



INTERNATIONAL CIVIL AVIATION ORGANIZATION

MIDDLE EAST OFFICE

**REPORT OF THE FIRST JOINT COORDINATION
MEETING OF THE ICAO REDUCED VERTICAL SEPARATION
MINIMUM (RVSM) IMPLEMENTATION TASK FORCES
OF THE MIDDLE EAST AND ASIA REGIONS
(JCM-RVSM MID/ASIA)**

(Abu Dhabi, 19 20 October 2002)

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JCM-RVSM MID/ASIA/1
History of the Meeting

PART 1 HISTORY OF THE MEETING

1. MEETING VENUE

1.1 The first Joint Coordination Meeting of the ICAO Reduced Vertical Separation Minimum (RVSM) Implementation Task Forces of the Middle East and Asia Regions (JCM-RVSM MID/ASIA/1) for implementation of RVSM in the Bay of Bengal and Beyond was held at the conference room of the Hilton Hotel, Abu Dhabi, United Arab Emirates (UAE) from 19 to 20 October 2002. A preparation and planning meeting was held on 18 October.

2. OPENING

2.1. The meeting was officially opened by Mr. Khalifa Abu Jamhoo, Director, Administration and Finance from the UAE General Civil Aviation Authority (GCAA) on behalf of the Director General of the GCAA. In his opening address Mr. Abu Jamhour extended the warmest welcome

the first inter-regional coordination meeting on RVSM implementation between the MID and Asia Regions. He pointed out that the objective of the meeting is to ensure a safe, smooth and harmonised implementation of RVSM on 27 November 2003.

2.1.1 He emphasized the importance of harmonisation of procedures and implementation timescales which will ensure that airlines can operate in a seamless RVSM environment all the way from Europe to the Far East in a safe environment, thus reaping the benefits of RVSM.

2.1.2 He urged both regions to take up the challenge and not shy away from the task at hand and, notwithstanding its complexity we should not be daunted by it. Many States have accomplished this before us, and we can benefit from their experiences.

2.2 Mr. Ahmed Zerhouni, Regional Director of the ICAO Middle East Office, Cairo welcomed delegates to this first Joint Coordination Meeting. He thanked the Director General of the GCAA for hosting the meeting and providing excellent services and support.

2.2.1 He noted with satisfaction that implementation planning was progressing well in the Middle East and Asia Regions and was confident that the good work already accomplished would lead to implementation of RVSM as planned on 27 November 2003. This would result in a seamless RVSM environment from Asia through the Middle East to Europe on the major ATS trunk routes, which would provide significant benefits to users and ATS providers including increased airspace capacity, operational efficiency, significant cost saving and enhancement of flight safety. The convening of this inter-regional RVSM coordination meeting was an important step forward and would pave the way for a harmonized implementation process in which the collective sharing of experience and expertise would ensure a successful outcome.

3. ATTENDANCE

3.1 The meeting was attended by a total of 19 participants from 11 States (Australia, Bahrain, Egypt, Indonesia, I.R. Iran, Maldives, Oman, Pakistan, Singapore, United Arab Emirates and Yemen) and two International Organizations (IATA and IFALPA). The list of participants is at **Appendix A**.

4. OFFICERS AND SECRETARIAT

4.1 The meeting was jointly Chaired by Mr. Sabri Al Busaidy of Oman, Chairman of the Middle East RVSM Task Force and Mr. Sydney Maniam of Singapore, Chairman of the Asia/Pacific RVSM Task Force. Mr. Dhiraj Ramdoyal, Regional Officer, Air Traffic Management ICAO Middle East

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Office, Cairo and Mr. David Moores, Regional Officer Air Traffic Management, Asia/Pacific Office were joint Secretaries of the meeting and assisted by the Rapporteurs of the RVSM Task Forces ATC

Working Groups: Mr. Mohammed Abdullah Zainal of Bahrain and Mr. Greg Hood of Australia. The meeting was also supported by Mr. M R. Khonji, Deputy Regional Director, ICAO Middle East Office.

5. LANGUAGE

5.1 The meeting was conducted in English. The documentation was issued in English.

6. AGENDA

6.1 The following Agenda was adopted:

- | | |
|----------------|--|
| Agenda Item 1: | Operational considerations |
| Agenda Item 2: | Development of a common amendment proposal to the Regional SUPPs |
| Agenda item 3: | Safety and airspace monitoring |
| Agenda Item 4: | Other business |

7. ACTION AGREED

RVSM Implementation Strategy

7.1 The meeting agreed that the MID and ASIA Regions will implement RVSM based on the following strategy:

- a) In the MID Region, RVSM would be implemented within all FIRs/airspace forming part of the MID RVSM Implementation from FL290 to FL410 inclusive;
- b) Implementation of RVSM in the MID Region would be in an RNP 5 environment and interface with the Asia and AFI Region in an RNP 10 environment;
- c) In the Asia Region, RVSM will be implemented on EMARSSH routes in an RNP 10 Oceanic environment. States concerned will include other routes in the operational plan for RVSM implementation, as necessary.
- d) The date for implementation of RVSM in the MID and Asia Regions will be 27 November 2003. The exact time for the transition will be determined jointly by the RVSM Task Forces by March 2003;
- e) The Go/No-go decision for RVSM implementation will be made in August and September 2003 for the MID and Asia Regions respectively; and
- f) At this point of the planning process, no transition area between the two regions was identified, except the interface with Kabul FIR.

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Radio Communication Failure Procedures

- 7.2 The meeting agreed that:
- a) Radio communication failure (RCF) procedures in the MID region will be aligned with procedures applicable in the European RVSM airspace;
 - b) When operating in t meteorological conditions (IMC), aircraft will maintain the last assigned speed and level or minimum flight altitude for a period of 20 minutes instead of 7 minutes; and
 - c) The ICAO Secretariat will develop an amendment to the Regional Supplementary Procedures (SUPP Doc 7030) to reflect the changes relating to RVSM operations.

Letters of Agreement (LOAs)

- 7.3 The meeting agreed that:
- a) States concerned should ensure that all LOAs be signed at least one month prior to the implementation date. To this end, draft LOAs should be prepared as soon as possible in consultation with adjacent ACCs; and
 - b) The relevant ICAO Regional Offices concerned would assist in the coordination of the procedures, as necessary.

Weather Deviation Procedures

7.4 In the MID Region, weather deviation procedures will be applied in accordance with the provisions of the MID/ASIA Regional Supplementary Procedures and be included in the MID Region ATC Manual. However, States at interface area(s) would review and harmonize their procedures with the procedures applicable in the Asia Region.

JCM-RVSM MID/ASIA/1
Report on Agenda Item 1

PART II REPORT ON AGENDA ITEMS

REPORT ON AGENDA ITEM 1: OPERATIONAL CONSIDERATIONS

1.1 The meeting was presented with an update on progress for the implementation of the revised ATS route structure Asia to Middle East and Europe, South-of-the-Himalayas (EMARSSH) in the Asia Region by the EMARSSH Task Force, as reported to the thirteenth meeting of the Asia/Pacific Planning and Implementation Regional Group (APANPIRG/13) (9-13 September 2002).

1.1.1 The meeting noted that the eighth meeting of the EMARSSH Task Force (August 2002) had finalised all outstanding issues associated with the EMARSSH project in order to achieve the target implementation date of AIRAC 28 November 2002. These issues included AIS matters, route structure and coordination between adjacent FIRs/States. In regard to safety management requirements, Airservices Australia who was undertaking the safety analysis for the EMARSSH routes was expected to complete the task prior to 31 October 2002.

1.1.2 The meeting was pleased to note that civil/military coordination had been successful in the majority of cases. With the cooperation of some military authorities, military airspace would be made available for civil use for limited periods to facilitate civil traffic flow during specified periods.

1.1.3 It was noted that this project was one of the largest ATS route structure changes undertaken covering three ICAO regions. A key element for successful implementation was the timely provision of aeronautical data to the aviation industry, especially to charting companies and aircraft database providers to ensure that databases necessary for aircraft navigation systems were made available to airlines.

1.1.4 The meeting noted that for the Kabul FIR, agreement had been reached with the military authority, the Coalition Forces, the control authority for Afghanistan airspace, for two of the EMARSSH RNP 10 routes to be implemented. These routes are L750 (formerly V838) and a new route N644, which replaced V888, were implemented on 5 September 2002. Additional EMARSSH routes were under regular review by the Coalition Forces and would be implemented when conditions permitted.

1.1.5 In respect to transition from the old to the new route structure, this was a one time event that would be accomplished by ATC giving specific route instructions to a specific intersection for each individual flight. All transitions were to be completed by 0230 UTC.

1.2 The meeting was presented with an update on RVSM implementation in the Asia Region where RVSM had been progressively implemented in accordance with the RVSM Implementation Plan established by the APANPIRG. RVSM was first introduced on the major route systems in the Pacific Region oceanic airspace on 24 February 2000 followed by Phase 1 of the new South China Sea route structure on 21 February 2002. Phase 2 is scheduled for 31 October 2002.

1.2.1 Following successful implementation of RVSM in the Pacific and South China Seas area, the next step in the Asia/Pacific Plan was to implement RVSM on the EMARSSH routes in the Bay of Bengal and Beyond (within the ICAO Asia Region) scheduled for 27 November 2003. The meeting was reminded that in the Middle East Region, RVSM was being implemented in all FIRs/airspace of States participating in the MID RVSM Implementation Programme. Integration of the MID ATS routes with the EMARSSH routes at the FIR boundaries between the MID and Asia Regions had been finalized. Further, the meeting was advised that the MID route restructuring including RNP 5 routes/areas had been completed, and the implementation date harmonized with EMARSSH, i.e. 28 November 2002.

1.2.2 The meeting was informed that the RVSM Task Force had adopted the definition

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airspace in which RVSM will be implemented. The RVSM airspace will include the Bangkok, Chennai, Colombo, Delhi, Dhaka, Jakarta, Karachi, Katmandu, Kolkata (Calcutta), Kuala Lumpur, Lahore, Male, Mumbai and Yangon FIRs.

1.2.2 In regard to a question as to whether there were any outstanding issues that could lead to a delay in implementation of the EMARSSH routes in the Asia Region, the meeting was informed that no issues had been identified and smooth implementation was expected on 28 November 2002.

1.2.3 The meeting was further informed that RVSM planning for the EMARSSH routes was in the early stages in line with the implementation schedule. With the experience and lessons learnt from implementation of RVSM in other areas of the Asia/Pacific Region, the process was well established and the implementation date was realistic. One of the essential steps to harmonize inter-regional implementation is now being addressed at this meeting.

1.2.5 The meeting established a small review group under the Rapporteurs of the MID/ASIA RVSM ATC Working Groups to consider operational issues to be harmonized between the MID/Asia RVSM Implementation Plans. The group reviewed the RVSM Task Forces task lists and aligned the major milestones for the implementation of RVSM as shown in **Appendix B**. The group entered into preliminary discussions concerning publishing of AIC/AIP SUPPs and subsequent trigger NOTAMs to ensure dates and content were comparable as shown in **Appendices C-1 & C-2**.

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Report on Agenda Item 2

REPORT ON AGENDA ITEM 2: DEVELOPMENT OF A COMMON AMENDMENT PROPOSAL FOR THE REGIONAL SUPPS

2.1 The meeting recognized that there was a need to review the Regional Supplementary Procedures (Doc 7030) for MID/ASIA for large weather deviation and loss of communication procedures. In this regard, the meeting was advised that a study undertaken by the Middle East Central Monitoring Agency (MECMA) had shown that large weather deviations were rare occurrences in the Middle East. The meeting was advised that the ICAO Secretariat was reviewing weather deviation procedures with a view to harmonizing global procedures, and this matter would be pursued by the respective ICAO Regional Offices.

2.2 In regard to loss of communication procedures, the meeting was informed that the eighteenth meeting of the Informal Pacific ATC Coordination Group (IPACG/18) (8-11 October 2002) had developed a proposed amendment to the Pacific SUPPs for oceanic loss of communication procedures. This would be progressed by IPACG/18 and in due course by ICAO. It was intended to develop a common global procedure for oceanic airspace. Procedures relevant to other airspaces such as continental and radar environments would need to be addressed.

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Report on Agenda Item 3

REPORT ON AGENDA ITEM 3: SAFETY AND AIRSPACE MANAGEMENT

3.1 The meeting was briefed on progress being made by MECMA to address airspace safety management requirements. At the MID RVSM TF/2 meeting, traffic samples for the period 20 January 2001 to 20 February 2002, which were used for the readiness assessment, had shown that 80 percent of aircraft movements already had RVSM approval as the majority of aircraft operated in the European RVSM airspace. A target of 90 percent RVSM aircraft approval (same as the Asia Region) was required for implementation, and this was expected to be readily achieved.

3.2 In regard to a question as to why a passing frequency rate of 1.25 had been adopted in the MID RVSM airspace when the global rate was 2.5, the meeting was informed that as part of the

be safely accommodated, and that route systems remain in place for long periods of time. Additionally, it should be noted that, in view of the numbers of aircraft navigating with GNSS input and certified to RNP 0.3, no trade-off against the lateral overlap probability (P_y) is possible. Accordingly, a passing frequency rate of 1.25, half the global rate, was adopted for the MID RVSM airspace. Monitoring requirements had been fixed in March 2002. The airspace safety issues were progressing well.

3.3 The meeting was provided information on the establishment of an airspace safety monitoring structure for the Asia/Pacific Region. It was recognized by the twelfth meeting of APANPIRG that as a matter of priority, there was a need to provide a robust and functional management team to ensure that the services of a regional monitoring agency were provided to all regional airspace and safety authorities, air traffic service providers and aircraft operators, in an efficient and cost effective manner. In this regard, APANPIRG/12 established the Asia/Pacific Airspace Safety and Monitoring Task Force (APASM/TF) to develop a plan for the establishment of a regional airspace safety monitoring agency (RASMA).

3.4 The APASM/TF presented the RASMA plan to the APANPIRG/13 meeting (September 2002) with the following objectives:

- a) Provide data collection and analysis services to States to enable them to meet their airspace safety management requirements;
- b) Contribute to meeting the quantitative safety goal for Asia Pacific Region;
- c) Contribute to fostering the safe implementation of CNS/ATM initiatives within the Asia Pacific Region; and
- d) Provide a regional comprehensive airspace safety monitoring structure.

3.5 In respect to funding the RASMA, APANPIRG/13 considered that funding arrangements were of significant importance. In this regard, it was recognized that the cost of some airspace safety monitoring services could be recovered either directly or indirectly from the users of the airspace. The region has, on a collective basis, already been successful in establishing aircraft height-keep

that resources to meet airspace safety monitoring and assessment obligations would be provided through a user charges levy based on a unit cost per flight in the Asia/Pacific Region. Operating charges to airlines would be based on each aircraft movement originating from/within the Asia/Pacific Region. The provision of safety monitoring services through RASMA would need to be cost effective to the industry as a whole.

3.6 The APASM/TF is continuing its work and the final plan was expected to be presented to the APANPIRG/14 in August 2003. Monitoring requirements for RVSM implementation in the Asia Region will continue to be provided by the Asia/Pacific Approvals Registry and Monitoring Organization (APARMO) operated by the United States Federal Aviation Administration (FAA). The meeting was advised that the FAA would not be able to continue to support the monitoring services in

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Report on Agenda Item 3

the Asia Region in the longer term. In this regard, APANPIRG/13 endorsed the transfer of responsibility to Aeronautical Radio of Thailand (AEROTHAI), who was presently working with the FAA to take over the RVSM monitoring requirements for the Asia Region.

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Report on Agenda Item 4

REPORT ON AGENDA ITEM 4: OTHER BUSINESS

4.1 The meeting recognized that this first Joint Coordination Meeting had provided an excellent forum to progress the coordination and harmonization of the RVSM Implementation Plans for the Middle East and Asia Regions. Delegates had appreciated the unique characteristics of the two regions that were significantly different in nature. Therefore, it was essential that both RVSM Task Forces understood each others problems and worked closely together to achieve the objective of a seamless RVSM implementation and operation from Asia to Europe through the Middle East Region. There was much to learn and benefit from the experiences of both groups, and the meeting appreciated the spirit of cooperation and goodwill that prevailed in the discussions. All parties recognized the enormous task they had undertaken and good progress was being made, which would lead to successful implementation on 27 November 2003.

4.2 The meeting recognized that a second meeting should be held prior to the Go/No-go date for the Middle East of 27 August 2003. It was therefore agreed to hold the meeting in the Asia Region in early June 2003 at a date and venue to be determined. The arrangements for the meeting will be made by the ICAO Asia/Pacific Office, Bangkok.

5. CLOSING OF THE MEETING

5.1 Mr. Ahmed Zerhouni, Regional Director, ICAO Middle East Office expressed his appreciation to participants for the excellent results achieved at this first Joint MID/ASIA RVSM Task Force Coordination Meeting, and emphasized the importance of holding such meetings to ensure the smooth and harmonized implementation of major airspace projects affecting adjacent regions. In this regard, he informed the meeting that a similar inter-face meeting would be held between the Middle East and European Regions to harmonize procedures for the implementation of RVSM in the Middle East.

5.2 Mr. Sydney Maniam, Chairman of the Asia/Pacific RVSM Task Force, on behalf of his colleagues from Asia/Pacific, expressed his sincere appreciation to the Director General of the GCAA and in particular to Mr. Riis Johansen, Director, Air Navigation Services and staff of the GCAA for their excellent support and warm hospitality extended to the participants during the meeting. He also thanked Mr. Zerhouni for his presence and participation, which underlined the importance of the work being progressed by the RVSM Task Forces of the two regions.

5.3 Mr. Sabri Al Busaidy, Chairman of the Middle East RVSM Task Force in closing the meeting thanked participants for the professional manner in which the meeting was conducted. The harmonization process was now well established and will significantly contribute to the successful implementation of RVSM between Asia, the Middle East and Europe. On behalf of his colleagues from the Middle East, he appreciated being able to work with colleagues from the Asia/Pacific and strong ties had been established. He also thanked the staff of GCAA who had supported this meeting as well as the preceding MID RVSM Task Force meeting.

INTERNATIONAL CIVIL AVIATION ORGANIZATION

JOINT CO-ORDINATION MEETING RVSM MID/ASIA

(Abu Dhabi, 19 20 October 2002)

LIST OF PARTICIPANTS

10 December 2002

NAME	TITLE & ADDRESS
AUSTRALIA Mr. Greg Hood	Flight Information Region Manager Brisbane Centre Chairman ATC Working Group Locked Bag 747 Eagle Farm QLD 4009 AUSTRALIA TEL: +61 7 3866 3331 MOB: +61 418 123 145 FAX: +61 7 3866 3226 E-mail: greg.hood@airservices.gov.au
BAHRAIN Mr. Mohammed Abdullah Zainal	Head Standards Licensing & Developments Civil Aviation Affairs P.O. Box 586 Manama BAHRAIN TEL: +973 321 028 FAX: +973 321 029 E-mail: zainalmohammed@hotmail.com
EGYPT Mr. Ibrahim Mahmoud Negm	Aviation Security Administrator Egyptian Ministry of Civil Aviation Cairo EGYPT TEL +20 2 268 5237 (also fax) MOB: +20 2 010 677 2053 HOME: +20 2 272 2104 FAX: +20 2 266 5435 E-mail: enegm@hotmail.com
INDONESIA Mr. Yusfandri Gona	Performance & Flight Test Section Head Directorate General Air Communication DEPHUB, Gd. Karya Lt. 22 Jln Medan Merdeka Barat No. 8 Jakarta, 10110 INDONESIA TEL: +62 21 350 6663 FAX +62 21 350 6664 E-mail: yugo_gona2001@yahoo.com

NAME	TITLE & ADDRESS
<p>IRAN, ISLAMIC REPUBLIC OF</p> <p>Mr. Asadollah Rastegarfar</p>	<p>Chief of Inspection & Uniformity (RVSM Program Manager) Mehrabad International Airport ATS Department Tehran IRAN TEL: +009 821 452 8010 FAX: +009 821 452 7194 E-mail: a_rastegarfar@yahoo.com</p>
<p>Mr. Seyed Alaeddin Sadraei</p>	<p>Civil Aviation Advisor & Senior Expert in Flight Operations Mehrabad International Airport Civil Aviation Organization Tehran IRAN TEL: +009 821 9102 2167 FAX: +009 821 603 6552 E-mail: s.a.sadraei@iricao.org</p>
<p>MALDIVES</p> <p>Mr. Mohamed Solih</p>	<p>Chief Air Traffic Services Maldives Airports Company Limited ATM & Safety Section Air Traffic Control Centre Male International Airport Hulhule REPUBLIC OF MALDIVES TEL +960 313 308 MOB: +960 774 154 RES: +960 313 700 FAX: +960 313 258 E-mail: atcc@airports.com.mv</p>
<p>OMAN</p> <p>Mr. Sabri Al-Busaidy</p>	<p>DMS Manager P.O. Box 1 CPO Seeb Muscat SULTANATE OF OMAN TEL: +968 519 317 MOB: +968 935 9415 FAX: +968 519 939 E-mail: sabri@dgcam.com.om</p>
<p>Mr. Abdullah Nasser Al-Harthy Chairman of MIDANPIRG</p>	<p>Supervisor ATM Box 1 Code 111 CPO Seeb Muscat SULTANATE OF OMAN TEL: +968 519 201 MOB: +968 947 6806 FAX: +968 519 939 Email: abdullah_nasser@dgcam.com</p>

NAME	TITLE & ADDRESS
<p>PAKISTAN</p> <p>Mr. Rashid Rasheed Zuberi</p>	<p>Corporate Manager Air Traffic Services HQ Civil Aviation Authority OPS. Directorate Headquarters Civil Aviation Authority Jinnah International Airport Karachi PAKISTAN TEL: +92 21 924 8134 RES: +92 21 567 7351 FAX: +92 21 924 8758 E-mail: rrz_63@hotmail.com</p>
<p>SINGAPORE</p> <p>Mr. Sydney Maniam</p>	<p>Head (Standards) Civil Aviation Authority of Singapore Singapore Changi Airport P.O. Box 1 SINGAPORE, 918141 TEL: +65 654 124 56 FAX: +65 654 565 16 E-mail: sydney_maniam@caas.gov.sg</p>
<p>Mr. Rosly Saad</p>	<p>Deputy Chief of SATCC Singapore Air Traffic Control Centre 60 Biggin Hill SINGAPORE, 509950 TEL: +65 654 124 30 FAX: +65 654 562 52 E-mail: rosly_saad@caas.gov.sg</p>
<p>UNITED ARAB EMIRATES</p> <p>Mr. Dean Fernandes</p>	<p>Flight Data Analyst & Software Specialist, MECMA General Civil Aviation Authority P.O. Box 6558 Abu Dhabi UNITED ARAB EMIRATES TEL: +971 2 4054 230 FAX: +971 2 4054 316 E-mail: dean.fernandes@gcaa-uae.gov.ae</p>
<p>Mr. Riis Johansen</p>	<p>Director, Air Navigation Services & MECMA General Civil Aviation Authority P.O. Box 6558 Abu Dhabi UNITED ARAB EMIRATES TEL: +971 2 4054 216 FAX: +971 2 4054 316 E-mail: atmuae@emirates.net.ae</p>

NAME	TITLE & ADDRESS
<p>YEMEN</p> <p>Mr. Saleh Al-Theeb</p>	<p>Director General Air Traffic Services P.O. Box 10820 REPUBLIC OF YEMEN TEL: +967 344 675 MOB: +967 73 715 516 MOB: +967 71 272 556 FAX: +967 344 048 Email: SAN1ANS@hotmail.com</p>
<p>ORGANISATIONS</p> <p>IATA</p> <p>Mr. Jehad Faqir</p>	<p>Director, Operations and Infrastructure Middle East International Air Transport Association P.O. Box 940587 Amman 11194 JORDAN TEL: +962 6 569 8728, 562 4521 Mobile: +962 79 5966 559 FAX: +962 6 560 4548 SITA: AMMEBXB E-mail: faqirj@iata.org</p>
	<p>Avionics Engineer Syrian Arab Airlines Technical Department Engineering, Sec. Damascus SYRIA TEL: +963 11 532 3634 E-mail: rama34@excite.com</p>
<p>Mr. Ayman Zakaria</p>	<p>Head of Instrument & Electrical Syrian Arab Airlines Damascus International Airport Technical Department Engineering, Sec. Damascus SYRIA TEL: +963 11 332 0312 E-mail: azakaria@mail.sy</p>
<p>IFALPA</p> <p>Capt. Kok Seong NG</p>	<p>Captain 47 Limau Grove SINGAPORE 467841 TEL: +65 6444 9425 MOB: +65 9030 8669 E-mail: kokseong@singnet.com.sg</p>

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NAME	TITLE & ADDRESS
<p>ICAO</p> <p>ASIA/PACIFIC REGIONAL OFFICE</p> <p>Mr. David J. Moores</p>	<p>Regional Officer Air Traffic Management Asia/Pacific Regional Office 252/1 Wiphawadi-Rangsit Road Latyao, Chatuchak Bangkok 10900 THAILAND TEL: +66 2 537 8189 EXT. 151 FAX: +66 2 537 8199 E-mail: dmoores@bangkok.icao.int</p>
<p>MIDDLE EAST REGIONAL OFFICE</p> <p>Mr. A. Zerhouni</p>	<p>Regional Director ICAO Middle East Regional Office CAIRO TEL: +20 2 267 4840/41/45/46 FAX: +20 2 267 4843 SITA: CAICAYA E-mail: azerhouni@cairo.icao.int</p>
<p>Mr. Mohamed R. M. Khonji</p>	<p>Deputy Regional Director ICAO Middle East Regional Office CAIRO TEL: +20 2 267 4840/41/45/46 FAX: +20 2 267 4843 SITA: CAICAYA E-mail: mkhonji@cairo.icao.int</p>
<p>Mr. Dhiraj Ramdoyal</p>	<p>Regional Officer Air Traffic Management ICAO Middle East Regional Office CAIRO TEL: +20 2 267 4840/41/45/46 FAX: +20 2 267 4843 Mob: +20 1 01 820 339 SITA: CAICAYA E-mail: dramdoyal@cairo.icao.int dramdoyal@hotmail.com</p>

APPENDIX B				
ID	DESCRIPTION	START	FINISH	RESOURCE NAMES
1	Identify Operational Need	18-Jan-02	31-Oct-02	
2	Agree operational concept for Bay of Bengal and beyond traffic flow	18-Jan-02	27-Nov-02	ATC/WG, RVSM Task Force
3	Conduct Cost Benefits Analysis	18-Jan-02	31-Mar-03	
4	Conduct preliminary benefit cost analysis	18-Jan-02	31-Mar-03	SAM WG
5	Finalize benefit cost analysis	18-Jan-02	27-Sep-03	SAM WG
6	Safety Assessment	18-Jan-02	31-Oct-03	
7	Review available summary data (non-compliant aircraft, aberrant aircraft etc)	18-Jan-02	31-Oct-03	SAM/WG, RVSM Task Force
8	Examine history of height keeping errors related to ATC clearances and assess possible RVSM impact	18-Jan-02	31-Oct-03	SAM/WG, RVSM Task Force
9	Confirm RVSM risk model assumptions/parameters are consistent with airspace where RVSM is to be applied	18-Jan-02	31-Oct-03	SAM/WG, RVSM Task Force
10	Ensure transferability of aircraft data from other Regions (ie liaison with MECMA)	18-Jan-02	31-Oct-03	SAM/WG, APARMO, RVSM Task Force
11	Collect weather and turbulence data for analysis - this should include Himalayan standing wave analysis	18-Jan-02	31-Oct-03	SAM/WG, RVSM Task Force
12	Report large height deviations to APARMO or equivalent monitoring agency (including level assignment errors)	18-Jan-02	Ongoing	ATS Providers, Users
13	Feasibility Analysis	18-Jan-02	31-Oct-03	
14	Examine the operational factors and workload associated with implementation	18-Jan-02	31-Oct-03	ATC/WG, RVSM Task Force
15	Determination of Requirements (airborne & ground systems)	18-Jan-02	31-May-03	
16	Determine need for additional GMUs	18-Jan-02	31-May-03	SAM/WG, RVSM Task Force
17	States assess the impact of RVSM implementation on controller automation systems (e.g., equipment) and plan for upgrades/modifications	18-Jan-02	31-May-03	States
18	Aircraft & Operator Approval Requirements	18-Jan-02	27-Nov-03	
19	Promulgate the operational approval process	18-Jan-02	Ongoing	OPS/AIR/WG, RVSM Task Force
20	Notify States when significant changes occur to RVSM documentation	18-Jan-02	Ongoing	OPS/AIR/WG, RVSM Task Force
21	Perform Rulemaking (if required)	18-Jan-02	27-Nov-03	
22	Recommend State airspace regulatory documentation	18-Jan-02	27-Nov-03	States
23	Perform Necessary Industry & International Co-ordination	18-Jan-02	27-Nov-03	
24	Notify States when significant changes occur to RVSM documentation	18-Jan-02	27-Nov-03	RVSM Task Force

ID	DESCRIPTION	START	FINISH	RESOURCE NAMES
25	Check MID RVSM Manual against APAC Regional Guidance Material	18-Jan-02	21-Jun-03	ICAO, RVSM Task Force Chairperson
26	Process Doc 7030 amendment and assess need for chart amendments related to RVSM	18-Jan-02	27-Nov-03	ICAO Regional Office
27	Publish advance AIC	18-Jan-02	28-Nov-03	States
28	Publish AIP Supplement containing RVSM policy/procedures	18-Jan-02	27-Sep-03	States
29	Review inter-facility coordination procedures	18-Jan-02	31-Oct-03	States
30	Finalize changes to Letters of Agreement	18-Jan-02	31-Oct-03	States
31	Approval of Aircraft & Operators	18-Jan-02	27-Sep-03	
32	Establish approved operations readiness targets	18-Jan-02	31-Mar-03	IATA, ATC/WG, RVSM Task Force
33	Assess readiness	18-Jan-02	27-Sep-03	IATA, OPS/AIR/WG
34	Develop Pilot & ATC Procedures	18-Jan-02	27-Nov-03	
35	Review application of tactical offset procedure to mitigate the effects of wake turbulence and TCAS alerts	18-Jan-02	TBD	ATC/WG, OPS/AIR/WG, RVSM Task Force
36	Review weather and contingency procedures for applicability under RVSM	18-Jan-02	TBD	OPS/AIR/WG, ATC/WG, RVSM Task Force
37	Publish appropriate ATC policy & procedures on RVSM website	18-Jan-02	Ongoing	RVSM Task Force
38	Identify transition areas and procedures	18-Jan-02	TBD	States, ATC/WG
39	Conduct simulations	18-Jan-02	TBD	States, ATC/WG
40	Report on simulation activity	18-Jan-02	TBD	ATC/WG, RVSM Task Force
41	Continue to recommend that RVSM operators adopt TCAS V.7	18-Jan-02	1-Jan-03	OPS/AIR/WG, RVSM Task Force
42	Develop procedures for handling non-compliant aircraft (inc ferry & mntce) in ATS documentation	18-Jan-02	27-Sep-03	OPS/AIR/WG, ATC/WG, RVSM Task Force
43	Develop mutually acceptable ATC procedures for non-approved State acft to transit RVSM airspace	18-Jan-02	27-Sep-03	ATC/WG, RVSM Task Force
44	Consider procedures for suspension of RVSM	18-Jan-02	27-Sep-03	ATC/WG, RVSM Task Force
45	Liaise with State defense authorities regarding "due regard" military operations	18-Jan-02	27-Sep-03	States
46	Pilot & ATC Training	18-Jan-02	27-Nov-03	
47	Provide ATC training documentation to States based on past experience	18-Jan-02	Ongoing	ICAO, RVSM Task Force Chairperson
48	Conduct local RVSM training for air traffic controllers, pilots and dispatchers	18-Jan-02	27-Nov-03	States, ATC/WG
49	Perform System Verificiation	18-Jan-02	TBD	

ID	DESCRIPTION	START	FINISH	RESOURCE NAMES
50	Height keeping performance monitoring needed to undertake safety analysis	15-Dec-02	15-Mar-03	APARMO and SAM/WG, RVSM Task Force
51	Provide representative traffic movement data to APARMO for period 15 December 2002 - 15 January 2003	15-Dec-02	15-Jan-03	States
52	Undertake initial safety analysis	15-Dec-02	15-Mar-03	SAM/WG, RVSM Task Force
53	Prepare/maintain regional status report detailing RVSM implementation plans	15-Mar-03	Ongoing	RVSM Task Force
54	Final Implementation Decision	18-Jan-02	27-Sep-03	RVSM Task Force
55	Review aircraft altitude-keeping performance and operational errors	15-Mar-03	27-Sep-03	SAM/WG, OPS/AIR/WG
56	ATS State documentation complete	15-Mar-03	27-Sep-03	States
57	Publish Trigger NOTAM	15-Mar-03	17-Nov-03	States
58	Complete readiness assessment	15-Mar-03	27-Sep-03	APARMO
59	Complete safety analysis	15-Mar-03	27-Sep-03	RVSM Task Force
60	Declare Initial Operational Capability	18-Jan-02	27-Nov-03	APARMO and SAM/WG, RVSM Task Force
61	Monitor System Performance	27-Nov-03	27-Nov-04	
62	Perform Follow-On Monitoring	27-Nov-03	Ongoing	OPS/AIR/WG, SAM/WG
63	Declare Full Operational Capability	27-Nov-03	27-Nov-04	RVSM Task Force
64	Task Force/14 and 15 (Bangkok)	3-Jun-02	7-Jun-02	RVSM Task Force (Bay of Bengal and South China Sea)
65	Task Force/16 (Bangkok)	23-Sep-02	25-Sep-02	RVSM Task Force (South China Sea)
66	Joint Interface Meeting (Abu Dhabi)	19-Oct-02	20-Oct-02	MID/APAC Task Forces
67	Seminar/5 (Bangkok)	15-Jan-03	17-Jan-03	RVSM Task Force (Bay of Bengal)
68	Task Force/17 (Bangkok)	20-Jan-03	24-Jan-03	RVSM Task Force (Bay of Bengal)
69	MID RVSM TF/7 (Abu Dhabi)	23-Feb-03	26-Feb-03	MID TF ONLY
70	Task Force/18 (Viet Nam) - 1 year Western Pacific/South China Sea and 90 day Phase II Review	26-Mar-03	28-Mar-03	RVSM Task Force
71	MID RVSM TF/8 (Abu Dhabi)	25-May-03	28-May-03	MID TF ONLY - DATES SUBJECT TO CHANGE
72	Task Force/19 and (Location TBD)	9-Jun-03	11-Jun-03	RVSM Task Force (Bay of Bengal) - SUBJECT TO CHANGE
73	Joint Interface Meeting (Location TBD)	12-Jun-03	13-Jun-03	MID/APAC Task Forces
74	MID RVSM TF/9 (Abu Dhabi)	24-Aug-03	27-Sep-03	MID TF ONLY

ID	DESCRIPTION	START	FINISH	RESOURCE NAMES
75	Task Force/20 (Location TBD) - GO/NO GO DECISION	24-Sep-03	26-Sep-03	RVSM Task Force
76	MID RVSM TF/10 (Abu Dhabi)	19-Oct-03	22-Oct-03	MID TF ONLY
77	Task Force/21 (Location TBD) - 90 day Bay of Bengal/South of the Himalayas Follow Up	2-Feb-04	4-Feb-04	RVSM Task Force
78	Task Force/22 (Location TBD) - 1 year Bay of Bengal/South of the Himalayas Follow Up	1-Nov-04	2-Nov-04	RVSM Task Force

JCM-RVSM MID/ASIA/1
Appendix C-1 to the Report

**ADVANCE RVSM IMPLEMENTATION NOTAM OR AIC
FOR MID/ASIA RVSM IMPLEMENTATION**

Note: Draft AIC applicable to the MID Region is at Appendix C-2

RECOMMENDATION: ATS Service Providers planning to implement RVSM on 27 November 2003 should publish an advance RVSM implementation NOTAM or AIC based on the example below no later than 28 November 2002.

ADVANCE NOTAM OR AIC TO BE PUBLISHED 28 November 2002.

This (NOTAM or AIC) serves as Notice of Intent to implement RVSM in the _____ FIR on 27 November 2003.

Reduced Vertical Separation Minimum (RVSM) is vertical separation of aircraft by 1,000 ft above FL 290. By 1 October 2003, operators should have received RVSM aircraft (airworthiness) and operational approval from the appropriate State authority. Operator/aircraft approval by 1 October 2003 will enable air traffic to plan for orderly RVSM implementation.

Starting 27 November 2003, only RVSM compliant aircraft will be cleared to operate in the _____ FIR between FLs 290 and 410 (inclusive). Aircraft that are not RVSM compliant (e.g., ferry and maintenance flights) will only be cleared to operate in the _____ FIR between FLs 290 and 410 (inclusive) after prior coordination with the appropriate Center. 2,000 ft vertical separation will be applied to such aircraft. _____ Center contacts will be published on web sites and in follow-up NOTAMS.

RVSM will be implemented in the _____ FIR in accordance with ICAO regional agreements. ICAO recommends that State authorities and operators use FAA Interim Guidance 91-RVSM (as amended), Joint Airworthiness Authorities Temporary Guidance Leaflet 6 or equivalent State documents as the basis for approving aircraft and operator programs for RVSM. Current information and RVSM approval documents, including revisions, can be found on the web site maintained by the FAA on behalf of the ICAO Asia/Pacific RVSM Implementation Group and on individual State web sites. To access the FAA RVSM web site, type:

<http://www.faa.gov/ats/ato/rvsm1.htm>

The RVSM Documentation section of the FAA website contains guidance on aircraft/operator approval. Operators must begin coordination with the appropriate State authority as soon as possible to ensure that they are approved to begin RVSM operations on 27 November 2003.

For questions on the aircraft and operator approval process, the following contacts may be used:

ICAO:

David Moores: Ph 66-2-537-8189; fax 66-2-537-8199; dmoores@icao.bangkok.int

IATA Singapore

Dave Behrens: Ph 65-239-7267 fax 65-536-6267; behrensd@iata.org

Neil Jonasson: Ph 65-239-7262 fax: same as above; jonassonn@iata.org

**DRAFT TRIGGER NOTAM
FOR MID/ASIA RVSM IMPLMENTATION**

The following text to be inserted in Field E of trigger NOTAM and issued 10 days prior to implementation:

- E) TRIGGER NOTAM (name of State/authority) AIRAC AIP SUP (reference number),
EFFECTIVE XXXX (TBA) UTC 27 NOV 2003, REDUCED VERTICAL SEPARATION MINIMA WILL BE IMPLEMENTED IN THE MIDDLE EAST AND BAY OF BENGAL REGIONS

DRAFT AERONAUTICAL INFORMATION CIRCULAR (AIC)

IMPLEMENTATION OF REDUCED VERTICAL SEPARATION MINIMA

Effective date: 27 November 2003.

Type: Permanent.

Appendix 3 - A

This AIC serves as Notice of Intent to implement 2003.

Reduced Vertical Separation Minimum (RVSM) is vertical separation of aircraft by 1,000 ft above FL 290. By 27 September 2003, operators should have received RVSM aircraft (airworthiness) and operational approval from the appropriate State authority. Operator/aircraft approval by 27 September 2003 will enable air traffic services (ATS) to plan for orderly RVSM implementation.

Starting 27 November 2003, only RVSM compliant aircraft will be cleared FIR between FLs 290 and 410 (inclusive). Aircraft that are not RVSM compliant (e.g., ferry and (inclusive) after prior coordination with the appropriate Center. 2,000 ft vertical separation will be follow-up NOTAMS.

gional agreements. ICAO recommends that State authorities and operators use FAA Interim Guidance 91-RVSM (as amended); Joint Airworthiness Authorities (JAA) Temporary Guidance Leaflet 6 (TGL 6) or equivalent State documents as the basis for approving aircraft and operator programs for RVSM.

The Middle East Region has established the Middle East Central Monitoring Agency for implementation of RVSM (MECMA), which would host the database of all information regarding the RVSM approval process. Current information and RVSM approval documents, including revisions, can be found on the website maintained by the FAA, Eurocontrol, MECMA and on individual State websites.

To access the FAA, Eurocontrol and MECMA RVSM websites, type:

<http://www.faa.gov/ats/ato/rvsm1.htm>

<http://www.eur-rvs.com>

<http://www.mecma.com>

The RVSM Documentation section of the FAA, Eurocontrol websites contain guidance on aircraft/operator approval. Operators must begin coordination with the appropriate State authority as soon as possible to ensure that they are approved to begin RVSM operations on 27 November 2003.

For questions on the aircraft and operator approval process, the following contacts may be used:

MECMA:

MECMA : Tel : 971-2-405-4339; fax : 971-2-449-1599; e-mail : traffic@mecma.com

CAA