14	19	0	12	25	28	41	0	40	0	0	0	13	28	40	6	9	0	0	0	3	12	15	0	0	0	0	0	0	0	153

Distribution of Air Navigation deficiencies by field in %



Distribution of Air navigation deficiencies by priority in %





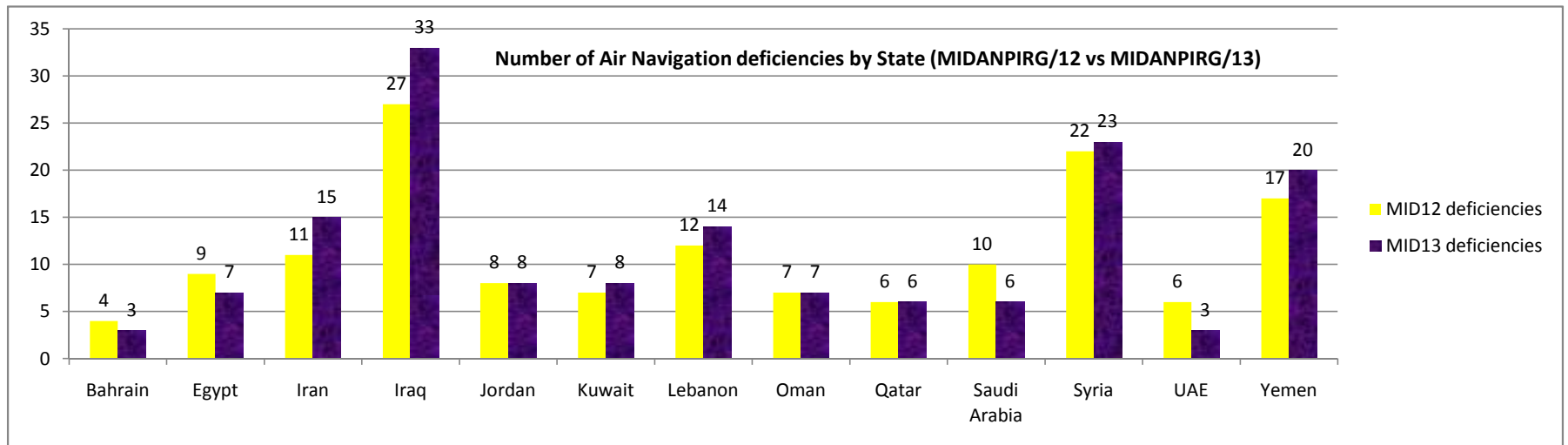
Deficiencies approved by MIDANPIRG/13

	Bahrain	Egypt	Iran	Iraq	Jordan	Kuwait	Lebanon	Oman	Qatar	Saudi Arabia	Syria	UAE	Yemen	Total
AOP	0	4	2	2	1	0	2	2	0	0	5	0	2	20
AIS/MAP	0	0	3	11	1	1	3	2	0	2	8	0	6	37
ATM	0	1	4	11	3	4	3	1	2	2	5	2	3	41
SAR	2	2	5	5	1	3	5	1	4	2	4	1	5	40
CNS	1	0	1	4	2	0	1	1	0	0	1	0	4	15
MET	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	3	7	15	33	8	8	14	7	6	6	23	3	20	153

Deficiencies approved by MIDANPIRG/12

	Bahrain	Egypt	Iran	Iraq	Jordan	Kuwait	Lebanon	Oman	Qatar	Saudi Arabia	Syria	UAE	Yemen	Total
AOP	1	6	2	2	1	0	2	2	2	0	5	0	2	25
AIS/MAP	0	0	3	11	1	1	3	2	1	5	8	2	7	44
ATM/SAR	2	3	4	8	4	4	5	2	2	4	7	3	4	52
CNS	1	0	1	5	2	2	2	1	1	1	1	1	4	22
MET	0	0	1	1	0	0	0	0	0	0	1	0	0	3
TOTAL	4	9	11	27	8	7	12	7	6	10	22	6	17	146

	Bahrain	Egypt	Iran	Iraq	Jordan	Kuwait	Lebanon	Oman	Qatar	Saudi Arabia	Syria	UAE	Yemen	Total
MID12 deficiencies	4	9	11	27	8	7	12	7	6	10	22	6	17	146
MID13 deficiencies	3	7	15	33	8	8	14	7	6	6	23	3	20	153



MIDANPIRG/13
Report on Agenda Item 5.2

REPORT ON AGENDA ITEM 5: AIR NAVIGATION DEFICIENCIES AND SAFETY MATTERS

5.2 AIR NAVIGATION SAFETY

***State Safety Programme (SSP) and Safety Management System (SMS)
Implementation in the MID Region***

5.2.1 The meeting recalled the requirements related to safety management and reviewed the status of implementation of States' Safety Programmes (SSP) and Safety Management Systems (SMS) in the fields of aerodromes and air traffic services in the MID Region.

5.2.2 The meeting recalled that ICAO safety management provisions require States to establish a State Safety Programme (SSP) in order to achieve an Acceptable Level of Safety (ALoS) in civil aviation. In addition, States shall require, as part of their SSP, the following service providers to implement a Safety Management System (SMS):

- a) approved training organizations that are exposed to operational safety risks during their air training operations (i.e.: flight training schools);
- b) aircraft operators;
- c) approved aircraft maintenance organizations and organizations responsible for type design and/or manufacture of aircraft (applicability date Nov. 2013);
- d) air traffic service providers; and
- e) certified aerodromes.

5.2.3 The meeting recognized the difficulties encountered by States in the implementation of SSP requirements and re-iterated that a step-by-step approach should be followed for managing the transition to an SSP environment.

5.2.4 The meeting reviewed and updated the status of implementation of SMS by the ATS service providers, in the MID Region, as follows:

	Not started	Planning/ Slow starting	Ongoing/ partial implementation	Implemented	Remarks
Bahrain				X	
Egypt			X		
Iran			X		
Iraq					
Jordan			X		
Kuwait	X				

MIDANPIRG/13
Report on Agenda Item 5.2

	Not started	Planning/ Slow starting	Ongoing/ partial implementation	Implemented	Remarks
Lebanon		X			
Oman			X		
Qatar				X	
Saudi Arabia			X		
Syria			X		
UAE				X	
Yemen		X			

5.2.5 The meeting reviewed and updated the status of implementation of SMS at MID Region international aerodromes as follows:

State	Number of international aerodromes	Number of Certified aerodromes	SMS implementation in certified aerodromes				Remarks
			Not started	Planned	Ongoing	Implemented	
Bahrain	1	1				1	
Egypt	16	4				4	
Iran	8	-					Plan to certify 7 aerodromes by end of 2012
Iraq	5	-					
Jordan	3	2				2	
Kuwait	1	1		1			
Lebanon	1	-					
Oman	2	1		1			
Qatar	1	1				1	
Saudi Arabia	4	4			1	3	

MIDANPIRG/13
Report on Agenda Item 5.2

State	Number of international aerodromes	Number of Certified aerodromes	SMS implementation in certified aerodromes				
			Not started	Planned	Ongoing	Implemented	Remarks
Syria	3	-					
UAE	8	8				8	
Yemen	5						
Total	58	22		2	1	19	

5.2.6 The meeting noted that the RASG-MID/1 meeting addressed the issue pertaining to the coordination between RASG-MID and MIDANPIRG. In this respect, it was noted that the RASG-MID/1 meeting agreed that SSP and SMS implementation as well as Runway Safety issues be included in the Work Programmes of both RASG-MID and MIDANPIRG, for some period. Nevertheless, taking into consideration the scope of SSP implementation, which goes far beyond the safety of air traffic services and aerodrome operations, the meeting agreed, pending the approval of RASG-MID, that SSP implementation should be monitored by RASG-MID. MIDANPIRG will continue to monitor the SMS implementation by the air traffic services and aerodrome operators.

Outcome of the RASG-MID/1 meeting:

5.2.7 The meeting recalled that subsequent to the ICAO Council decision related to the establishment of Regional Aviation Safety Groups (RASG), the First Meeting of the Directors General of Civil Aviation-Middle East (DGCA-MID/1) agreed to the establishment of the Regional Aviation Safety Group-Middle East (RASG-MID) with the aim of supporting a Regional Performance Framework for the management of safety in the MID Region. Subsequently, the first RASG-MID meeting took place in Cairo, 18-19 September 2011.

5.2.8 In this respect, the meeting noted that the RASG/1 meeting agreed that the RASG-MID will initially deal with safety issues directly related to flight operations. However, planning should be initiated in future as RASG-MID matures to adopt a systems approach so that RASG-MID addresses safety issues from an integrated perspective that includes flight operations and ATM safety work presently covered by MIDANPIRG.

5.2.9 Based on the outcome of the RASG-MID/1 meeting, the meeting agreed that:

- SSP implementation, English Language Proficiency (ELP) and Accidents and Incidents Analysis be addressed within the framework of RASG-MID;
- SMS implementation as well as Runway Safety issues be included in the Work Programmes of both RASG-MID and MIDANPIRG, for some period; and
- RVSM safety monitoring continue to be part of MIDANPIRG Work Programme.

MIDANPIRG/13
Report on Agenda Item 5.2

RVSM Monitoring Activities in the MID Region

5.2.10 The meeting was apprised of the outcome of the ATM/SAR/AIS SG/12 and MIDRMA Board/11 meetings related to the MIDRMA activities and RVSM safety monitoring activities in the MID Region.

MID RVSM SMR 2012

5.2.11 The meeting noted with concern that the MIDRMA is still facing difficulties related to the provision of required data by States. The meeting recognized that the non-compliance with the requirement for reporting of data to the MIDRMA is a longstanding shortcoming in the MID Region, which needs to be addressed seriously. In this respect, it was agreed that the lack of awareness about the requirements for RVSM safety assessment activity is a major contributing factor.

5.2.12 In order to standardize and simplify the reporting of Altitude/Height Deviations and Coordination Failures, the meeting supported the MIDRMA Board and ATM/SAR/AIS SG decision to replace the monthly submission of ADRs and CFRs to the MIDRMA; by the monthly submission of LHDs using the Form at **Appendix 5.2A** to the Report on Agenda Item 5.2, in accordance with the ICAO Doc 9937 - *Operating Procedures and Practices for Regional Monitoring Agencies in Relation to the Use of a 300 m (1 000 ft) Vertical Separation Minimum Between FL 290 and FL 410 Inclusive*.

5.2.13 The meeting recalled that as a mitigation measure to improve the reporting of required data to the MIDRMA, MIDANPIRG/11, through Conclusion 11/21, agreed to the inclusion of States that are not providing the required data to the MIDRMA, on a regular basis and in a timely manner, in the MIDANPIRG list of air navigation deficiencies. Accordingly, based on the status of provision of data by States provided by the MIDRMA, the meeting agreed to include Iraq and Yemen in the list of deficiencies.

5.2.14 The meeting noted that the draft MID RVSM Safety Monitoring Report (SMR) 2011-2012 developed by the MIDRMA was reviewed by the MIDRMA Board/11 and the ATM/SAR/AIS SG/12 meetings.

5.2.15 The meeting reviewed the final version of the SMR 2011-2012 presented by the MIDRMA. It was highlighted that the SMR 2011-2012 presents evidence that, according to the data and methods used, the key safety objectives as set out by MIDANPIRG, through Conclusion 12/16, continue to be met. In this respect, it was noted with appreciation that the three safety objectives were met, as follows:

Safety Objective 1: The risk of collision in MID RVSM airspace due solely to technical height-keeping performance meets the ICAO target level of safety (TLS) of 2.5×10^{-9} fatal accidents per flight hour. The computed value for the technical height risk in the SMR 2012 is 5.08×10^{-14} . This meets RVSM Safety Objective 1.

5.2.16 The meeting recalled that the evidence concerning the risk of collision due to technical height-keeping performance is considered reliable if it can be shown, inter-alia, that the $P_z(1000)$ – the probability of vertical overlap due to technical height-keeping performance, between aircraft flying 1000 ft separation in the MID RVSM airspace, is less than 1.7×10^{-8} . For the MID RVSM SMR 2012, the computed value of the $P_z(1000)$ is 7.83×10^{-10} , which meets the ICAO requirement.

MIDANPIRG/13
Report on Agenda Item 5.2

5.2.17 The meeting noted that radar data from three radars: Amman, Bahrain and Kuwait, was used for the determination of the Horizontal Frequency Overlap (HOF) using the RADAC System. It was highlighted that the actual measurements were captured for the period 1 to 31 January 2011 for Bahrain and Kuwait radars, and from 15 to 31 May 2011 for Amman radar. The computed value for the Horizontal Frequency Overlap is estimated to be 6.49×10^{-5} per flight hour.

5.2.18 Based on the above, the meeting recalled that, in accordance with the Recommendations of the SMR 2010, and considering the MID Region ATS route network and traffic data, it was agreed that the horizontal frequency overlap should be determined in Muscat in Oman, HIL in Saudi Arabia, and TAZ in Yemen.

5.2.19 The meeting supported the following Recommendation contained in the SMR 2011-2012 for Safety Objective 1:

- (iii) The MIDRMA shall coordinate with Iraq's focal point to ensure the receipt of all the requirements of including Iraq's radar in the RADAC System for the purpose of continuous monitoring of the horizontal overlap within Baghdad FIR.

5.2.20 Based on the above, the meeting urged Iraq, Oman, Saudi Arabia and Yemen to take action, in coordination with the MIDRMA, for measuring the horizontal frequency overlap in their FIRs and to provide all necessary technical information for including their radar format in the RADAC system.

Safety Objective 2: The overall risk of collision due to all causes which includes the technical risk and all risk due to operational errors and in-flight contingencies in the MID RVSM airspace meets the ICAO overall TLS of 5×10^{-9} fatal accidents per flight hour. The computed value for the overall risk in the SMR 2012 is 1.04×10^{-11} . This meets RVSM Safety Objective 2.

5.2.21 The effect of future traffic growth has also been assessed. The overall risk of collision will continue to meet the TLS of 2.5×10^{-9} fatal accidents per flight hour at least until 2015.

5.2.22 With regard to the methodology used for the assessment of RVSM operations in the MID Region, the meeting recalled that the MIDRMA, since its establishment, has been using the Collision Risk Model provided by EUROCONTROL. The meeting recalled that the MID RVSM Safety Assessment Seminar held in Bahrain from 22 to 24 February 2010, addressed the subject. Accordingly, the meeting agreed that the MIDRMA initiate action for the development/purchase of suitable Vertical Collision Risk (VCR) software, for the MID Region, which should be presented to and validated by the Second MID RVSM Safety Assessment Seminar, to be organized by the MIDRMA in coordination with ICAO, in Bahrain, 9-11 October 2012.

Safety Objective 3: address any safety-related issues raised in the SMR by recommending improved procedures and practices; and propose safety level improvements to ensure that any identified serious or risk-bearing situations do not increase and, where possible, that they decrease. This should set the basis for a continuous assurance that the operation of RVSM will not adversely affect the risk of en-route mid-air collision over the years.

5.2.23 The meeting noted that the analysis of operational error reports and coordination failure reports and the recommendations put forward in the SMR 2011-2012 provide sufficient evidence that RVSM Safety Objective 3 is being met.

MIDANPIRG/13
Report on Agenda Item 5.2

5.2.24 Considering all of the foregoing, the meeting agreed to the following Conclusions:

CONCLUSION 13/64: REPORTING OF LARGE HEIGHT DEVIATIONS (LHD)

That, in order to simplify and standardize the reporting of Altitude/Height Deviations and Coordination Failures, in accordance with the ICAO Doc 9937:

- a) the Form at **Appendix 5.2A** to the Report on Agenda Item 5.2 be used for the reporting of Altitude/Height Deviations and Coordination Failures; and*
- b) the monthly submission of LHD replaces the monthly submission of ADRs and CFRs.*

CONCLUSION 13/65: PROVISION OF REQUIRED DATA TO THE MIDRMA

That, considering the on-going requirement for RVSM safety monitoring in the MID Region:

- a) States provide the required data to the MIDRMA on a regular basis and in a timely manner. The data includes, but is not necessarily limited to:*
 - i) approval of operators and aircraft for RVSM operations (on monthly basis or whenever there's a change);*
 - ii) Large Height Deviations (LHD) (on monthly basis);*
 - iii) traffic data (as requested by the MIDRMA Board); and*
 - iv) radar data as, when and where required.*
- b) States not providing the required data to the MIDRMA on a regular basis and in a timely manner:*
 - i) be included in the MIDANPIRG list of air navigation deficiencies; and*
 - ii) might not be covered by the RVSM SMRs.*

CONCLUSION 13/66: SECOND MID RVSM SAFETY ASSESSMENT SEMINAR

That, with a view to raise the awareness related to the requirements for sustained RVSM safety assessment activity and improve the knowledge of all involved parties, in particular with respect to the Vertical Collision Risk Methodology and Altimetry System Errors, the MIDRMA, in coordination with ICAO, organize a Second MID RVSM Safety Assessment Seminar, in the last quarter of 2012.

CONCLUSION 13/67: TRAINING ON RVSM SAFETY ASSESSMENT

That, with a view to raise the awareness related to the requirements for sustained RVSM safety assessment activity and improve the knowledge of the ATC and Air Operators personnel:

MIDANPIRG/13
Report on Agenda Item 5.2

- a) *the MIDRMA include in its work programme regular missions to the Member States, during which briefings on the MIDRMA activities and RVSM safety assessment requirements be provided to concerned personnel; and*
- b) *for improved effectiveness, the MIDRMA visit to a State be conducted, to the extent possible, back-to-back with the GMU height monitoring mission related to the air operator(s) based in this State.*

CONCLUSION 13/68: VERTICAL COLLISION RISK SOFTWARE

That,

- a) *the MIDRMA initiate action for the development/purchase of a suitable VCR software for the MID Region; and*
- b) *the VCR Software be presented to and validated by the Second MID RVSM Safety Assessment Seminar, to be held in October 2012.*

Height Keeping Monitoring Requirements

5.2.25 The meeting recalled Annex 6 provisions related to long term monitoring requirements for height keeping performance, applicable since 18 November 2010.

5.2.26 The meeting was apprised of the Table consolidated by the MIDRMA showing the Minimum Monitoring Requirements (MMR) for each of the MID States, based on the latest RVSM approval lists received from MID States. The meeting noted with concern that **34%** of the RVSM approved aircraft in the MID Region do not have known height monitoring results or need to be monitored. It was recognized that big effort should be made to reach the performance target (world average less than **10%** of the RVSM approved aircraft do not have known height monitoring results). In this respect, the meeting urged States to enforce the implementation of the MMR Tables to ensure that minimum monitoring requirements for all MID RVSM approved aircraft are continuously met.

5.2.27 Based on the above, the meeting agreed to the following Conclusion which replaces and supersedes the MIDANPIRG/12 Conclusion 12/15:

CONCLUSION 13/69: RVSM APPROVALS

That,

- a) *States be urged to take necessary measures to:*
 - i) *ensure that, **before 30 June 2012**, their aircraft operators fully comply with Annex 6 provisions related to long term height monitoring requirements, based on the MIDRMA MMR Tables;*
 - ii) *withdraw the RVSM approvals for their registered aircraft that would not be compliant with Annex 6 provisions related to long term height monitoring requirements; **after 30 June 2012**;*
 - iii) *ban any aircraft without confirmed RVSM approval status from entering the RVSM airspace; and*

MIDANPIRG/13
Report on Agenda Item 5.2

iv) report any case of handover at an RVSM Flight Level of an aircraft without confirmed RVSM approval status from adjacent ACCs to the MIDRMA and the ICAO MID Regional Office.

b) the MIDRMA Board Members in coordination with the MID RVSM Programme Managers monitor and follow up this subject at the national level, in order to ensure efficient implementation.

5.2.28 The meeting was apprised of the MIDRMA GMU activities and noted with appreciation that the MIDRMA Team was provided with the necessary training and was certified to conduct GMU height monitoring. The meeting noted the difficulties which hindered the MIDRMA to purchase 2 GMU Units from the CSSI Company, as agreed by the MIDRMA Board through Draft Conclusion 10/6.

5.2.29 The meeting agreed, that as an alternate solution, the MIDRMA should sign the Service Agreement with CSSI for the use of 2 GMUs for height-keeping monitoring in the MID Region (with the condition that the processing of recorded data is done by CSSI). In addition, the meeting agreed that it became necessary to plan for the implementation of HMUs in the Region in order to be used for height-keeping monitoring and endorsed the revised version of the MID Region height-keeping monitoring Strategy as at **Appendix 5.2B** to the Report on Agenda Item 5.2. Accordingly, the meeting agreed to the following Conclusion:

CONCLUSION 13/70: MID REGION HEIGHT-KEEPING MONITORING STRATEGY

*That, the MID Region height-keeping monitoring strategy is updated as at **Appendix 5.2B** to the Report on Agenda Item 5.2.*

Action Plan for the development of the MID RVSM SMR 2012-2013

5.2.30 Considering that a new VCR Model/Software will be used for the development of the SMR 2012-2013, the meeting noted with appreciation that the Traffic Data Sample (TDS) which will be used will not require the provision of the aircraft registrations. Nevertheless, it was underlined that the TDS should be prepared using a special Excel sheet Format and that any data received in a different format, or in an Excel sheet different from the one available on the MIDRMA website, www.midrma.com, would not be acceptable.

5.2.31 Taking into consideration that MIDANPIRG/14 is tentatively scheduled for the fourth quarter of 2013, the meeting agreed that, for the development of the SMR 2012-2013, the TDS will be collected for the month of October 2012, which coincides with the Hajj season.

5.2.32 Therefore, the meeting agreed to the following Action Plan for the development of the MID RVSM SMR 2012-2013:

MIDANPIRG/13
Report on Agenda Item 5.2

No.	Start	Activity	End
1	01/10/2012	States to collect flight plan traffic data (SMR's Traffic Data Sample) for all traffic operating between FL290 and FL410 inclusive.	31/10/2012
2	01/10/2012	Collect Bahrain and Kuwait SSR radar data for October 2012	31/10/2012
3	01/11/2012	Collect Amman SSR radar data for November 2012	15/11/2012
4	16/11/2012	Collect Muscat SSR radar data for November 2012	30/11/2012
5	01/12/2012	Collect Jeddah* SSR radar data for November 2012	15/12/2012
6	01/11/2012	Collect states TDS	31/01/2013
7	01/11/2012	Ensure MID RVSM approvals up to date and ensure the ICAO minimum monitoring requirements achieved based on the TDS received from States	31/01/2013
8	01/12/2012	Review and analyze all Large Height Deviation Reports.	Scrutiny Group meeting date
9	01/01/2013	Prepare New MID MMR for all MID Airline Operators.	31/01/2013
10	01/02/2013	MID RMA evaluation of technical risk	28/02/2013
11	01/03/2013	Calculations of all risk parameters	31/03/2013
12	01/04/2013	Production of draft SMR-2013/2014	30/04/2013

* Subject to Saudi Arabia approval and necessary coordination with the MIDRMA

5.2.33 Based on the above, the meeting agreed to the following Conclusion:

CONCLUSION 13/71: MID RVSM SMR 2012-2013

That,

- a) the FPL/traffic data for the period 1-31 October 2012 be used for the development of the MID RVSM Safety Monitoring Report (SMR 2012-2013);
- b) only the appropriate Flight Data form available on the MIDRMA website (www.midrma.com) should be used for the provision of FPL/traffic data to the MIDRMA; and
- c) the draft version of the MID RVSM SMR 2012-2013 be ready before 30 April 2013.

MIDANPIRG/13
Appendix 5.2A to the Report on Agenda Item 5.2



The information contained in this form is confidential and will be used for statistical safety analysis purposes only.

**MIDRMA F4
LARGE HEIGHT DEVIATION FORM (LHD)**

Report to the MIDRMA of an altitude deviation of 300ft or more, including those due to TCAS, Turbulence and Contingency Events			
1. Today's date:		2. Reporting Unit:	
DEVIATION DETAILS			
3. Operator Name:		4. Call Sign: ACFT Registration Number:	
		5. Aircraft Type:	
		6. Mode C Displayed: ☐ Yes. Which FL? _____ ☐ No.	
7. Date of Occurrence:		8. Time UTC:	
		9. Occurrence Position (lat/long or fix):	
10. Cleared Route of Flight:			
11. Cleared Flight Level:		12. Estimated Duration at Incorrect Flight Level (seconds):	
		13. Observed Deviation (+/- ft):	
14. Other Traffic Involved:			
15. Cause of Deviation (<i>brief title</i>): (Examples: ATC Loop Error, Turbulence, Weather, Equipment Failure)			
AFTER DEVIATION IS RESTORED			
16. Observed/Reported Final Flight Level*: *Please indicate the source of information: ☐ Mode C ☐ Pilot		Mark the appropriate Box 17. Is the FL above the cleared level: ☐ 18. Is the FL below the cleared level: ☐	
		19. Did this FL comply with the ICAO Annex 2 Tables of Cruising Levels? ☐ Yes ☐ No	
NARRATIVE			
20. Detailed Description of Deviation (Please give your assessment of the actual track flown by the aircraft and the cause of the deviation.)			
21 - CREW COMMENTS (IF ANY)			

When complete please forward the report(s) to:
MIDRMA
Tel: +973 17 329054
Fax: +973 17 329956
Email – midrma@midrma.com
P.O.BOX 50468

MIDANPIRG/13
Appendix 5.2B to the Report on Agenda Item 5.2

MID REGION HEIGHT-KEEPING MONITORING STRATEGY

Considering:

- a) The status of implementation of RVSM in the MID Region;
- b) the ICAO requirements for height-keeping monitoring contained in Annex 6, Annex 11, Doc 9574 (RVSM Manual) and Doc 9937;
- c) the duties and responsibilities of the MIDRMA; and
- d) the sustained need for height-keeping monitoring of aircraft operating within the MID RVSM airspace

Recognizing:

- i) that an important number of Middle East region aircraft do not have known monitoring results; and
- ii) the necessity to develop a MID Region Height monitoring infrastructure

Agreed:

That the MID Region height-keeping monitoring Strategy is as described below:

1) Short Term (2011-2014):

- States to follow up with concerned aircraft operators to carry out necessary height keeping monitoring for the aircraft identified by the MIDRMA; and
- States encountering difficulties to get the necessary height monitoring results to coordinate with the MIDRMA for the conduct of GPS Monitoring Unit (GMU) monitoring for the identified operators' aircraft.

2) Medium and Long Term (2014 – 2020) :

- MIDRMA continue to conduct GMU monitoring for identified operators' aircraft, as required.
- the use of the Bahraini and Omani Multi-lateration-based Height Monitoring Units (HMUs), or any other HMU that becomes available in the MID Region, as a means of conducting height-keeping monitoring; and
- the use of a MID Region HMU infrastructure as the main mean of height-keeping monitoring in the Region.

MIDANPIRG/13
Report on Agenda Item 6

REPORT ON AGENDA ITEM 6: FUTURE WORK PROGRAMME***ICAO MID Office Tentative Schedule of Meetings, Seminars and Workshops***

6.1 The meeting recalled that the ICAO MID Regional Office by November of each year, after coordination with concerned parties (internally and externally) and taking into consideration, inter-alia, the MIDANPIRG Work Programme and Follow-up Action Plan, sends the Tentative Schedule of Meetings, Seminars and Workshops planned for the year to come to all MID States, and concerned International and Regional Organizations. The tentative Schedule of Meetings, Seminars and Workshops is also posted on the MID Regional Office website (<http://legacy.icao.int/mid/>).

6.2 The meeting was also informed that the Tentative Schedule of Meetings, Seminars and Workshops should be used for planning purposes only and that Meetings, Seminars and Workshops are confirmed only when an invitation letter is issued by the ICAO MID Regional Office. Sometimes revisions and updates are deemed necessary and the Schedule is updated accordingly.

6.3 The meeting recalled that a Memorandum of Cooperation (MoC) has been signed between ICAO and the Arab Civil Aviation Commission (ACAC) on 27 September 2010 in Montreal prior to the 37th ICAO General Assembly, as part of ICAO's cooperation with Regional Bodies. In this context, it was noted with appreciation that the ICAO MID Regional Office in cooperation with ACAC conducted and is planning to conduct joint activities as reflected in **Appendix 6A** to the Report on Agenda Item 6.

6.4 Based on the above, the meeting urged States to participate actively in the Meetings, Seminars and Workshops planned by the ICAO MID Regional Office as at **Appendix 6A** to the Report on Agenda Item 6; and encouraged States to coordinate with the ICAO MID Regional Office, in a timely manner, the hosting of future Meetings, Seminars and Workshops, as appropriate.

6.5 The meeting was informed that the CANSO Middle East Conference is planned to be held in Amman, Jordan, 18 – 20 March 2013. The meeting was further informed that details of CANSO activities can be found at their website: <http://www.canso.org>. In this respect, the meeting encouraged the regional and international organizations that have their Regional Offices located in the MID Region to carry out necessary coordination with the ICAO MID Regional Office prior to the publication of their yearly schedule of events, to explore the possibility of organizing joint events and avoid, to the extent possible, the interference between events and lack of participation.

MIDANPIRG/14 and MSG/3 dates, durations and venues

6.6 The meeting noted with satisfaction the offer made by Saudi Arabia to host the MIDANPIRG/14 meeting in Jeddah and agreed that the MIDANPIRG/14 meeting, be tentatively scheduled in the fourth quarter of 2013. The duration of the meeting will be five (5) days and the exact dates will be determined, after coordination between the Secretariat, the Chairperson of MIDANPIRG and Saudi Arabia.

6.7 The meeting recalled that the MIDANPIRG Steering Group (MSG) meetings are hosted by the eight (8) Member States (Bahrain, Egypt, Iran, Jordan, Lebanon, Oman, Saudi Arabia and UAE) on rotation basis.

MIDANPIRG/13
Report on Agenda Item 6

6.8 For an improved efficiency, the meeting reiterated the need for MIDANPIRG to delegate some tasks to the MSG. In this respect, the meeting recalled that MIDANPIRG/12 agreed that for the future, when preparing the provisional agenda of the MSG meetings, the Secretariat would coordinate with the MIDANPIRG Chairperson the issues which could be fully addressed and closed by the MSG. However, it was highlighted that issues necessitating the agreement of all MID States will continue to be presented to MIDANPIRG.

6.9 The meeting noted with satisfaction the offer made by Oman to host the MSG/3 meeting and agreed that the MSG/3 meeting, be tentatively scheduled in the first half of 2013. The duration of the meeting will be tentatively three (3) days and the exact dates will be determined, after coordination between the Secretariat, the Chairperson of MIDANPIRG and Oman.

Follow-up Action Plan

6.10 In accordance with the requirements for performance monitoring, the meeting developed a follow-up action plan as at **Appendix 6B** to the Report on Agenda Item 6.

MIDANPIRG/13
Appendix 6A to the report on Agenda Item 6



ICAO Middle East Regional Office (MID)

Tentative Schedule of Meetings, Seminars and Workshops

“January – December 2012”

Revision # X dated April 2012

DATE	MEETING/SEMINAR/WORKSHOP	VENUE	REMARKS
January			
16-18	INFPL Seminar/Workshop	Jeddah	Convened Joint ICAO/ACAC. Hosted by Saudi Arabia
29	ICAO Fuel Savings Estimation Tool (IFSET) Workshop	Cairo	Convened Joint CANSO/ICAO activity
30	High Level Briefing on Aviation System Block Upgrades (ASBUs)	Cairo	Convened
31 Jan- 2 Feb	CNS/ATM/IC SG/6	Cairo	Convened
February			
5-7	ARN TF/5	Amman	Convened Hosted by Jordan
8-9	Baghdad FIR Post RVSM Implementation-Special Coordination Meeting (BFPRI-SCM)	Amman	Convened Hosted by Jordan
13-15	AOP SG/8	Cairo	Convened
20-22	MIDAD SG*/1	Cairo	Convened
27-29	INFPL SG*/4	Cairo	Convened
March			
4-8	European Co-ordination Centre for Aviation Incident Reporting Systems (ECCAIRS) Training course	Cairo	Convened
12-14	State Safety Programme (SSP) Implementation Course	Cairo	Convened

DATE	MEETING/SEMINAR/WORKSHOP	VENUE	REMARKS
April			
22-26	MIDANPIRG/13	Abu Dhabi	Hosted by UAE
May			
14-16	Regional Runway Safety Seminar/Workshop	Amman	(SIP) Joint IATA/ ICAO activity
21-23	ATN/IPS WG/4	Cairo	
29-31	SADISOPSG/17	Cairo	HQ meeting
June			
11-13	ACAC/ICAO AIM Seminar	Cairo	Joint ACAC/ICAO activity. Hosted by Egypt
18-20	RASG-MID Steering Committee (RSC/1)	Cairo	
September			
3 – 5	INFPL SG*/5	Cairo	
TBD	Civil/Military Cooperation Seminar/ Workshop	TBD	
25-27	AIM TF/7	Cairo	
October			
30 Sept.- 4 Oct.	Aviation System Block Upgrade (ASBU) Workshop	Cairo	(SIP) Joint ACAC/ICAO activity
9-11	MID RVSM Safety Assessment Seminar	Bahrain	Hosted by the MIDRMA
15-17	ADCI TF/1	Cairo	Aerodrome Certification Implementation Task Force (ADCI)
November			
12-14	RASG MID/2	TBD	
December			
3-5	CAPSCA-MID/2	TBD	Cooperative Arrangement for the Prevention of Spread of Communicable Disease by Air Transport – Middle East Project Meeting
10-12	Seminar/Workshop on Regional Safety Oversight Programmes	Rabat	Joint ACAC/ICAO activity

6A-3

DATE	MEETING/SEMINAR/WORKSHOP	VENUE	REMARKS
11-13	CNS SG/5	Cairo	
16	MIDRMA Scrutiny Group	Kuwait	(MIDRMA meeting). Hosted by Kuwait
17-19	MIDRMA Board/12	Kuwait	Hosted by Kuwait

Notes:

1. Above activities are subject to confirmation by ICAO MID Regional Office invitation letters.
2. States interested in hosting any of the activities are requested to coordinate with the ICAO MID Regional Office, at least three (03) months in advance of the indicated dates.
3. The above table will be subject to update when required

Legend:

SG = Sub-Group, SG* = Study Group, TF = Task Force, WG = Working Group.
TBD = To Be Determined.

For more information please contact: icaomid@cairo.icao.int

MIDANPIRG/13
Appendix 6B to the Report on Agenda Item 6

FOLLOW-UP ACTION PLAN ON MIDANPIRG/13 CONCLUSIONS AND DECISIONS

CONCLUSIONS AND DECISIONS	FOLLOW-UP	TO BE INITIATED BY	DELIVERABLE	TARGET DATE	REMARKS
CONCLUSION 13/1: AERODROMES CERTIFICATION IMPLEMENTATION AND ACTION PLAN That, States, that have not yet done so, be urged to take necessary measures to start/complete the Implementation of the Aerodromes Certification Programme in an expeditious manner and provide the ICAO MID Regional Office with the associated Action Plan, before 15 September 2012 , for review by the ADCI TF	Implement the Conclusion	ICAO States	State Letter Action Plan	15 Sep. 2012	
CONCLUSION 13/2: RUNWAY END SAFETY AREA (RESA) That, States, that have not yet done so, be invited to take necessary measures to include in their national regulations the requirements related to Runway End Safety Area (RESA) as reflected in ICAO Annex 14 Recommended Practice in order to reduce the safety risk of Runway Excursion.	Implement the Conclusion	ICAO States	State Letter Update Regulation	Dec. 2012	
CONCLUSION 13/3: IMPROVEMENT OF THE ATS ROUTE STRUCTURE IN THE MID REGION That, as a first step towards the rationalization of the ATS route network in the MID Region: a) States be urged to; i) identify those ATS Routes that are not economically structured within their airspaces; ii) coordinate and agree with appropriate authorities on the priority of action to replace the identified routes with more economical routes based on the definition of City Pairs, the PBN and FUA concepts; b) Users to; i) identify those ATS Routes that are not economically structured in the MID Region; ii) provide priority of action; and	Implement the Conclusion	ICAO States Users	State Letter	Sep. 2012	

CONCLUSIONS AND DECISIONS	FOLLOW-UP	TO BE INITIATED BY	DELIVERABLE	TARGET DATE	REMARKS
c) States and Users; provide feedback to the ARN TF/6 meeting					
CONCLUSION 13/4: MIDRAR PROJECT That States, be invited to support the MIDRAR Project and assign Focal Points to provide necessary information to the MIDRAR Team	Implement the Conclusion	ICAO States	State Letter	30 Aug. 2012	
CONCLUSION 13/5: IMPLEMENTATION OF REDUCED RADAR LONGITUDINAL SEPARATION IN THE MID REGION That, a) States, that have not yet done so; i) be urged to implement the 20 NM radar longitudinal separation; ii) be encouraged to further reduce the radar longitudinal separation within the MID Region to 10 NM, where appropriate; and iii) be invited to agree with their neighbouring FIRs/States on the date of implementation and updating of the LoAs; b) the ATM Regional PFFs be updated to include the reduced radar longitudinal separation as an ATM objective for the MID Region.	Implement the Conclusion	ICAO States	State Letter	30 Aug. 2012	
CONCLUSION 13/6: MID STRATEGY ON SSR CODE ALLOCATION That, the MID Region Strategy on SSR Code Allocation be updated as at Appendix 4.2B to the Report on Agenda Item 4.2	Implement the Strategy	MIDANPIRG/13	Strategy	Apr. 2012	Completed

CONCLUSIONS AND DECISIONS	FOLLOW-UP	TO BE INITIATED BY	DELIVERABLE	TARGET DATE	REMARKS
CONCLUSION 13/7: MID SSR CODE MANAGEMENT PLAN (CMP) That, the MID Region SSR Code Management Plan is endorsed as at Appendix 4.2C to the Report on Agenda Item 4.2.	Implement the Conclusion	States ICAO	State Letter	May 2012	
DECISION 13/8: DISSOLUTION OF THE SSRCA STUDY GROUP That, recognizing that its work programme has been completed, the SSRCA Study Group is dissolved.	ATM/AIM/SAR SG to address SSR CA issues	MIDANPIRG/13	Dissolve SG	Apr. 2012	Completed
CONCLUSION 13/9: MID REGIONAL CONTINGENCY PLAN That, States and users be urged to review the MID Regional Contingency Plan and the revised version of the CRAME-03 at Appendices 4.2E and 4.2F to the Report on Agenda Item 4.2, respectively; and provide updates and comments to the ICAO MID Regional Office before 1 September 2012 .	Implement the Conclusion	States ICAO	State Letter	Sep. 2012	
CONCLUSION 13/10: POST RVSM IMPLEMENTATION IN THE BAGHDAD FIR That, a) Iraq be urged to implement the actions agreed by the BFPRI-SCM in an expeditious manner to solve the ATC coordination, communication and surveillance issues between Baghdad ACC and the neighbouring ACCs; b) States and all stakeholders be invited to support Iraq in the process of normalization of the Baghdad FIR; and c) in case of low progress of implementation of the necessary actions by Iraq before 15 October 2012 , the RVSM operations be suspended in the Baghdad FIR.	Implement the Conclusion	ICAO States/Stakeholders Iraq	State Letter Provide support Implement the Action Plan	15 Jun. 2012 15 Oct. 2012 15 Oct. 2012	

CONCLUSIONS AND DECISIONS	FOLLOW-UP	TO BE INITIATED BY	DELIVERABLE	TARGET DATE	REMARKS
DECISION 13/11: REVISED TOR OF THE ATM/AIM/SAR SUB-GROUP That, the ATM/SAR/AIS Sub-Group be renamed ATM/AIM/SAR Sub-Group with Terms of Reference as at Appendix 4.2K to the Report on Agenda Item 4.2.	Implement the Work Programme of the ATM/AIM/SAR SG	MIDANPIRG/13	Updated TOR and Procedural Handbook	Apr. 2012	
CONCLUSION 13/12: MEANS OF DISSEMINATION OF THE LIST OF VALID NOTAM That, States be encouraged to: a) use the internet (emails and/or websites) for the dissemination of the monthly printed plain-language list of valid NOTAM and discontinue its dissemination in hardcopy by post; and b) make available on the web on a daily or at least on a weekly basis an updated list of valid NOTAM.	Implement the Conclusion	ICAO States	State Letter Feedback from States	30 Jun. 201 Sep. 2012	
CONCLUSION 13/13: AVOIDANCE OF THE AIRAC DATE 15 NOVEMBER 2012 That, taking into consideration the worldwide impact of the ICAO New FPL format implementation, States be invited to avoid the use of the AIRAC date of 15 November 2012 as an effective date for the introduction of significant changes to the aeronautical information publications	Implement the Conclusion	ICAO States	State Letter Feedback from States	30 Jun. 2012 20 Sep. 2012	
DECISION 13/14: DISSOLUTION OF THE QMS ACTION GROUP That, recognizing that the activities of the QMS AG were very limited, the QMS AG is dissolved	Implement the Decision	MIDANPIRG/13	QMS AG dissolved	Apr. 2012	Completed

CONCLUSIONS AND DECISIONS	FOLLOW-UP	TO BE INITIATED BY	DELIVERABLE	TARGET DATE	REMARKS
CONCLUSION 13/15: QMS IMPLEMENTATION That, in accordance with Annex 15 provisions, States, that have not yet done so, be urged to take necessary measures to: a) organize at the National level, awareness campaigns and training programmes to promote and expedite the process of implementation of QMS for AIS; b) implement/complete the implementation of the required QMS in an expeditious manner; c) arrange for an ISO 9001 certification by an accredited certification body; and d) ensure that quality management is applicable to the whole aeronautical information data chain from data origination to distribution to the next intended user, taking into consideration the intended use of data.	Implement the Conclusion	ICAO States	State Letter Feedback from States	30 Jun. 2012 Sep. 2012	
CONCLUSION 13/16: CERTIFICATION OF THE AIM SERVICES That, in order to improve the level of compliance with the Standards and Recommended Practices of Annex 4 and Annex 15 and pave the way for the transition from AIS to AIM, ICAO consider the inclusion of a requirement for the certification of AIM Services in Annex 15	Implement the Conclusion	ICAO	SARPs/Guidance Material	2016	Subject to ANC approval
DECISION 13/17: ESTABLISHMENT OF THE MIDAD STUDY GROUP (MIDAD STG) That, the MID Region AIS Database (MIDAD) Study Group (MIDAD STG) is established with Terms of Reference as at Appendix 4.3B to the Report on Agenda Item 4.3.	Implement the work programme of the MIDAD STG	MIDANPIRG/13	MIDAD STG established	Apr. 2012	
DECISION 13/18: DISSOLUTION OF THE AIS AUTOMATION ACTION GROUP That, recognizing that the activities of the AIS Automation Action Group (AISA AG) were very limited, the AISA AG is dissolved.	Implement the Decision	MIDANPIRG/13	AIS Automation AG dissolved	Apr. 2012	Completed

CONCLUSIONS AND DECISIONS	FOLLOW-UP	TO BE INITIATED BY	DELIVERABLE	TARGET DATE	REMARKS
CONCLUSION 13/19: MIDAD PROJECT SECOND PHASE That, taking into consideration the results of the first phase of the MIDAD Study, States, Users and all concerned stakeholders be invited to provide all necessary support for the achievement of the second phase of the MIDAD Project.	Implement the Conclusion	ICAO States and Users	State Letter Support the MIDAD Project	Dec. 2012 During Phase 2 of the MIDAD Project	
CONCLUSION 13/20: COMMITMENT TO THE MIDAD PROJECT That, as part of the Second Phase of the MIDAD Project: a) a Memorandum of Agreement (MOA) be signed by Bahrain, Iran, Jordan, Kuwait, Lebanon, Oman, Qatar, Saudi Arabia, Syria and Yemen in order to legally reflect their commitment to the MIDAD Project; and b) other States from within and outside the MID Region, interested to participate in the MIDAD Project, be invited to sign the MOA.	Implement the Conclusion	ICAO Concerned States	MOA signed	2013	
CONCLUSION 13/21: MIDAD LEGAL FRAMEWORK That, the following options be considered for the endorsement of the MIDAD legal framework by the DGCA-MID/2 meeting: a) a volunteer State/Group of States provides the legal framework by hosting the project; or b) an ICAO TCB Project for the implementation of MIDAD, including the establishment of a MIDAD legal entity or agency (similar to the MIDRMA).	Implement the Conclusion	DGCA-MID/2	Agreement on the best option for the MIDAD legal framework	Apr. 2013	

CONCLUSIONS AND DECISIONS	FOLLOW-UP	TO BE INITIATED BY	DELIVERABLE	TARGET DATE	REMARKS
DECISION 13/22 TERMS OF REFERENCE OF THE AIM TASK FORCE That, the AIS/MAP Task Force be renamed AIM Task Force with Terms of Reference (TOR) as at Appendix 4.3D to the Report on Agenda Item 4.3.	Implement the work programme of the AIM TF	MIDANPIRG/13	Updated TOR	Apr. 2012	Completed
CONCLUSION 13/23: MID IP NETWORK SURVEY That, States complete the MID IP Network survey as at Appendix 4.4A to the Report on Agenda Item 4.4 and provide feedback to the ATN-IPS WG/4 meeting.	Implement the Conclusion	ICAO States	State Letter Completed Survey	May 2012	
CONCLUSION 13/24: DEVELOPMENT OF IP BASED MID NETWORKS That, States, that have not yet done so, be urged to: a) develop national plans, in line with the ICAO Manual on the Aeronautical Telecommunication Network (ATN) using Internet Protocol Suite (IPS) Standards and Protocols (Doc 9896), for migration to IPv6 taking the existing IPv4 based aeronautical systems into account; b) consider the use of IPv4/IPv6 protocol translation devices only as a provisional solution during the migration; and c) include a requirement for both IPv4 and IPv6 in their ongoing Air Traffic Services (ATS) Message Handling System (AMHS) implementation programmes in order to ensure seamless transition and interoperability.	Implement the Conclusion	ICAO States	State Letter	Sep. 2012	
CONCLUSION 13/25: UPDATE THE AMC SYSTEM That, States be urged to keep the data related to their COM CENTER updated in the EUR-AMC system	Implement the Conclusion	ICAO States	State Letter	Sep. 2012	

CONCLUSIONS AND DECISIONS	FOLLOW-UP	TO BE INITIATED BY	DELIVERABLE	TARGET DATE	REMARKS
CONCLUSION 13/26: MID AFTN/CIDIN DIRECTORY That, ICAO MD Regional Office: a) take necessary steps with Jordan to populate the MID AFTN/CIDIN Directory in the MID-AMC; and b) post the MID AFTN/CIDIN Directory in the ICAO MID Website.	Implement the Conclusion	ICAO Jordan States	MID Routing Directory in MID AMC	Dec. 2012	
CONCLUSION 13/27: MID-ATS MESSAGE MANAGEMENT CENTRE (AMC) PROJECT That, a) Jordan complete the development of the MID-AMC; b) ICAO MID Regional Office communicate with EUROCONTROL to provide the necessary support for the project; c) ATN-IPS WG and CNS SG develop the necessary legal framework for the use of the MID-AMC; and d) States be encouraged to use the MID-AMC on trial basis for one year.	Implement the Conclusion	ATN-IPS WG ICAO Jordan States	Operations of MID-AMC Trial results	Dec. 2012 Apr. 2013	
DECISION 13/28: REVISED TOR OF THE ATN-IPS WORKING GROUP That, the Terms of Reference (TOR) of the ATN-IPS Working-Group be updated as at Appendix 4.4C to the Report on Agenda Item 4.4.	Implement the work programme of the ATN IPS WG	MIDANPIRG	Updated TOR	Apr. 2012	Completed
DECISION 13/29: TERMS OF REFERENCE OF THE CNS SUB-GROUP That, the Terms of Reference (TOR) of the CNS SG be updated as at Appendix 4.4D to the Report on Agenda Item 4.4.	Implement the work programme of the CNS SG	MIDANPIRG	Updated TOR and Procedural Handbook	Apr. 2012	Completed

CONCLUSIONS AND DECISIONS	FOLLOW-UP	TO BE INITIATED BY	DELIVERABLE	TARGET DATE	REMARKS
CONCLUSION 13/30: NATIONAL PERFORMANCE FRAMEWORK That, States be urged to: a) develop, update and/or complete their National Performance Framework, including the National Performance Framework Forms (PFFs), ensuring the alignment with and support to the regional performance objectives; b) incorporate the agreed MID Region Performance Metrics into their National performance monitoring process; and c) report relevant data necessary for performance monitoring of the air navigation systems to the ICAO MID Regional Office, on a regular basis, with a view to update the Regional PFFs and monitor the MID Region Performance Metrics.	Implement the Conclusion	ICAO States	State Letter Feedback and reports	30 Jun. 2012 On regular basis	
CONCLUSION 13/31: ENDORSEMENT OF THE AIM PARTS OF THE MID BASIC ANP AND FASID That, the AIM Parts of the MID Basic ANP and FASID, including the AIM FASID Tables at Appendices 4.5F, 4.5G and 4.5H to the Report on Agenda Item 4.5: a) are endorsed; b) be used as a planning document for the transition from AIS to AIM in the MID Region; and c) be formally included in the MID ANP through a proposal for amendment, when the new structure of the MID ANP is finalized and the AIM FASID Tables are populated with relevant data.	Implement the Conclusion	MIDANPIRG/13	Basic ANP and FASID AIM Parts	Apr. 2012	

CONCLUSIONS AND DECISIONS	FOLLOW-UP	TO BE INITIATED BY	DELIVERABLE	TARGET DATE	REMARKS
DECISION 13/32: ESTABLISHMENT OF THE MID AIR NAVIGATION PLAN AD-HOC WORKING GROUP (ANP WG) That, the MID Air Navigation Plan Ad-hoc Working Group (ANP WG) be established to fulfil the requirements set up by MIDANPIRG through Decision 12/49.	Convene the ANP WG/1 meeting	MIDANPIRG/13	ANP WG established	Apr. 2012	Completed
CONCLUSION 13/33: STATE ACTION PLANS FOR CO₂ EMISSION That, States, that have not yet done so, be urged to: a) send the contact details of their CO ₂ emission focal point to the ICAO MID Regional Office; and b) submit their action plan for CO ₂ emission to ICAO before 30 June 2012.	Implement the Conclusion	States	Action Plan	30 Jun. 2012	
DECISION 13/34: ESTABLISHMENT OF THE AIR TRAFFIC MANAGEMENT MEASUREMENT TASK FORCE (ATMM TF) That, the ATMM TF be established with Terms of Reference (TOR) as at Appendix4.5J to the Report on Agenda Item 4.5.	Convene the ATMM TF/1 meeting	MIDANPIRG/13	ATMM TF established	Apr. 2012	Completed
CONCLUSION 13/35: ESTIMATING ENVIRONMENT BENEFITS That, in order to allow the Air Traffic Management Measurement Task Force (ATMM TF) and the CNS/ATM/IC SG to follow-up the implementation of the ATM operational improvements and estimate the fuel savings accrued from the corresponding improvements on regional basis a) States be urged to: i) use IFSET or a more advanced model/measurement capability available to estimate environment benefits accrued from operational improvements; ii) send the IFSET reports/the accrued environmental benefits to ICAO MID Regional office on a bi-annual basis.	Implement the Conclusion	ICAO States/Users ATMM TF and CNS/ATM/IC SG	State Letter Feedback (IFSET reports) Reports of meetings	Dec. 2012 2013	

CONCLUSIONS AND DECISIONS	FOLLOW-UP	TO BE INITIATED BY	DELIVERABLE	TARGET DATE	REMARKS
b) IATA to: i) encourage users to support the programme; and ii) consolidate users' inputs and report the accrued environmental benefits to ICAO MID Regional office on a bi-annual basis.					
CONCLUSION 13/36: ICAO NEW FLIGHT PLAN FORMAT AWARENESS CAMPAIGNS That, States be urged to conduct internal awareness campaigns on INFPL and invite all stakeholders within their States.	Implement the Conclusion	ICAO States	State letter	Jun. 2012	
CONCLUSION 13/37: ICAO NEW FPL FORMAT TESTING SCHEDULE That, States be urged to follow the testing schedule as at Appendix 4.5L to the Report on Agenda Item 4.5.	Implement the Conclusion	ICAO States	State letter	Jun. 2012	
CONCLUSION 13/38: INFPL STRATEGIC SUPPORT TEAM (SST) That, in order to support INFPL implementation in the MID region, those States requiring support request the ICAO MID Regional Office to coordinate with the SST members the provision of the required support.	Implement the Conclusion	States	State Letter	Jun. 2012	
CONCLUSION 13/39: REVISED STRATEGY FOR THE IMPLEMENTATION OF INFPL That, the revised MID Region Strategy for the implementation of INFPL be adopted as at Appendix 4.5M to the Report on Agenda Item 4.5.	Implement the Strategy	MIDANPIRG/13	Strategy	Apr. 2012	Completed

CONCLUSIONS AND DECISIONS	FOLLOW-UP	TO BE INITIATED BY	DELIVERABLE	TARGET DATE	REMARKS
CONCLUSION 13/40: MID REGION INFPL IMPLEMENTATION DOCUMENT That, the MID Region INFPL Implementation document be adopted as at Appendix 4.5N to the Report on Agenda Item 4.5.	Implement the Conclusion	MIDANPIRG/13	Adopted Document	Apr. 2012	Completed
CONCLUSION 13/41: MID REGION PROCESS FOR MODE S IC CODES ALLOCATION That, the process for the allocation of IC codes for Mode S radars in the MID Region be adopted as at Appendix 4.5O to the Report on Agenda Item 4.5.	Implement the Conclusion and follow the IC code allocation process	MIDANPIRG/13	Adopted process	April 2012	Completed
DECISION 13/42: MID REGION SURVEILLANCE STRATEGY That, the CNS SG review MID Surveillance Strategy and ADS-B Strategy at Appendices 4.5P and 4.5Q to the Report on Agenda Item 4.5 and develop a consolidated MID Surveillance Strategy.	Implement the Decision CNS SG/5 develop consolidated Strategy	CNS SG/5	MID Surveillance Strategy	Dec. 2012	
CONCLUSION 13/43: ALLOCATION OF 24 BIT AIRCRAFT ADDRESS That, States be urged to: a) allocate 24 bit aircraft address according to Annex 10, Volume III, Part I, Chapter 9, Table 9-1 (allocation of aircraft addresses to States); b) send the allocation list to ICAO MID Regional Office and MIDRMA by 30 September 2012; and c) provide ICAO MID Regional Office and MIDRMA with regular updates to the allocation list.	Implement the Conclusion	ICAO States MIDRMA	State Letter	Sep.2012	

CONCLUSIONS AND DECISIONS	FOLLOW-UP	TO BE INITIATED BY	DELIVERABLE	TARGET DATE	REMARKS
CONCLUSION 13/44: PROTECTION OF GNSS SIGNAL That, States that are listed in the footnotes 5.362B and 5.362C be urged to take necessary measures to remove their names from these footnotes as soon as possible.	Implement the Conclusion	ICAO States	State Letter	Jun.2012	
CONCLUSION 13/45: STRATEGY FOR THE IMPLEMENTATION OF GNSS IN THE MID REGION That, the Strategy for implementation of GNSS in the MID Region be updated as at Appendix 4.5R to the Report on Agenda Item 4.	Implement the Strategy	MIDANPIRG/13	Strategy	Apr. 2012	Completed
CONCLUSION 13/46: GNSS SURVEY That, States complete the GNSS questionnaire as at Appendix 4.5S to the Report on Agenda Item 4.5 and send it to the ICAO MID Regional Office before 1 September 2012.	Implement the Conclusion	ICAO States	State Letter Completed Survey	Sep.2012	
CONCLUSION 13/47: MID REGIONAL PBN IMPLEMENTATION STRATEGY AND PLAN That, the MID Regional PBN Implementation Strategy and Plan be updated as at Appendix 4.5T to the Report on Agenda Item 4.5.	Implement the Strategy	MIDANPIRG/13	Strategy	Apr. 2012	Completed
DECISION 13/48: ESTABLISHMENT OF MID PBN SUPPORT TEAM (MPST) That, MPST be established with TOR as at Appendix 4.5U to the Report on Agenda Item 4.5.	Implement Decision	MIDANPIRG/13	MPST established	Apr. 2012	Completed

CONCLUSIONS AND DECISIONS	FOLLOW-UP	TO BE INITIATED BY	DELIVERABLE	TARGET DATE	REMARKS
CONCLUSION 13/49: MID PBN SUPPORT TEAM (MPST) That, a) ICAO MID Regional Office provide the leadership for MPST; b) UAE be the champion for the MPST; c) IATA fully commit and support the MPST; and d) States assign members to MPST and allocate necessary resources	Implement the Conclusion	ICAO States UAE IATA	State Letter MPST Visit	Sep. 2012	
CONCLUSION 13/50: PBN IMPLEMENTATION PROGRESS REPORT That, for future reporting on the status of PBN implementation, States be urged to: a) use the excel sheet as at Appendix 4.5X to the Report on Agenda Item 4.5, and PBN Implementation Progress Report Template as at Appendix 4.5Y to the Report on Agenda Item 4.5; and b) submit progress reports to ICAO MID Regional Office every six months and whenever major progress is achieved.	Implement the Conclusion	States	Progress Report	Every 6 months	
CONCLUSION 13/51: SUPPORTING IMPLEMENTATION OF SECURE SADIS FTP SERVICE IN THE MID REGION That, States, that have not already done so, be urged to register for the Secure SADIS FTP Service in view of noting the cessation of its predecessor, the SADIS FTP Service, on 30 November 2012, in accordance with SADISOPSG/16 Conclusion 16/15	Implement the Conclusion	ICAO	State Letter	15 Jun. 2012	
CONCLUSION 13/52: SIGMET TEST PARTICIPATION That, States' MID SIGMET Test focal points be invited to participate in the bi-annual SIGMET tests conducted by the EUR Region and report any deficiencies at each MET SG meeting	Implement the Conclusion	ICAO	State Letter	31 Aug. 2012	

CONCLUSIONS AND DECISIONS	FOLLOW-UP	TO BE INITIATED BY	DELIVERABLE	TARGET DATE	REMARKS
CONCLUSION 13/53: UPDATE TO THE MID REGIONAL SIGMET GUIDE That, States with meteorological watch office responsibilities, and that have not yet done so, be invited to provide, by 1 July 2012, the World Meteorological Organization Abbreviated Header Lines used for the issuance of SIGMET for flight information regions (FIRs) under their area of responsibility for inclusion in the MID Regional SIGMET Guide	Implement the Conclusion	ICAO States	State Letter Necessary information	15 Jun. 2012 1 Jul. 2012	
CONCLUSION 13/54: DEVELOP RECOMMENDATION OF MID REGIONAL OPMET CENTRES FOR INTER-REGIONAL EXCHANGE OF OPMET DATA That, a) the MID Bulletin Management Group: - determine requirements associated with the establishment of Regional OPMET Centres (ROC) in the MID Region; and - carry out a survey based on requirements developed in (i) to determine States' capabilities for establishing ROC(s); and b) concerned States be invited to complete the survey by 31 August 2012 in order for the MID BMG to report back to MET SG/4 with a recommendation of potential regional designation of ROC(s) for further consideration by MIDANPIRG/14.	Implement the Conclusion	ICAO States	State Letter Completed survey	15 Jun. 2012 31 Aug. 2012	

CONCLUSIONS AND DECISIONS	FOLLOW-UP	TO BE INITIATED BY	DELIVERABLE	TARGET DATE	REMARKS
CONCLUSION 13/55: OPMET DATA ERRORS AND DEFICIENCIES That, a) States be informed of: i) incorrect addressing to Regional OPMET Centre (ROC) Vienna as provided at Appendix 4.6A to the Report on Agenda Item 4.6; ii) multiple bulletins received at ROC Vienna as provided at Appendix 4.6B to the Report on Agenda Item 4.6 and assure only one bulletin is sent to ROC Vienna; iii) non-receipt of OPMET (SA, FC, FT) requests during monitoring as provided at Appendix 4.6C to the Report on Agenda Item 4.6; and b) States non-compliant with TAF requirements be included in ICAO MID deficiency list.	Implement the Conclusion	ICAO	State Letter	31 Aug. 2012	
CONCLUSION 13/56: TIMELINESS OF OPMET DATA That, States be notified of procedures related to METAR and TAF compilation and dissemination times as per Appendix 4.6D to the Report on Agenda Item 4.6.	Implement the Conclusion	ICAO	State Letter	31 Aug. 2012	
DECISION 13/57: REVISED TOR OF THE MET SG That, the Terms of Reference (ToR) of the Meteorology Sub-Group be updated as at Appendix 4.6E to the Report on Agenda Item 4.6.	Implement the work programme of the MET SG	MIDANPIRG	Updated TOR and Procedural Handbook	April 2012	Completed
CONCLUSION 13/58: PROVISION OF STATISTICAL DATA That, States be urged to provide required airlines, airports and air navigation service providers statistical data to ICAO using the new revised forms as at Appendix 4.7A to the Report on Agenda Item 4.7.	Implement the Conclusion	ICAO States	State Letter Statistics	31 Dec. 2012	

CONCLUSIONS AND DECISIONS	FOLLOW-UP	TO BE INITIATED BY	DELIVERABLE	TARGET DATE	REMARKS
CONCLUSION 13/59: TRAFFIC FORECAST AND PEAK PERIOD ANALYSIS WORKSHOP That, with a view to provide States with a better understanding of the ICAO Statistical data reporting forms and process of development of Traffic Forecasts and Peak Period Analysis: a) a MID Traffic Forecast and Peak Period Analysis Workshop be organised in 2013; and b) States be invited to participate actively in the Workshop.	Implement the Conclusion	ICAO	Workshop	2013	
CONCLUSION 13/60: TRAFFIC FORECASTING AND PEAK PERIOD ANALYSIS REQUIREMENTS IN THE MID REGION That, considering the on-going requirements for development of Traffic Forecasts and Peak Period analysis in the MID Region; States be urged to: a) provide required traffic data in order to facilitate the timely and efficient development of Traffic Forecasts and Peak Period analysis; and b) continue their support to the Traffic Forecasting Sub-Group by ensuring that their respective nominees to the membership of the Sub-Group include, as much as possible, forecasting experts, air traffic management experts and, when required, financial analysts to carry out business case and cost/benefit analysis.	Implement the Conclusion	ICAO States	State Letter Statistics and necessary support	31 Dec. 2012	

CONCLUSIONS AND DECISIONS	FOLLOW-UP	TO BE INITIATED BY	DELIVERABLE	TARGET DATE	REMARKS
CONCLUSION 13/61: CENTRALIZED AIR NAVIGATION DEFICIENCY DATABASE That, States and international organizations be invited to: a) test the centralized air navigation deficiency database on iSTARS platform using the guidance in Appendix 5.1A to the Report on Agenda Item 5.1; b) update the data as necessary in coordination with the ICAO MID Regional Office; and c) provide feedback to the ICAO MID Regional Office by 31 August 2012	Implement the Conclusion	ICAO States	State Letter Feedback	30 Jun. 2012 31 Aug. 2013	
CONCLUSION 13/62: NGAP NATIONAL PLANS That, in order to ensure that enough qualified and competent aviation professionals are available to operate, manage and maintain the future international air transport system, States be urged to: a) develop Next Generation of Aviation Professionals (NGAP) National Plan; b) use the ICAO guidance material for the development of the NGAP National Plans, including the information contained in ICAO DOC 9956 (Global and Regional 20-year forecasts) and the traffic forecasts and peak period analysis developed by the TF SG/4 meeting for the period 2010-2030; and c) provide feedback to the ICAO MID Regional Office before 31 January 2013, for review by the DGCA-MID/2 meeting.	Implement the Conclusion	ICAO States	State Letter Feedback	31 Aug. 2012 31 Jan. 2013	

CONCLUSIONS AND DECISIONS	FOLLOW-UP	TO BE INITIATED BY	DELIVERABLE	TARGET DATE	REMARKS
CONCLUSION 13/63: ELIMINATION OF AIR NAVIGATION DEFICIENCIES IN THE MID REGION That, States be urged to: a) review their respective lists of identified deficiencies, develop associated Corrective Action Plans and forward them to the ICAO MID Regional Office prior to 15 June 2012; and b) use the ICAO MID Air Navigation Deficiency Database (MANDD) for submitting online requests for addition, update, and elimination of air navigation deficiencies, until the official launch of the Centralized Air Navigation Deficiency Database on iSTARS.	Implement the Conclusion	ICAO States	State Letter CAP and necessary updates	15 Jun. 2012	
CONCLUSION 13/64: REPORTING OF LARGE HEIGHT DEVIATIONS (LHD) That, in order to simplify and standardize the reporting of Altitude/Height Deviations and Coordination Failures, in accordance with the ICAO Doc 9937: a) the Form at Appendix 5.2A to the Report on Agenda Item 5.2 be used for the reporting of Altitude/Height Deviations and Coordination Failures; and b) the monthly submission of LHD replaces the monthly submission of ADRs and CFRs.	Implement the Conclusion	MIDANPIRG/13 States	LHD Form endorsed LHD sent to the MIDRMA	Apr 2012 On monthly basis	

CONCLUSIONS AND DECISIONS	FOLLOW-UP	TO BE INITIATED BY	DELIVERABLE	TARGET DATE	REMARKS
CONCLUSION 13/65: PROVISION OF REQUIRED DATA TO THE MIDRMA That, considering the on-going requirement for RVSM safety monitoring in the MID Region: a) States provide the required data to the MIDRMA on a regular basis and in a timely manner. The data includes, but is not necessarily limited to: i) approval of operators and aircraft for RVSM operations (on monthly basis or whenever there's a change); ii) Large Height Deviations (LHD) (on monthly basis); iii) traffic data (as requested by the MIDRMA Board); and iv) radar data as, when and where required. b) States not providing the required data to the MIDRMA on a regular basis and in a timely manner: i) be included in the MIDANPIRG list of air navigation deficiencies; and ii) might not be covered by the RVSM SMRs.	Implement the Conclusion	States	Necessary data provided to the MIDRMA	On monthly basis	
CONCLUSION 13/66: SECOND MID RVSM SAFETY ASSESSMENT SEMINAR That, with a view to raise the awareness related to the requirements for sustained RVSM safety assessment activity and improve the knowledge of all involved parties, in particular with respect to the Vertical Collision Risk Methodology and Altimetry System Errors, the MIDRMA, in coordination with ICAO, organize a Second MID RVSM Safety Assessment Seminar, in the last quarter of 2012.	Convene the Seminar	MIDRMA/ICAO	Seminar	Oct. 2012	

CONCLUSIONS AND DECISIONS	FOLLOW-UP	TO BE INITIATED BY	DELIVERABLE	TARGET DATE	REMARKS
CONCLUSION 13/67: TRAINING ON RVSM SAFETY ASSESSMENT That, with a view to raise the awareness related to the requirements for sustained RVSM safety assessment activity and improve the knowledge of the ATC and Air Operators personnel: a) the MIDRMA include in its work programme regular missions to the Member States, during which briefings on the MIDRMA activities and RVSM safety assessment requirements be provided to concerned personnel; and b) for improved effectiveness, the MIDRMA visit to a State be conducted, to the extent possible, back-to-back with the GMU height monitoring mission related to the air operator(s) based in this State.	Implement the Conclusion	MIDRMA	Training on RVSM safety assessment provided	2012-2013	
CONCLUSION 13/68: VERTICAL COLLISION RISK SOFTWARE That, a) the MIDRMA initiate action for the development/purchase of a suitable VCR software for the MID Region; and b) the VCR Software be presented to and validated by the Second MID RVSM Safety Assessment Seminar, to be held in October 2012	Implement the Conclusion	MIDRMA	VCR Software	Oct. 2012	
CONCLUSION 13/69: RVSM APPROVALS That, a) States be urged to take necessary measures to: i) ensure that, before 30 June 2012, their aircraft operators fully comply with Annex 6 provisions related to long term height monitoring requirements, based on the MIDRMA MMR Tables;	Implement the Conclusion	ICAO States	State Letter Necessary action and feedback	1 Jun. 2012 2012-2013	

CONCLUSIONS AND DECISIONS	FOLLOW-UP	TO BE INITIATED BY	DELIVERABLE	TARGET DATE	REMARKS
ii) withdraw the RVSM approvals for their registered aircraft that would not be compliant with Annex 6 provisions related to long term height monitoring requirements; after 30 June 2012; iii) ban any aircraft without confirmed RVSM approval status from entering the RVSM airspace; and iv) report any case of handover at an RVSM Flight Level of an aircraft without confirmed RVSM approval status from adjacent ACCs to the MIDRMA and the ICAO MID Regional Office b) the MIDRMA Board Members in coordination with the MID RVSM Programme Managers monitor and follow up this subject at the national level, in order to ensure efficient implementation.					
CONCLUSION 13/70: MID REGION HEIGHT-KEEPING MONITORING STRATEGY That, the MID Region height-keeping monitoring strategy is updated as at Appendix 5.2B to the Report on Agenda Item 5.2.	Implement the Strategy	MIDANPIRG/13	Strategy	April 2012	Completed
CONCLUSION 13/71: MID RVSM SMR 2012-2013 That, a) the FPL/traffic data for the period 1-31 October 2012 be used for the development of the MID RVSM Safety Monitoring Report (SMR 2012-2013); b) only the appropriate Flight Data form available on the MIDRMA website (www.midrma.com) should be used for the provision of FPL/traffic data to the MIDRMA; and c) the draft version of the MID RVSM SMR 2012-2013 be ready before 30 April 2013.	Implement the Conclusion	ICAO States MIDRMA	State Letter Oct. 2012 FPL/traffic data provided to the MIDRMA Draft SMR	15 Sep. 2012 15 Nov. 2012 30 Apr. 2013	

MIDANPIRG/13
Report on Agenda Item 7

REPORT ON AGENDA ITEM 7: ANY OTHER BUSINESS

ICAO MID Forum

7.1 The meeting recalled that the ICAO MID Forum was successfully launched in September 2004 and that Bahrain supported all financial aspects of launching, hosting and running the project.

7.2 The meeting noted with appreciation and thanks the actions undertaken by Bahrain, in coordination with the ICAO MID Regional Office, for the improvement of the Forum.

7.3 The meeting noted that the new Forum was developed based on a workspace approach. Accordingly, several types of users with different types of privileges are managed by the MID Forum Administrator based on the user's registration. The URL address of the Forum is: www.icaomidforum.net.

7.4 Based on the above, the meeting encourage States and Users from the MID Region to register and participate in the MID Forum and to forward their comments and observations, if any, to the ICAO MID Forum Administrator for further enhancement of the Forum's features.

MIDANPIRG Members, Alternates and Advisers

7.5 The meeting reviewed and updated the list of MIDANPIRG Members, Alternates and Advisers as at **Appendix 7A** to the Report on Agenda Item 7.

Closing of the Meeting

7.6 The meeting ended expressing its gratitude and appreciation to the United Arab Emirates and its General Civil Aviation Authority and especially, to H.E. Saif Mohammed Al Suwaidi, Director General of UAE GCAA for hosting the Thirteenth Meeting of MIDANPIRG, for excellent arrangements made towards successful conduct of the meeting and the warm hospitality extended to all delegates throughout their stay in Abu Dhabi. Thanks were also conveyed to the Chairman for the excellent conduct of the meeting and for the ICAOMID Regional Office for the good preparation, coordination and secretarial work.

MIDANPIRG/13

Appendix 7A to the Report on Agenda Item 7

**MIDDLE EAST AIR NAVIGATION PLANNING
AND IMPLEMENTATION REGIONAL GROUP (MIDANPIRG)**

LIST OF MEMBERS/ALTERNATES/ADVISERS

NO	STATE	MEMBER	ALTERNATE	ADVISER
1	BAHRAIN	Mr. Ali Ahmed Mohammed Director Air Navigation Civil Aviation Affairs P.O. Box 586 Kingdom of Bahrain Fax: (973) 17 329 977 Tel: (973) 17 321 116 Mobile: (973) 399 69 399 E-mail : aliahmed@caa.gov.bh	Mr. Saleem Mohamed Hassan Chief Air Traffic Management Civil Aviation Affairs P.O. Box 586 Kingdom of Bahrain Fax: (973) 17 321 992 Tel: (973) 17 321 117 Mobile: (973) 39 60 88 60 E-mail : saleemmh@caa.gov.bh	
2	EGYPT	Mr. Abu El Magd Ahmed Khalifa Head of Department of Navigation Ministry of Civil Aviation Egyptian Civil Aviation Authority Cairo Airport Road Cairo – Egypt Fax : (202) 2267 8537 Tel : (202) 2267 8537 Mobile : (2012) 228 0347 Email: NAVMAGD@yahoo.com	Mr. Mahmoud Mohamed Abdel Aziz Senior Air Traffic Controller National Air Navigation Services Company Cairo Air Navigation Center (CANC) Cairo Airport Road Cairo – Egypt Fax: (202) 226 5796 Tel: (202) 226 5796 Mobile: (2016) 351 0769 Email: mahmoud5531@hotmail.com	
3	IRAN	Mr. Mohammad khodakarami Director General of Aeronautical Affairs Civil Aviation Organization Islamic Republic of Iran Fax : (9821) 66036340 Tel : (9821) 44665576 Mobile: (98912) 3908196 Email: mokhodakarami@gmail.com	Mr. Ebrahim Shoushtari Director General of Iran ATS (Iran Airports Company) Islamic Republic of Iran Fax: (9821) 445 44102 Tel: (9821) 445 44101 Email: e.shoushtari@airport.ir Email: e_shoushtari@yahoo.com	Mr. Hamid Hosseini Director General of Communication & Navigation (Iran Airport Company) Islamic Republic of Iran Fax: (9821) 445 44001 Tel: (9821) 445 44000 Email: hosseini@airport.ir Email: Hamid_y110@yahoo.com

MIDANPIRG/13-REPORT
APPENDIX 7A

7A-2

NO	STATE	MEMBER	ALTERNATE	ADVISER
4	IRAQ	Mr. Iman Zedan Abd Ameer CNS Director/ Senior Computer & Control Engineer Baghdad International Airport Iraq Email: imzen29@yahoo.com Tel: (9641) 3814044 Mobil: (964) 7901 484525	Mr. Jawdat Abdul Satter Director of ATS Iraq Email: jawdatabulsattar@yahoo.com Tel: (9641) 3814044 Mobil: (964) 79702100836	
5	JORDAN	Capt. Diab Abu Zaid ANS Commissioner Civil Aviation Regulatory Commission P.O. Box 7547 Amman - Jordan Mobile: (962) 795703449 Email: anscom@com.gov.jo	Mr. Nayef Irshaid Al-Marshoud Director of ATM Civil Aviation Regulatory Commission P.O. Box 7547 Amman - Jordan Fax: (962-6) 489 7729 Tel: (962-6) 4891 401 - 3354 Mobile: (962-7) 97498992 Email: datm@carc.gov.jo	Mr. Suleiman Deeb Zayed Director of Communications Civil Aviation Regulatory Commission Civil Aviation Authority P.O. Box 7547 Amman - Jordan Fax: (962-6) 4898 0331 Tel: (962-6) 4898 2282 Mobile: (962-79) 611 7566 Email: suleiman2111@yahoo.com dcom@carc.gov.jo
6	KUWAIT	Mr. Fawzi M. Al Marshood Director of Air Navigation Directorate General of Civil Aviation P.O. Box 17 – 13001-Safat-Kuwait Fax : (965) 24346221 Tel : (965) 24346220 Mobile : (965) 99700663 E.mail: q8dgca_danoff@hotmail.com	Mr. Mohammad A.M. Al Awadi Superintendent of Air Navigation Air Navigation Department Directorat General of Civil Aviation P.O. Box 17 – Safat 13001-Safat-Kuwait Fax : (965) 24315359 Tel : (965) 24729762 Mobile : (965) 97177703 E.mail: awadhi7177@hotmail.com	
7	LEBANON	Mr. Walid Al Hassanieh Chief Air Navigation Department Lebanese DGCA Hariri Int'l Airport Beirut-Lebanon Tel: (9611) 628178 Fax : (9611) 629023 Mob: (96)1 70 474517 E-mail: hassaniehw@beirutairport.gov.lb	Mr. Elie Elkhoury Head of AIS Section Pans-Ops Specialist Lebanese DGCA Hariri Int'l Airport Beirut-Lebanon Tel : (9611) 629067 Fax : (9611) 629023 Mob: (9613) 897943 E-mail: kelie@beirutairport.gov.lb	

NO	STATE	MEMBER	ALTERNATE	ADVISER
8	OMAN	Mr. Hamad Ali Mohamed Al-Abri Director Air Navigation Services Directorate General of Civil Aviation and Meteorology P.O. Box 1 – Code 111 Seeb International Airport Muscat-Oman Fax: (968) 24 51 99 30 Tel: (968) 24 51 95 19 E-mail : h.alabri@caa.gov.om	Mr. Abdullah Bin Nasser Bin Rashed Al-Harthy Superintendan., Air Traffic Services Directorate General of Civil Aviation and Meteorology P.O. Box 1 – Code 111 Seeb International Airport Muscat-Oman Fax: (968) 24 51 95 23 Tel: (968) 24 51 92 01 E-mail: Abdullah-nasser@caa.gov.om	Mr. Waleed Khalfan Al-Riyami ATS & Search and Rescue Inspector ANS Safety Department Directorate General of Civil Aviation and Meteorology P.O. Box 2783-Code 111, Seeb International Airport Muscat-Oman Tel: (968) 2451 8985 Mobile: (968) 9932 3733 E-mail: waleedalryami@caa.gov.om
9	QATAR	Mr. Ahmed Mohamed Al Eshaq Director Air Navigation Civil Aviation Authority P.O. Box 73 Doha, Qatar Fax: (974) 4465 6554 Tel: (974) 4462 2300 Mobile: (974) 5555 0440 E-Mail: ahmed@caa.gov.qa	Mr. Faisal Alqahtani Head of Aeronautical Information Services Civil Aviation Authority P.O. Box 73 Doha, Qatar Fax: (974) 4465 6554 Tel: (974) 4465 6221 Mobile: (974) 5553 7060 E-Mail: faisal.alqahtani@caa.gov.qa	
10	SAUDI ARABIA	Mr. Aon Abdullah Al-Garni Head of ATM Air Navigation Services General Authority of Civil Aviation P.O. Box 40217 Jeddah 21499 KSA Saudi Arabia Fax: (966 2) 640 1477 Tel. (966 2) 640 1005 or 6402855 E-mail: aonabdul@yahoo.com	Mr. Hassan Al Ghoraybi System Planning Division- Airways Engineering General Authority of Civil Aviation P.O. Box 15441 Jeddah 21444 Saudi Arabia Fax: (966-2) 6719041 or (966-2) 6717717 Ext.276 E-mail: ghorabi@msn.com hmg_sed@yahoo.com	
11	SYRIA			

MIDANPIRG/13-REPORT
APPENDIX 7A

7A-4

NO	STATE	MEMBER	ALTERNATE	ADVISER
12	UAE	Mr. Ahmed Al Jallaf Executive Director of Air Navigation Services GCAA Sheikh Zayed Air Navigation Centre P.O. Box 66 Abu Dhabi United Arab Emirates Fax: (971-2) 599 6883 Tel: (971-2) 599 6888 Mobile: (971-50) 614 9065 Email: aljallaf@szc.gcaa.ae	Mr. Juma Harib Deputy Executive Director of Air Navigation Services & Head of Support Coordination GCAA Sheikh Zayed Air Navigation Centre P.O. Box 66 Abu Dhabi United Arab Emirates Fax: (971-2) 599 6883 Tel: (971-2) 599 6887 Mobile: (971-50) 668 2725 Email: jharib@szc.gcaa.ae	Mr. Abdulla Al Hashmi Director of Air Traffic Management GCAA Sheikh Zayed Air Navigation Centre P.O. Box 66 Fax: (971-2) 599 6836 Tel: (971-2) 599 6830 Mobile: (971-50) 442 0486 Email: ahashimi@szc.gcaa.ae
13	YEMEN	Mr. Abdullah Ahmed Alawlaqi Director General Air Navigation Airport Road Sana'a Tel : (967) 1345402 Fax : (967) 1344047 Email : atccns@gmail.com	Mr. Abdullah Abdulwareth Aleryani Director of ACC/FIC Airport Road Sana'a Tel/Fax (967) 1345403 Email : emlabd@gmail.com	Mr. Ahmed Mohammed Al Kopati Director of Air Navigation Operation Airport Road Sana'a Tel : (967) 1345401 Fax : (967) 1344047 Email : atccns@gmail.com

-END-