



**INTERNATIONAL CIVIL AVIATION ORGANIZATION**

**THE MIDDLE EAST AIR NAVIGATION PLANNING  
AND IMPLEMENTATION REGIONAL GROUP  
(MIDANPIRG)**

**REPORT OF THE SECOND MID REGION ATM  
ENHANCEMENT PROGRAMME BOARD MEETING**

**(MAEP Board/2)**

*(Cairo, Egypt, 11 - 13 April 2016)*

The views expressed in this Report should be taken as those of the MIDANPIRG MAEP Board and not of the Organization. This Report will, however, be submitted to the MIDANPIRG 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

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## TABLE OF CONTENTS

Page

### PART I - HISTORY OF THE MEETING

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

### PART II - REPORT ON AGENDA ITEMS

Report on Agenda Item 1 .....	1-1
Report on Agenda Item 2 .....	2-1/2-2
Report on Agenda Item 3 .....	3-1/3-5
Report on Agenda Item 4 .....	4-1
Report on Agenda Item 5 .....	5-1

### APPENDICES

Appendix 2A	
Appendices 3A – 3C	

### ATTACHMENT

List of Participants .....	Attachment A
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## **PART I – HISTORY OF THE MEETING**

### **1. PLACE AND DURATION**

1.1 The Second Meeting of the MID Region ATM Enhancement Programme Board (MAEP Board/2) was successfully held at the Meeting Room of the ICAO Middle East Regional Office in Cairo, Egypt, from 11 to 13 April 2016.

### **2. OPENING**

2.1 Mr. Mohamed Khalifa Rahma, ICAO Regional Director, Middle East Office welcomed the participants to Cairo and wished them a successful and fruitful meeting. He highlighted that MAEP would be the Regional platform that provides the basis for a collaborative approach towards planning and implementing projects in support of the MID Air Navigation Strategy, taking into consideration previous initiatives.

2.2 Mr. Rahma reiterated that the DGCA MID/2 meeting through Conclusion 2/4 agreed to the establishment of the MAEP Board composed of high level representatives from concerned States and Organizations, to be responsible for overall supervision, direction, and management of the Programme. He stressed that ICAO commitment to support the establishment of MAEP and the implementation of its projects will continue.

2.3 Mr. Rahma recalled that the DGCA-MID/3 meeting endorsed the MAEP Memorandum of Agreement (MOA), which had been signed by six States (Egypt, Jordan, Kuwait, Lebanon, Sudan and UAE). In this respect, he strongly encouraged the remaining States to join MAEP, which will ensure to the extent possible the implementation of the agreed regional air navigation projects in a collaborative and harmonized manner.

2.4 In closing, Mr. Rahma thanked the participants for their presence and wished the meeting every success in its deliberations.

### **3. ATTENDANCE**

3.1 The meeting was attended by a total of twenty six (26) participants from nine (9) States (Bahrain, Egypt, Kuwait, Lebanon, Oman, Saudi Arabia, Sudan, United Arab Emirates and United States of America) and five (5) International Organizations and Industries (AACO, BOEING, CANSO, EUROCONTROL and IATA). The list of participants is at **Attachment A** to the Report.

### **4. OFFICERS AND SECRETARIAT**

4.1 The meeting was chaired by Mr. Ahmed Al-Jallaf, Assistant Director General Air Navigation Services, General Civil Aviation Authority, UAE.

4.2 Mr. Elie El Khoury RO/ATM/SAR was the Secretary of the meeting supported by Mr. Mohamed Smaoui, ICAO Deputy Regional Director, Middle East Office, Mr. Raza Gulam, RO/CNS and Mr. Abbas Niknejad, RO/AIM/ATM.

### **5. LANGUAGE**

5.1 Discussions were conducted in English and documentation was issued in English.

**6. AGENDA**

6.1 The following Agenda was adopted:

Agenda Item 1: Adoption of the Provisional Agenda and election of Chairperson

Agenda Item 2: MID Region ATM Enhancement Programme (MAEP) establishment

- Status of signature of the Memorandum of Agreement (MOA)
- Review of MAEP Project Document
- Project Management Office functions and responsibilities
- MAEP financial issues

Agenda Item 3: MAEP Projects

- MID Flight Procedure Programme (MID FPP)
- MID ATS Route Network Optimization Project (ARNOP)
- MID IP Network
- MID Integrated Flight Plan Processing System (MID IFPS) Project
- MID Regional/Sub-Regional ATFM System
- MID Region AIM Database (MIDAD) Project

Agenda Item 4: Future Work Programme

Agenda Item 5: Any other Business

**7. CONCLUSIONS AND DECISIONS – DEFINITION**

7.1 All MIDANPIRG Sub-Groups and Task Forces record their actions in the form of Conclusions and Decisions with the following significance:

- a) **Conclusions** deal with the matters which, in accordance with the Group’s terms of reference, merit directly the attention of States on which further action will be initiated by ICAO in accordance with established procedures; and
- b) **Decisions** deal with matters of concern only to the MIDANPIRG and its contributory bodies

**8. LIST OF DRAFT CONCLUSIONS AND DRAFT DECISIONS**

<i>MAEP BOARD DECISION 2/1:</i>	<i>MAEP ORGANIZATIONAL STRUCTURE</i>
<i>MAEP BOARD CONCLUSION 2/2:</i>	<i>MAEP MEMORANDUM OF UNDERSTANDING</i>
<i>MAEP BOARD CONCLUSION 2/3:</i>	<i>MAEP PROJECTS FUNDING</i>
<i>MAEP BOARD CONCLUSION 2/4:</i>	<i>MAEP BOARD MEMBERS</i>
<i>MAEP BOARD CONCLUSION 2/5:</i>	<i>HOSTING OF THE MID FPP</i>
<i>MAEP BOARD CONCLUSION 2/6:</i>	<i>MID FPP SPONSORSHIP</i>
<i>MAEP BOARD CONCLUSION 2/7:</i>	<i>MID IP NETWORK PROJECT (CRV)</i>

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**PART II: REPORT ON AGENDA ITEMS**

**REPORT ON AGENDA ITEM 1: ADOPTION OF THE PROVISIONAL AGENDA**

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

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**REPORT ON AGENDA ITEM 2: MID REGION ATM ENHANCEMENT PROGRAMME (MAEP) ESTABLISHMENT**

2.1 The subject was addressed in WP/2 presented by the Secretariat. The meeting was provided with an update on the progress of MAEP establishment and the challenges delaying the launching of the Programme, which is mainly due to the lack of sufficient commitment from States to cover the running cost of the MAEP Project Management Office.

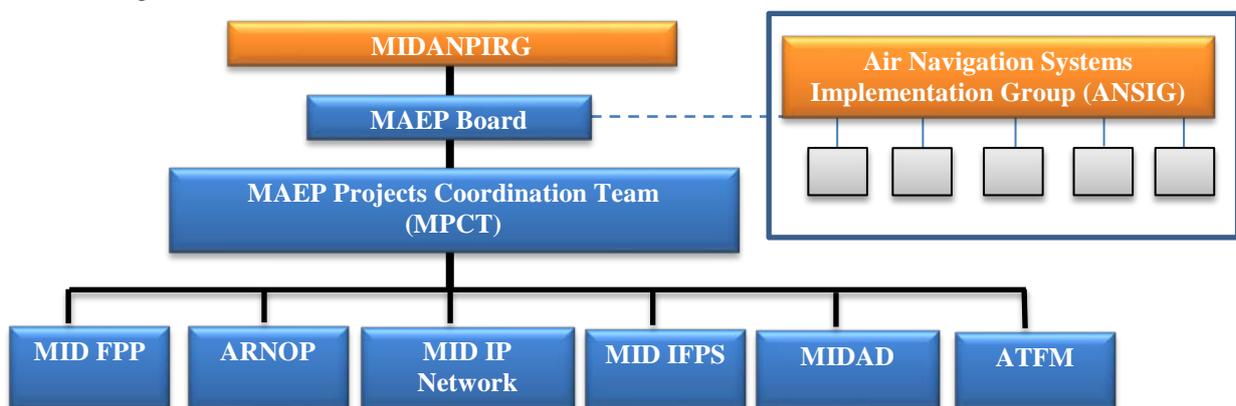
2.2 The final Scope and Strategic Objective of MAEP are as follows:

*The MID Region ATM Enhancement Programme (MAEP) is a Regional platform that provides the basis for a collaborative approach towards planning and implementing air navigation projects in support of the MID Air Navigation Strategy, taking into consideration previous initiatives. This includes the following:*

- 1) *Maximize Air Traffic Management performance in the MID Region through project management and within the time frame (2016-2028).*
- 2) *Improve efficiency and increase capacity to safely accommodate air traffic growth.*
- 3) *Support the implementation of air navigation projects in the MID Region in a harmonized and collaborative manner in line with the MID Air Navigation Strategy and Global Air navigation Plan (GANP), taking into consideration the users' requirements.*
- 4) *Addresses ATM community expectations in a cost-effective and environmentally sustainable manner.*

***New MAEP Organizational Structure***

2.3 The subject was addressed in WP/3 and PPT/1 presented by AACO on behalf of the MAEP Interim PMO (MAEP IPMO). The meeting recognized that the running cost of the MAEP PMO was one of the main showstoppers. Accordingly, the meeting agreed to the following revised MAEP Organizational Structure:



2.4 Based on the above, the meeting agreed to the following MAEP Board Decision:

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**MAEP BOARD DECISION 2/1: MAEP ORGANIZATIONAL STRUCTURE**

*That:*

- a) *the MAEP Steering Committee is dissolved; and*
- b) *the MAEP Projects Coordination Team (MPCT) is established with Terms of Reference as at **Appendix 2A** to replace and supersede the MAEP PMO.*

2.5 In connection with the above, Mr. Rashad Karaky, Senior Manager - Economics & Technology Management, AACO, was elected unanimously as the Rapporteur of the MPCT. The meeting noted with appreciation that AACO, CANSO, IATA and ICAO will support the MPCT. The meeting agreed that States should also be represented in the MPCT.

2.6 The meeting agreed that the MAEP MOA should be changed to a Memorandum of Understanding (MOU), reflecting the commitment of States to work cooperatively towards the implementation of regional/sub-regional air navigation projects. The meeting noted that membership of the MAEP Board is no longer depending on any financial contribution, which would encourage all States to sign the new MAEP MOU.

2.7 In connection with the above, the meeting agreed that the MAEP Board TORs and the MAEP Funding Mechanism (MSG/4 Conclusion 4/7 refers) should be amended. Accordingly, the meeting agreed to the following MAEP Board Conclusions:

**MAEP BOARD CONCLUSION 2/2: MAEP MEMORANDUM OF UNDERSTANDING**

*That,*

- a) *the MAEP MOA be replaced by a Memorandum of Understanding (MOU);*
- b) *States be invited to provide the ICAO MID Regional Office with their comments on the Draft MAEP MOU by **20 May 2016**; and*
- c) *the final version of the MAEP MOU be presented to the MAEP Board/3 meeting for endorsement.*

**MAEP BOARD CONCLUSION 2/3: MAEP PROJECTS FUNDING**

*That, the funding of the MAEP projects:*

- a) *be addressed by the MAEP Board, on case-by-case basis; and*
- b) *be ensured through:*
  - i. *contribution (cash or in-kind) by concerned States,*
  - ii. *voluntary contribution by stakeholders, sponsors/donors and States.*

2.8 The meeting agreed that States should assign Member/Alternate to the MAEP Board. Accordingly, the meeting agreed to the following MAEP Board Conclusion:

**MAEP BOARD CONCLUSION 2/4: MAEP BOARD MEMBERS**

*That, States be urged to assign Member/Alternate to the MEAP Board.*

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**REPORT ON AGENDA ITEM 3: MAEP PROJECTS*****Outcome of the MAEP SC/2***

3.1 The subject was addressed in WP/4 presented by the Secretariat.

***Update on the MAEP Interim PMO Activities***

3.2 The meeting was apprised of the work carried out by the MAEP IPMO. The meeting commended the work of the MAEP IPMO.

3.3 The meeting was presented with a progress report on the implementation of the Call Sign Initiative, led by Etihad Airways and supported by IATA MENA and ICAO MID Office. The meeting reviewed the Alphanumeric Call Sign Acceptance Test Final Report at **Appendix 3A**. Accordingly, the meeting encouraged States to cooperate in a timely manner with the CSC Initiative Team, for successful future testing.

***MID Flight Procedure Programme (MID FPP)***

3.4 The subject was addressed in WP/5, WP/6, WP/7 (PPT/2) and WP/8 (PPT/3) presented by the Secretariat, Egypt, Lebanon and Sudan, respectively. The meeting was apprised of the latest developments related to the establishment of the MID FPP.

3.5 The meeting noted that, as a follow-up action to the MAEP SC/2 Draft Conclusion 2/2, the ICAO MID Regional Office circulated a Questionnaire to seek States' willingness to join the MID FPP and/or provide in-kind contributions, get their views regarding the hosting, identify the States' needs and determine the flight procedures design and PBN capabilities in the MID Region. The meeting reviewed the survey results at **Appendix 3B**, as presented to the PBN SG/2 meeting (Sharm El Sheikh, Egypt, 22 – 25 February 2016), and noted with appreciation that the majority of States are supporting the establishment of the MID FPP.

3.6 The meeting received with appreciation three (3) offers for hosting the MID FPP from Egypt, Lebanon and Sudan. The meeting agreed that the evaluation process of the offers should be based on clear criteria and procedure of evaluation. Accordingly, the meeting agreed that the ICAO MID Regional Office send another Letter to States requesting those interested in hosting the MID FPP to send their offer in a closed bid providing all necessary information as detailed in the State Letter. An evaluation Committee composed of ICAO and Experts from Bahrain, Kuwait and UAE (non-bidder States) will be established in order to evaluate the hosting offers in accordance with the agreed criteria. Accordingly, the meeting developed the Action Plan at **Appendix 3C**, with the aim to complete the evaluation of the offers by **30 June 2016**.

3.7 Based on the above, the meeting agreed to the following MAEP Board Conclusion:

***MAEP BOARD CONCLUSION 2/5: HOSTING OF THE MID FPP***

*That, States be invited to indicate their willingness to host the MID FPP and provide their hosting offers (in closed Bid) to the ICAO MID Regional Office by **20 June 2016**.*

3.8 The meeting noted with appreciation that an airline proposed (verbally) a solo- sponsorship of the MID FPP for three (3) years. In this respect, the meeting agreed that the sponsorship opportunity should be open to other stakeholders. Accordingly, the meeting agreed to the following MAEP Board Conclusion:

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**MAEP BOARD CONCLUSION 2/6: MID FPP SPONSORSHIP**

*That, AACO, CANSO and IATA be invited to indicate to the ICAO MID Regional Office, by 15 June 2016, if any of their member(s) is/are willing to provide sponsorship to the MID FPP.*

3.9 Based on the above, the meeting agreed that the Draft MID FPP Project Document should be updated in order to be in line with the revised organizational structure of MAEP, and reflect other aspects such as the hosting State, sponsorship, revised period: January 2017-December 2019, etc.

**MID ATS Route Network Optimization Project (ARNOP)**

3.10 The subject was addressed in WP/4 presented by the Secretariat. The meeting noted that Phase I of the project, the CNS/ATM study, which is being carried out by Airbus ProSky under the Arab Civil Aviation Commission (ACAC) framework, has been extended to cover Kuwait and Tehran FIRs.

3.11 The study is expected to be completed by June 2016. The meeting noted that the results of the study would trigger the implementation of other projects. Accordingly, the meeting urged States to support ARNOP and provide the required data to Airbus ProSky in a timely manner.

**MID IP Network**

3.12 The subject was addressed in WP/9 presented by the Secretariat. The meeting was apprised of the progress of the MID IP Network Project. In this respect, the meeting noted that the ICAO MID Regional Office in coordination and the support of the ICAO APAC Region, conducted the MID IP Network workshop (Cairo, Egypt 24-25 January 2016). The workshop discussed in detail the CRV framework, and how it will benefit both the APAC and MID Regions.

3.13 The meeting noted that the MIDAMC STG/3 reviewed the outcome of the MID IP Network workshop and agreed that the CRV be renamed as Common aeRonautical VPN (CRV) in order to represent both Regions. Furthermore, five (5) States (Bahrain, Egypt, Jordan, Saudi Arabia and UAE) conducted an initial basic local CBA.

3.14 As a follow-up action to the outcomes of the MID IP Network workshop and MIDAMC STG/3 meeting, the ICAO MID Regional Office issued a State Letter requesting details of the focal points, IP Network equipment coordinates and commitment to the Common aeRonautical VPN (CRV). In this respect Bahrain, Iran, Jordan, Kuwait, Lebanon and Sudan had confirmed their commitment to the project. It was noted that the APAC Region Pioneer States had conducted the technical evaluation meeting (22-24 March 2016) and would hold the second meeting (09-10 May 2016), where they would continue to discuss the pending issues and have a face-to-face meeting with bidders to discuss the final clarifications.

3.15 It was highlighted that the CRV Framework accommodates the necessary legal framework for all States, where it is possible to adapt the individual service contract between States and the selected common service provider to the national laws and regulation. Furthermore, the selected common service provider will be responsible for dealing with the national telecommunication service providers in the States and may require standard support letter from the State.

3.16 Based on all the above, the meeting agreed to the following MAEP Board Conclusion:

**MAEP BOARD CONCLUSION 2/7: MID IP NETWORK PROJECT (CRV)**

*That,*

- a. the procurement framework of the APAC Common Regional Virtual Private Network Programme (CRV) be used for the implementation of the MID IP Network Project use ;*
- b. the MID IP Network Project be renamed as Common aeRonautical VPN Network (CRV) in order to be one common IP Network with the APAC;*
- c. States, that have not yet confirmed their commitment to join the CRV, be urged to do so before **10 May 2016**; and*
- d. further to the successful completion of the procurement process conducted in the APAC Region, States be urged to engage with the recommended supplier to establish individual service contracts.*

3.17 The meeting urged all States to join the CRV in order to gain the maximum benefits from the project. It was underlined that States not joining the project will have to connect to the network through an appropriate interface.

3.18 In accordance with the new MAEP structure for the management of the MID projects, the meeting agreed that the MIDAMC Steering Group act as the project manager for the MID IP Network, and will have similar activities and responsibilities to the APAC CRV Operation Group.

***MID Integrated Flight Plan Processing System (MID IFPS) Project***

3.19 The subject was addressed in WP/4 presented by the Secretariat and an update was provided by Bahrain. The meeting noted that the system is designed and developed to improve the quality of flight plan messages in accordance with ICAO standards by processing and validating the flight plans.

3.20 The meeting noted that the IFPS will be implemented initially in the GCC States and thereafter will be expanded to cover all MID States.

3.21 The meeting noted that the IFPS is being implemented in accordance with the following phases:

- Data collection from the concerned States in terms of addressing the frequent complications and issues associated with the flight plan processing, concerned States to submit these inputs to Bahrain by the third quarter 2016 (not later than September).
- The development of Service Level Agreements with the States concerned, to be developed by Bahrain (third quarter 2016).
- Flight plan data collection phase under OBBBZEZM for data analysis, AFTN and system load tests (fourth quarter 2016, a period of 1-3 months).
- Configuration phase, a period of 1 month but could be in parallel with the flight plan data collection phase subject to the States configuration inputs.
- Tests and trial phase, with created virtual (test/dummy) originators followed with selected individual originators (first quarter 2017, a period of 1-2 months depending on the results).
- Transition phase, live operational trials with selected originators, flight plan messages being processed and selected originators being automatically addressed/replied to (first-second quarter 2017 for a period of 1-2 months subject to the trials outcomes).

- Implementation phase (second quarter 2017 within a period of 1-3 months considering the preparation of SUPs, NOTAMs and AIRAC cycles schedules).

3.22 Based on the above, the meeting agreed that Bahrain will be the Project Manager for the MID IFPS; and encouraged States to coordinate with Bahrain all matters related to the MID IFPS project and provide necessary data and support, as appropriate.

### ***MIDAD***

3.23 The subject was addressed in WP/10. The meeting received with appreciation a proposal from EUROCONTROL related to the implementation of an EAD-based MIDAD, with the following main steps:

- Step 1: migration of the MID States to EAD.
- Step 2: establishment of an EAD-based MIDAD System.
- Step 3: establishment of a MIDAD Operational Centre in the MID Region (hand-over of the MIDAD operations from EUROCONTROL to the MIDAD Service Provider).

3.24 The meeting noted that with this offer from EUROCONTROL, there won't be a need for the "MIDAD Detailed Study" and recognized that this would save money, effort and time. Nevertheless, the meeting underlined that a detailed implementation plan (including the transition plan), should be developed based on the EAD experience, in coordination with the MIDAD ST, and further reviewed and discussed by the MIDAD TF before presentation to the MAEP Board and/or MIDANPIRG for endorsement.

### ***MID Regional/Sub-Regional ATFM System***

3.25 The meeting noted that Air Traffic Flow Management (ATFM)/Collaborative Decision Making (CDM) objective is to manage the flow of traffic in a way that minimizes delays and maximizes/optimizes the use of the available airspace.

3.26 The meeting emphasized the importance of the project. However, based on the prioritization done by the MAEP SC/2 meeting, the project would not be initiated before 2017, providing that all the enablers/prerequisites are implemented.

3.27 The meeting encouraged States to attend the ICAO ATFM Seminar that will be held in Abu Dhabi, UAE, 21-23 November 2016.

### ***Cooperation Council for the Arab States of the Gulf (GCC) Upper FIR Project***

3.28 The meeting noted that the GCC ANC has initiated a project to establish a single Upper Flight Information Region (UFIR) in the airspace of participating GCC Member States.

3.29 The meeting noted that the GCC UFIR Task Force is seeking support from ICAO MID Regional Office, GCC Member States, airspace users and industry to develop the requirements for the UFIR. The meeting noted that the data collection has been completed.

3.30 Based on the above, the meeting encouraged all concerned stakeholders to support the GCC UFIR project throughout the project life cycle.

***Prioritization of the MAEP Projects***

3.31 The meeting emphasized that the six (6) projects under MAEP are important for the MID Region. However, the implementation of some projects might be less complicated than other projects, taking into consideration the institutional and financial issues. Accordingly, the meeting agreed to prioritize the projects in accordance with their implementation time frame and assigned a “Manager” for each project, (the Manager could be a Person, Group, Entity or State) as follows:

<b>Project</b>	<b>Time frame</b>	<b>Project Manager</b>
MID Flight Procedure Programme (MID FPP)	January 2017- December 2019	Manager
MID ATS Route Network Optimization Project (ARNOP) – Phase I	Phase I ends June 2016	ACAC
MID IP Network	January 2016	MIDAMC STG
MID Integrated Flight Plan Processing System (MID IFPS)	2016	Bahrain
MIDAD	2017 and beyond	MIDAD TF
Regional/Sub-Regional ATFM system	2017 and beyond	TBD

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**REPORT ON AGENDA ITEM 4: FUTURE WORK PROGRAMME**

4.1 In accordance with the MAEP Board Terms of Reference, the meetings of the MAEP Board should be hosted by its Member States on rotation basis.

4.2 The meeting agreed that the ICAO MID Regional Office coordinates the exact dates and venue of the MAEP Board/3 meeting with the concerned parties.

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**REPORT ON AGENDA ITEM 5: ANY OTHER BUSINESS**

5.1 Saudi Arabia provided a briefing on the Ministerial Conference to be held in Riyadh, Saudi Arabia, 29-31 August 2016, highlighting the scope, objectives and expected outcomes. The meeting was of the view that the objectives and outcomes of the Conference, in particular Part II (ACAC Region Ministerial Conference) should be further clarified.

5.2 The meeting encouraged States to attend and support the Conference.

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# ***APPENDICES***

## APPENDIX 2A

### MAEP Projects Coordination Team Terms of Reference

#### A) Duties and Responsibilities of the PMO:

The MAEP Projects Coordination Team (MPCT) is established to follow up on the implementation of different MAEP Projects, monitor their development, and ensure coordination between those Projects.

In order to achieve its objectives, MAEP MPCT shall:

1. Elect a rapporteur for a renewable cycle of two years.
2. Monitor and coordinate the implementation of MAEP Regional Projects in accordance with the approved plans by MAEP Board.
3. Carry out initial assessment of the new proposal for MAEP Projects.
4. Support the development and amendment of business plans (deliverables, timeline, budget and concerned entities) for each Project and recommends them to the MAEP Board.
5. Recommend to the MAEP Board Key Performance Indicators (KPIs) for tracking the implementation of the Projects in order to assess and measure the effectiveness of the Programme.
6. Identify and report risks of the Projects and the Programme in general to the MAEP Board.
7. Coordinate at all levels with States and stakeholders to foster the project implementation.
8. Submit progress reports on each Project to the MAEP Board, as appropriate and when required. Reports on MAEP Projects to include:
  - a. accomplishments (since last report);
  - b. objectives for the next reporting period;
  - c. recommendations, if any; and
  - d. new requirements, concerns, issues, etc.

#### B) Composition & Reporting:

The MPCT works under the direction of and reports directly to the MAEP Board.

The MPCT is composed of:

- a) assigned representatives from AACO, CANSO, IATA and ICAO; and
- b) representatives from States to contribute to the work programme of the MPCT.

Other representatives/experts from States and industry may be invited on ad-hoc basis, as required.

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## ALPHA NUMERICAL CALL SIGN ACCEPTANCE TESTING



## ALPHA NUMERICAL CALL SIGN ACCEPTANCE TESTING

Call sign	Squawk	Dep Apt	Arr Apt	Alt Apt	Route	Annotations	
EAL210	3401	KALB	ALB GDM2			22L	VIS
Aircraft Type B752/F	110	KBOS KPVD					
CID 498	I	210	fuel	/W/Have charts			
IFR/VFR	Temp Alt	Cruise Alt	Scratchpad	Remarks			

# ALPHA NUMERICAL CALL SIGN ACCEPTANCE TESTING

## INTRODUCTION

The PMO is responsible of implementing and/or supporting the implementation of MAEP objectives.

Project: ATS systems acceptance of Commercial Airline call-signs utilizing Alpha-Numeric within the flight ID per ICAO Annex10 and ICAO DOC 4444 Pans/ATM

In order to achieve its purpose the MAEP PMO shall:

1. Review regional objectives in line with the Air Navigation Strategy and the users' requirements.
2. Identify, propose and prioritize projects to meet the regional objectives as stipulated in MAEP Master Plan.
3. Develop project plans (business plans, deliverables, timeline, budget and concerned entities) for each agreed regional project for the review of the MSC and/or the Board.
4. Coordinate, support and track the implementation of national projects.
5. Ensure coordination between national and regional projects.
6. Measure the performance of MAEP.
7. Provide regular communications and reports to the MSC, the Board and other stakeholders as appropriate.
8. Manage PMO projects.
9. Maintain communication channels with all MAEP stakeholders.
10. Coordinate the work of Task Forces and implementation bodies.
11. Provide Secretarial support to MAEP Steering Committee (MSC).

### Composition & Reporting:

The PMO is a dedicated and independent (both financially and managerially) office hosted at ICAO MID Regional Office. The PMO reports directly into MAEP Steering Committee and into MAEP Board through the MSC. Its work is supported by all MAEP stakeholders as required

# ALPHA NUMERICAL CALL SIGN ACCEPTANCE TESTING

## INDEX

<b>COVER PAGE</b> .....	<b>4</b>
<b>COUNTRY: UAE</b> .....	<b>4</b>
<b>PROJECT TITLE: ALPHA NUMERIC CALL SIGN ACCEPTANCE</b> .....	<b>4</b>
<b>STARTING DATE: 22 FEBRUARY 2015</b> .....	<b>4</b>
<b>COMPLETION DATE: ONGOING</b> .....	<b>4</b>
<b>EXECUTIVE SUMMARY</b> .....	<b>5</b>
<b>SECTION 1. BACKGROUND</b> .....	<b>5</b>
<b>SECTION 2. RATIONALE</b> .....	<b>5</b>
2.1 PROBLEMS/ISSUES TO BE ADDRESSED.....	5
2.2 STAKEHOLDERS AND TARGET BENEFICIARIES.....	6
2.3 PROJECT JUSTIFICATION .....	6
<b>SECTION 3. PROJECT FRAMEWORK</b> .....	<b>6</b>
3.1 IMPACT .....	6
3.2 PROJECT PROCESS AND WORK PLAN .....	6
FLIGHT PLANS: .....	7
1. PER ICAO DOC 4444 .....	7
2. PER STATE AIP .....	7
TESTING SCHEDULE: .....	7
<b>SECTION 4. IMPLEMENTATION AND MANAGEMENT ARRANGEMENTS</b> .....	<b>7</b>
4.1 INSTITUTIONAL FRAMEWORK AND COORDINATION.....	7
<b>SECTION 5. OVERSIGHT, MONITORING, MANAGEMENT INFORMATION, AND REPORTING</b> .....	<b>8</b>
5.1 MONITORING .....	8
5.2 COMMUNICATION AND VISIBILITY .....	8
5.3 REPORTING SCHEDULE .....	8
<b>ANNEX-1 PROJECT WORK PLAN</b> .....	<b>9</b>
<b>ANALYSIS</b> .....	<b>12</b>

# **ALPHA NUMERICAL CALL SIGN ACCEPTANCE TESTING**

## **COVER PAGE**

**Country: UAE**

**Project title: ALPHA NUMERIC CALL SIGN ACCEPTANCE**

**Starting date: 22 February 2015**

**Completion date: ongoing**

**Responsible for project execution: Etihad Airways**

**Responsible for project execution: IATA Middle East North Africa**

# ALPHA NUMERICAL CALL SIGN ACCEPTANCE TESTING

## EXECUTIVE SUMMARY

Alpha numeric flight call sign acceptance testing within the Middle East ATS systems is a defined series of structured tests that do not include the element of a live flight associated with the flight plan as to identify any challenges associated in ensuring the regions capability of accepting alpha numeric call signs for commercial flights. Testing will include ATC Systems, regulatory overflight approval, Airport landing and departure approvals. As to validate the testing the project will conclude with a live flight. Etihad Airways has been selected to manage this project that includes a final report and Gap Analysis to the MEAP PMO for review and consideration.

The project is the first phase addressing the regional and global concern relating to call sign confusion. The need to identifying solutions and possible mitigation measures addressing this safety concern will need the co-operation of all aviation stakeholders.

## SECTION 1. BACKGROUND

This document will look at call sign similarity / confusion that often occur within an FIR. The danger is that ATC clearances issued to one flight (call sign) can be – and has been – incorrectly read back and complied with by a similar sounding flight (call sign). This confusion by either flight crews or ATC can lead to possible safety consequences. Whilst it would seem an easy exercise to change call signs to eradicate the confusion, several factors affect this:

- The call sign usually reflects the flight number associated with the airline schedule,
- Overflight approvals in certain countries are requested based on the flight number / call sign and can take an extremely long time to apply for a change (especially in our current geopolitical climate);
- Automation on the ground such as operations systems, flight planning systems, reservations and weight and balance are fed by downlinks from the aircraft (i.e. 0001 messages);
- In areas where datalink is used for communications or surveillance the flight call sign input into the FMS will downlink into ATC systems (meaning the FMS must reflect what is in the ICAO ATC filed flight plan).

## SECTION 2. RATIONALE

### **2.1 Problems/Issues to be addressed**

# ALPHA NUMERICAL CALL SIGN ACCEPTANCE TESTING

States and their respective ATM systems must be ready to accept alpha numeric call signs in any combination.

## 2.2 Stakeholders and Target Beneficiaries

**Stakeholders:** States, ANSPs and Operators

**Target Beneficiaries:** ATC and Operators

## 2.3 Project Justification

Call sign similarity / confusion have been identified on a global and regional level that creates a safety problem which has proportionally increased within the region and will increase further with the increased growth of commercial aviation. Due to the limited number of current combinations of flight call signs the number of operators using the same flight numbers within the same areas of airspace has and will increase.

As a mitigating factor regions surrounding the Middle East have adopted the acceptance of alpha numeric with a commercial flight id used within the ATS environment.

## SECTION 3. PROJECT FRAMEWORK

### 3.1 Impact

To ensure the Middle East ATS system acceptance of such flight Id's several tests will be conducted, testing will include "dummy Flight Plans" to validate ATC, regulatory and airport acceptance to conclude with a live actual flight.

The testing requires State and ANSP feedback as to provide a gap analysis to the MEAP PMO. The gap analysis might include such defenceless that require States to upgrade their systems or review there regulatory requirements.

### 3.2 project process and work plan

The following structure and process shall be utilized during the phases of testing and will be adjusted as deemed necessary as to produce a final report and Gap Analysis. (see chart Annex-1)

Prior to any ATC system testing states shall be notified through the IATA MENA office with the relevant information prior to the planned test, these tests will identify any ATC system challenges associated with acceptance of such flight plans.

State overflight, airport landing and departure approvals shall be accomplished through the required application process which can vary from state to state as well as airport to airport. As this phase of testing is solely a paper and approval exercise no prior notification will be provided with

## ALPHA NUMERICAL CALL SIGN ACCEPTANCE TESTING

landing and departure approvals only addressing international airports. This phase of testing is to design to identify challenges within the state and airport environments.

As to validate the testing and not solely rely on results done in a test environment a “Stress Test” shall be conducted prior to the actual live flight conclusion. The stress test will consist of several regional airlines per their internal bulk flight plan processing include a flight plan that includes a flight utilizing alpha-numeric. The aim of this test is to finalize the testing phase prior to an actual flight.

Flight Plans:

1. Per ICAO doc 4444
2. Per state AIP

Testing schedule:

Test 1 and 2 - flight plan testing for ATC Systems

Test 3 - Flight plan testing for state overflight permissions which require individual flight plan processing per state over flight permission.

Test 4 - Flight plan testing for international airport landing and departure approvals to be based on airport requirements for processing.

Test 5- Stress test utilizing several Middle East based operators processing several days of bulk flight plans with embedded flight plans that utilize Alpha numerics

Test 7- Actual live flight to validate final acceptance based upon testing results.

### SECTION 4. IMPLEMENTATION AND MANAGEMENT ARRANGEMENTS

#### **4.1 Institutional Framework and Coordination**

Etihad Airways will provide flight plans to test ATM systems, overflight approvals and airport approvals and conclude with an actual flight testing based on section 3.

# **ALPHA NUMERICAL CALL SIGN ACCEPTANCE TESTING**

## **SECTION 5. OVERSIGHT, MONITORING, MANAGEMENT INFORMATION, AND REPORTING**

### **5.1 Monitoring**

IATA and Etihad Airways will monitor the testing as well as the outcome and provide a final report to the MEAP PMO.

### **5.2 Communication and Visibility**

All communication will be completed by IATA to include MEAP PMO updates as necessary

### **5.3 Reporting Schedule**

**TBD**

## ALPHA NUMERICAL CALL SIGN ACCEPTANCE TESTING

### Annex-1 PROJECT WORK PLAN

Country	ATC System capability	State Overflight Approval	Airpport Landing / Departure Approval
Egypt	YES / EMAIL	YES / EMAIL	ongoing
Saudi Arabia	YES / EMAIL	YES / EMAIL	RUH, JED, MED successful
Kuwait	YES / EMAIL	YES / EMAIL	KWI successful
Iran	YES / EMAIL	YES / EMAIL	ongoing
Bahrain	YES / EMAIL	SEE QATAR	BAH successful
UAE	YES / EMAIL	N/A	AUH successful
Jordan	YES / EMAIL	YES / EMAIL	AMM successful
Iraq	YES / EMAIL	YES / EMAIL	ongoing
Lebanon	YES / EMAIL	YES / AFTN	BEY successful
Qatar	YES / EMAIL	YES / AFTN	DOH successful
Oman	YES / EMAIL	YES / AFTN	MCT successful
Sudan	YES / EMAIL	Sudan already accepts any call sign	ongoing
Syria	NO REPLY	NOT REQUESTED	not planned
Yemen	NO REPLY	NOT REQUESTED	not planned

# ALPHA NUMERICAL CALL SIGN ACCEPTANCE TESTING

## Annex-2

Flight Plan Test-1 conducted February 22nd 2015

(FPL-ETD42DW-IS

-B77W/H-SDE2E3FGHIJ5M1RWXY/SB1D1

-EIDW0820

-N0482F350 PESIT5A PESIT DCT BAKUR UN546 STU UP2 NIGIT UL18 MID

UL612 RESMI UM728 KISTO UQ160 MEDAL UM729 PNZ UM603 SOR UM736 CRN

UM601 EKTOS/N0467F370 UM601 MIL UN134 ASPIS UG183 PASOS UL550

BOSID B417 KUA B416 AMBIK UB416 KUVER B416 IMDAT R784 ORSAR G666

TANGA

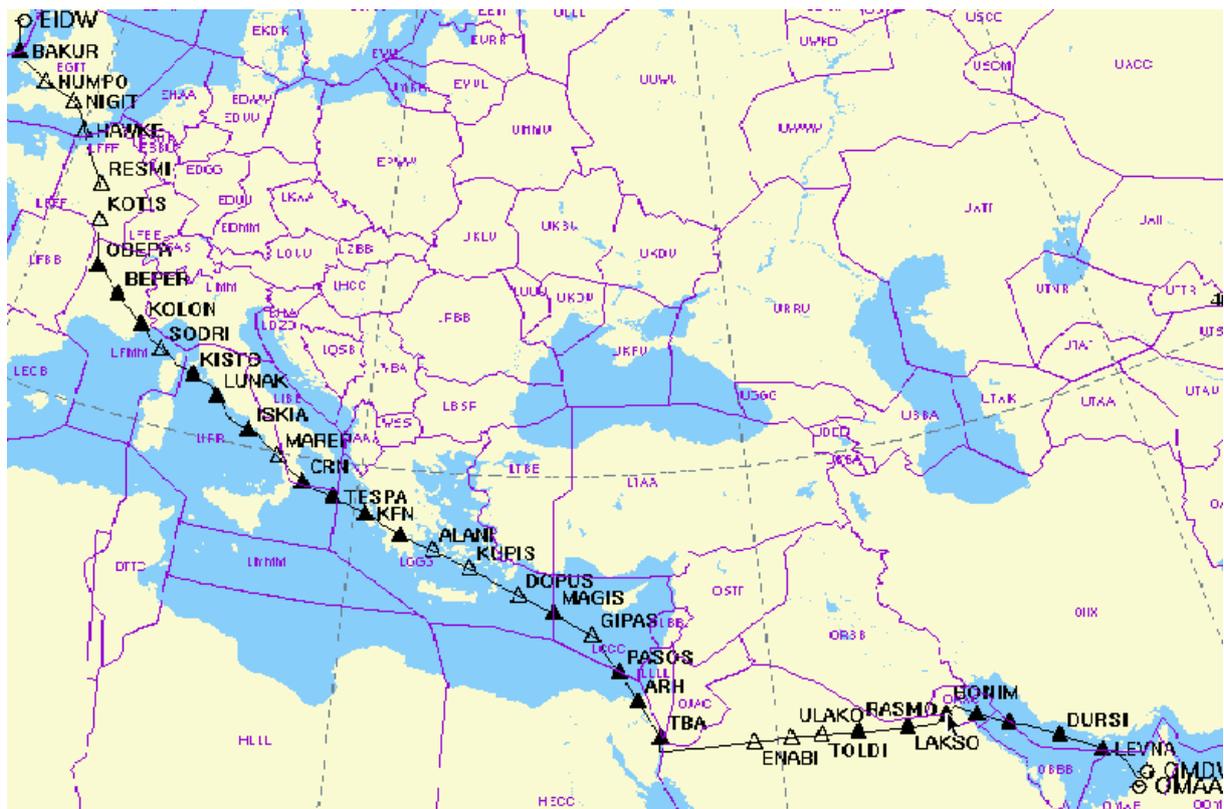
-OMAA0655 OMDW

-PBN/A1B1C1D1L1O1S2T1 DOF/150130 REG/A6ETA EET/EISN0010 EGTT0013

LFFF0043 LIRR0154 LIBB0232 LIRR0242 LGGG0250 LCCC0356 HECC0421

OEJD0449 OKAC0556 OBBB0608 OIIX0613 OMAE0639 SEL/GRLP OPR/ETD

RMK/TCAS EQUIPPED)



# ALPHA NUMERICAL CALL SIGN ACCEPTANCE TESTING

## Annex-2

Flight Plan Test-2 conducted March 22nd 2015

(FPL-ETD42DW-IS  
-B77L/H-SDE2E3FGHIJ5M1RWXY/SB1D1  
-OMAA0800  
-N0479F370 DCT MCT/N0482F380 DCT SYN DCT PSD/N0477F390 DCT  
LUDAN/N0475F380 DCT KAD/N0456F360 DCT ORER/N0445F350 DCT OTHH DCT  
-OMAA0826 OMAL  
-PBN/A1B1D1L1O1S2T1 DOF/150316 REG/XXXXX EET/OOMM0010 OEJD0053  
OOMM0123 OYSC0128 OEJD0245 HHAA0326 HSSS0334 HECC0403 OEJD0417  
OJAC0504 OSTT0524 OLBB0533 OSTT0545 ORBB0614 OIIX0647 ORBB0656  
OIIIX0657 ORBB0700 OIIX0714 ORBB0716 OIIX0718 ORBB0722 OKAC0726  
OBBB0736 OMAE0813 SEL/CJDQ OPR/ETD RMK/TCAS EQUIPPED DUMMY FLIGHT  
PLAN ONLY NO AIRCRAFT)



# ALPHA NUMERICAL CALL SIGN ACCEPTANCE TESTING

## Analysis

### The Pool of Standards Required by the Use Case

#### Summary of Standards

#### Test trial summary

Etihad has in addition to the successful test trial introduced several live flights into Europe (already using alpha numeric call signs) and live flights to 6 destinations within the Middle East. The trials will continue until the end of our winter schedule. Below are the flights currently successfully operated with an alpha numeric call sign

Sector	Commercial Flight Number	Alpha Numeric ATC Call Sign
AUH/DUS	EY23	ETD35EY
DUS/AUH	EY24	ETD56EY
AUH/MUC	EY3	ETD46W
MUC/AUH	EY4	ETD16E
AUH/ZRH	EY73	ETD54B
ZRH/AUH	EY74	ETD81C
AUH/FCO	EY83	ETD79EY
FCO/AUH	EY84	ETD26C
AUH/GVA	EY51	ETD28Y
GVA/AUH	EY52	ETD27B
AUH/BRU	EY55	ETD67E
BRU/AUH	EY56	ETD97A
AUH/BRU	EY57	ETD46X
BRU/AUH	EY58	ETD73Y
AUH/KWI	EY301	ETD10RE
KWI/AUH	EY302	ETD87XB
AUH/RUH	EY315	ETD82YR
RUH/AUH	EY316	ETD73UY
AUH/JED	EY313	ETD28TR
JED/AUH	EY312	ETD25TN
AUH/MED	EY345	ETD58UA
MED/AUH	EY346	ETD21EU
AUH/AMM	EY513	ETD10VA
AMM/AUH	EY514	ETD1EY
AUH/BEY	EY535	ETD34CB
BEY/AUH	EY534	ETD47TM

# ALPHA NUMERICAL CALL SIGN ACCEPTANCE TESTING

## Technical details:

### 1. Conversion to an alpha numeric call sign

It is important to understand that not every single flight number needs to be changed. This would create a reversed negative affect. Etihad has used the EuroControl CSS tool to de-conflict its own schedule. EuroControl has provided alpha numeric call signs to those flight numbers that are phonetically similar.

#### **Points to be considered:**

We have tested the use of EY as letters (e.g. ETD1EY) but found that it was not practical. Other airline codes may work better.

It was also recommended by our crews to use 2 numbers and 1 letter whenever possible. It is easier to say and to remember. Since this is a global issue we may even run out of possible combinations so this is not always possible

### 2. Obtaining overflight permissions and airport approvals

When applying for overflight it is recommended to apply for both the commercial flight number and the respective alpha numeric call sign. This will help to safeguard the flight in case of any unforeseen problems using the alpha numeric call sign. For airport approvals it is usually sufficient to inform the airport of the alpha numeric call sign that is connected to a commercial flight number.

### 3. Internal considerations

#### **Flight Plan**

The operational flight plan should include both the commercial and the alpha numeric call sign. The ICAO flight plan however will be filed with its alpha numeric call sign but it is important to add the commercial flight number under field 18 to ensure the connection between the two numbers.

#### **FMS**

We have tested Airbus A320, A340 and A320, Boeing B787 and Boeing B777.

Depending of the FMS used may have to be used to ensure that messages are transmitted to other internal systems such as load planner, fuel docket etc.

#### **ACARS**

It is important that the ops control system is set so that it understands both flight numbers. This is important since the aircraft uses alpha numeric in the OOOI messages where the airport offices typically send movement messages with commercial flight numbers.

#### **Datalink**

We have further tested DCL and CPDLC. We found no issues when using alpha numeric call signs.

# ALPHA NUMERICAL CALL SIGN ACCEPTANCE TESTING

## Use Case Open Issues

Event	Event Description	Major Assumptions

## Gaps in Standards

In this subsection we provide a description of the gaps, including missing or incomplete standards, in standards that are required for the events in this Use Case.

Event	Event Description	Standard Gap

# ALPHA NUMERICAL CALL SIGN ACCEPTANCE TESTING

## Standards to be profiled in Implementation Guides TBD

In this subsection we provide a list of projected profiles for any standards that maybe utilized

Event	Event Description	Standard Gap

## Resolution Recommendations TBD

Event	Event Description	Standard Duplication/ Overlap/Gap Resolution

## Next Steps

1. Etihad is planning to introduce alpha numeric call signs (where required) to the following regions starting with the summer schedule
  - Europe (all Etihad destinations)
  - North America (all Etihad destinations)
  - Middle East (all Etihad destinations but depending on the outcome of further trials)
2. Etihad will invite other operators to help testing further destinations within the Middle East.

# ALPHA NUMERICAL CALL SIGN ACCEPTANCE TESTING

## Interim Summary

The project has found no deficiencies so far with flight plan processing or active live flights with regional ATC or CAA units. Etihad Airways with the support of selected regional and international airlines will continue the flight plan testing phases for International airports' arrivals and departures within the Mid-Region to identify gaps and/or challenges within the airport process, such as IT or human factors, that would limit the use of Alpha-Numeric call signs for commercial flights in the MID region. Any deficiencies will be reported to ICAO and the MEAP S/C upon the completion of the testing phase.

The project has identified that the current Call Sign Similarity process and software which is currently used by Eurocontrol can be utilized in the MID Region. Furthermore, the region will benefit from the lessons learned by Eurocontrol to ensure a better implementation of the tool.

### Suggestions overview:

1. Establish a regional call-sign similarity unit (CSS)
2. Establish CSS rules for call-sign conflicts as done by Eurocontrol
3. Establish CSS Working Group through ICAO
4. Operators having an internal process to de-conflict the airline's flight schedule, will provide the internally de-conflicted schedule to the regional call sign similarity unit (CSS).
5. Operators that do not have an internal de-conflicting process that they can utilize to de-conflict their internal flight schedule, will provide data to the regional call sign similarity unit (CSS) for de-confliction.
6. Call- sign conflicts identified through regional call sign similarity unit (CSS) will be provided to operators with options for adjustments (example: XXX123 to XXX12A/XXX12M).
7. Call signs that have been identified with no conflict will be assigned until such time they are no longer utilized by operator.
8. All new call signs will be applied through the regional call sign similarity unit (CSS) prior to utilizations to assure de-confliction and report and assignment provided to submitter by the (CSS)
9. States will report to the regional call sign similarity unit (CSS) attaching the ATC/Airport call-sign confusion reports for review tracking and action if deemed appropriate.

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## ICAO MID Flight Procedure Programme (FPP) Survey

State	Replied	How many trained procedure designers are there in your State?	How many of the trained procedure designers in your State work for the State regulator?	How many of the trained procedure designers in your State work for the State's procedure design service provider?	How many procedure designers work for the State training organization?	How many of the trained procedure designers in your State have successfully completed advanced training in PBN procedure design?	Would Benefit from Services	Willing to Host	Provided Hosting Offer	Willing to Support	
										Financial to the start-up or annual operating expenses of the FPP	Expertise
Bahrain	Yes	Non	Non	Non	Non	Non	Yes	NO	N/A	Yes	NO
Egypt	Yes	10	1	10	4	8	Yes	Yes	Yes	Yes	Yes
Iran	Yes	7	2	5	4	3	Yes	Yes	Yes	Yes	Yes
Iraq	-	-	-	-	-	-	-	-	-	-	-
Jordan	Yes	3	1	2	0	3	Yes	NO	N/A	NO	Yes
Kuwait	Yes	2	0	2	2	0	Yes	NO	N/A	NO	NO
Lebanon	Yes	2	0	0	0	0	Yes	Yes	N/A	Yes	Yes
Libya	-	-	-	-	-	-	-	-	-	-	-
Oman	-	-	-	-	-	-	-	-	-	-	-
Qatar	Yes	4	0	4	N/A	3	Yes	NO	N/A	NO	Yes
Saudi Arabia	Yes	8	3	5	0	5	NO	NO	N/A	NO	NO
Sudan	Yes	4	2	4	0	4	Yes	Yes	Yes	Yes	Yes
Syria	-	-	-	-	-	-	-	-	-	-	-
UAE	Yes	8	2	7	0	8	Yes	NO	N/A	Yes	NO
Yemen	-	-	-	-	-	-	-	-	-	-	-
<b>Results</b>	<b>10</b>	<b>48</b>	<b>11</b>	<b>39</b>	<b>10</b>	<b>34</b>	<b>9 Yes 1 NO</b>	<b>Yes</b>	<b>3 offers</b>	<b>6 Yes 4 NO</b>	<b>6 Yes 4 NO</b>

**APPENDIX 3C**

**Action Plan for the evaluation of MID FPP Hosting Offers**

	<b>Action</b>	<b>Deliverable</b>	<b>Responsible</b>	<b>Timeline</b>
1	Setting-out the evaluation criteria	Evaluation criteria	Evaluation Committee	10/05/2016
2	Invite States to provide their hosting offers	State Letter	ICAO MID Office	10/05/2016
3	States provide in closed bid their hosting offers	Offers (closed bid)	States	20/06/2016
4	Evaluation of bids by the Evaluation Committee	Offers evaluation	Evaluation Committee	25/06/2016
5	Notify the selected State, in order to trigger the preparation for the hosting agreement that should be signed with ICAO TCB	State Letter	ICAO MID Office	30/06/2016
6	Presenting the results to the MAEP Board/3 meeting	MID FPP ProDoc, including the Host State and hosting offer	ICAO MID Office	01/09/2016 TBC

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***ATTACHMENT***

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