INTERNATIONAL CIVIL AVIATION ORGANIZATION

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

MIDANPIRG/12

(Amman, Jordan 17-21 October 2010)

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

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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 3
6. Agenda 3
7. Conclusions and Decisions – Definition 3-4
8. List of Conclusions and Decisions 4-7
9. List of Participants 8-25

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

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 ..... 4-1/4-5
Appendix 4A

Report on Agenda Item 5.1 ..... 5.1-1/5.1-5
Appendix 5.1A - 5.1E

Report on Agenda Item 5.2 ..... 5.2-1/5.2-25
Appendix 5.2A - 5.2L

Report on Agenda Item 5.3 ..... 5.3-1/5.3-12
Appendix 5.3A - 5.3I

Report on Agenda Item 5.4 ..... 5.4-1/5.4-8
Appendix 5.4A - 5.4G

Report on Agenda Item 5.5 ..... 5.5-1/5.5-15
Appendix 5.5A - 5.5U

Report on Agenda Item 5.6 ..... 5.6-1/5.6-9
Appendix 5.6A - 5.6E

Report on Agenda Item 5.7 ..... 5.7-1/5.7-2
Appendix 5.7A

Report on Agenda Item 6.1 ..... 6.1-1/6.1-3
Appendix 6.1A –6.1K

Report on Agenda Item 6.2 ..... 6.2-1/6.2-11
Appendix 6.2A & 6.2B

Report on Agenda Item 7 7-1
Appendix 7A & 7B

Report on Agenda Item 8 8-1

PART I - HISTORY OF THE MEETING

1. PLACE AND DURATION

1.1 The Twelfth Meeting of the Middle East Air Navigation Planning and Implementation Regional Group (MIDANPIRG/12) was hosted by the Civil Aviation Regulatory Commission (CARC) of Jordan at the Le Royal Hotel in Amman, Jordan, from 17 to 21 October 2010.

2. OPENING

2.1 The meeting was opened by Captain. Suleiman Obeidat, Chief Commissioner and Chief Executive Officer, CARC, Jordan, who extended a warm welcome to all participants to the MIDANPIRG/12 and wished them a pleasant stay in Jordan. He thanked ICAO for its efforts in fostering the implementation of Middle East (MID) Regional Air Navigation Plan (ANP) and arranging this meeting in Jordan and restated Jordan's commitment to support the ICAO MID Regional Office and MIDANPIRG activities.

2.2 Captain Obeidat mentioned that the MID Region is becoming one of the fastest growing aviation markets in the world, making its airspace one of the busiest and most complex in the world. The increase in air traffic, appears to be a challenge for air traffic controllers, and thus for MIDANPIRG. He added that, ATC should cope with the increasing challenges, resolving the region's airspace safety, security, capacity, efficiency and environmental challenges and further enhancing regional cooperation and utilizing the latest technologies, becomes a must. Captain Obeidat, further highlighted that challenges poses greater needs for maintaining the continuous improvement of the MID Air Navigation Plan, facilitating the implementation of safety standards of air navigation systems and services, and tackling deficiencies in the air navigation field. In conclusion he indicated that the outcome of the MIDANPIRG/12 meeting will contribute to the development of CNS/ATM in the region and sustain the advancement of a more coherent, efficient, harmonized and safer ATM services.

2.3 Mr. Mohamed Khonji, Regional Director, ICAO Middle East (MID) Regional Office welcomed all the participants to Amman. He expressed ICAO's sincere gratitude and appreciation to the Government of Jordan, the Civil Aviation Regulatory Commission (CARC), Jordan and especially to Capt. Suleiman Obeidat, Chief Commissioner and Chief Executive Officer, CARC and also Mr. Mohammed Amin M. Al-Quran, Air Navigation Services Commissioner for hosting this important meeting in Amman and for the generous hospitality for all the arrangements made for the ICAO staff and all participants. He pointed out that CARC Jordan had hosted also the MSG/2 meeting in Amman last March 2010; that Jordan has always being supporting the ICAO MID Regional Office and MIDANPIRG activities and played an important and positive role in the MID Region.

2.4 Mr. Khonji also thanked the States that had hosted and will host some of MID Regional activities during the last and future periods. He encouraged the States to continue their support to the ICAO MID Regional Office and MIDANPIRG by hosting more meetings, giving examples of the already two e.g. the MIDRMA Board and the MIDANPIRG Steering Group (MSG) meetings that are hosted by their Member States on rotation basis.

2.5 Mr. Khonji highlighted that MIDANPIRG has matured, transforming the MID Region into a more developed active Region over the fifteen years of its existence. Because of its location as crossroads between three major continents (Africa, Asia and Europe), the MID Region plays an important role and contributes toward enhancing safety and efficiency of air navigation.

2.6 Mr. Khonji also briefly talked about the future plans to convene Regional Aviation Safety Groups for the MID (RASG-MID) that will serve as a regional cooperative forum integrating global, regional, sub-regional, national and industry efforts in continuing to enhance aviation safety in the MID Region. He also mentioned that, the First DGCA meeting for the MID (DGCA-MID/1) will be held from 22 to 24 March 2011 in Abu-Dhabi, UAE, in order to set up the priorities for the Region and address at the highest level the policy matters and implementation issues regarding aviation safety, efficiency and security.

2.7 Mr. Khonji welcomed and introduced the new Chairman of MIDANPIRG and MSG, Mr. Hamad Alaufi, Director AIS, General Authority of Civil Aviation (GACA), Saudi Arabia who also thanked CARC and extended and a warm welcome to all participants to MIDANPIRG/12 meeting.

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

3. ATTENDANCE

3.1 The meeting was attended by a total of seventy six (76) participants, which included experts from twelve (12) States (Bahrain, Egypt, Iraq, Iran (Islamic Republic of), Israel, Jordan, Kuwait, Lebanon, Oman, Qatar, Saudi Arabia and U.A.E.) and four (4) International Organizations (CANSO, IATA, IFALPA and Jeppesen). The list of participants is at pages 8-25.

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. J. Faqir	-	Deputy Regional Director (DEPRD)
Mrs. N. Abdel Hady	-	Regional Officer, Aerodrome and Ground Aids (AGA)
Mr. M. Smaoui	-	Regional Officer, Air Navigation Services/Aeronautical Information Management (ANS/AIM)
Mr. R. A. Gulam	-	Regional Officer, Communications, Navigation and Surveillance (CNS)
Mr. Saud Al Adhoobi	-	Regional Officer, Air Traffic Management and Search and Rescue (ATM/SAR)

4.2 The meeting was also supported by Mr. Greg Brock, Rregional Officer Meteorology (MET) from the ICAO EUR/NAT Office, Paris and Mr. Hindupur Sudarshan, Regional Programme Officer from the Air Navigation Bureau of ICAO Headquarters in Montreal.

5. LANGUAGE

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

6. AGENDA

6.1 The following Agenda was adopted:

Agenda Item 1: Adoption of the Provisional Agenda

Agenda Item 2: Follow-up on the outcome of MIDANPIRG/11 Meeting

- 2.1 Review of action taken by the ANC on MIDANPIRG/11 Report
- 2.2 Review status of MIDANPIRG/11 Conclusions and Decisions

Agenda Item 3: Global, Inter and Intra-Regional Activities

Agenda Item 4: Increasing the Efficiency of MIDANPIRG

Agenda Item 5: Performance Framework for Regional Air Navigation Planning and Implementation

- 5.1 AOP
- 5.2 ATM/SAR
- 5.3 AIS/MAP
- 5.4 CNS
- 5.5 CNS/ATM
- 5.6 MET
- 5.7 Traffic Forecasting

Agenda Item 6: Air Navigation Deficiencies and Safety Matters

- 6.1 Air Navigation Deficiencies
- 6.2 Air Navigation Safety

Agenda Item 7: Future Work Programme

Agenda Item 8: 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

8. LIST OF CONCLUSIONS AND DECISIONS

CONC.12/1: *ESTABLISHMENT OF RASGS –CONSEQUENT REVISION TO TOR OF MIDANPIRG*

CONC. 12/2: *INCREASING THE EFFICIENCY OF THE MIDANPIRG SUBSIDIARY BODIES*

CONC. 12/3: *UPDATE OF THE MIDANPIRG PROCEDURAL HANDBOOK*

CONC. 12/4: *REQUIREMENT FOR ICAO GUIDANCE ON AERODROME OPERATIONAL MANAGEMENT PROCEDURES*

DEC. 12/5: *ESTABLISHMENT OF AERODROME CERTIFICATION IMPLEMENTATION TASK FORCE*

DEC. 12/6: *SURVEY ON AERODROME EMERGENCY PLAN AND EMERGENCY OPERATION CENTRE*

CONC. 12/7: *RUNWAY SAFETY*

CONC. 12/8: *QUALITY OF AERODROME AERONAUTICAL DATA AND COORDINATION BETWEEN AERODROME OPERATORS AND AIS*

CONC. 12/9: *RNAV 5 IMPLEMENTATION IN THE MID REGION*

CONC. 12/10: *ALLOCATION OF FIVE-LETTER-NAME CODES IN THE MID REGION*

CONC. 12/11: *MEMBERSHIP OF THE MIDRMA*

CONC. 12/12: *MIDRMA FUNDING MECHANISM*

CONC. 12/13: *MIDRMA STAFFING*

DEC. 12/14: *MID RVSM SCRUTINY GROUP*

CONC. 12/15: *AIRCRAFT WITHOUT CONFIRMED RVSM APPROVAL STATUS*

CONC. 12/16: *MID RVSM SAFETY OBJECTIVES*

CONC. 12/17: *MID REGION HEIGHT-KEEPING MONITORING STRATEGY*

CONC. 12/18: *MID RVSM SMR 2012*

DEC. 12/19:	*RVSM IMPLEMENTATION WITHIN BAGHDAD FIR*
CONC. 12/20:	*FDPS SSRCA REQUIRED FUNCTIONALITY*
CONC. 12/21:	*MID STRATEGY ON SSR CODE ALLOCATION ISSUES*
CONC 12/22:	*SURVEY ON THE PROVISION OF SAR IN THE MID REGION*
CONC. 12/23:	*SAR POINT OF CONTACT (SPOC) AND 406MHZ BEACON*
DEC. 12/24:	*DISSOLVE THE SAR AD-HOC WORKING GROUP (AWG)*
CONC. 12/25:	*CIVIL/MILITARY COOPERATION*
CONC. 12/26:	*UNCOORDINATED FLIGHTS OVER THE RED SEA AREA*
CONC. 12/27:	*IMPROVEMENT OF THE ADHERENCE TO THE AIRAC SYSTEM*
CONC. 12/28:	*eTOD CHECKLIST*
CONC. 12/29:	*eTOD AWARENESS CAMPAIGNS*
DEC. 12/30:	*DISSOLUTION OF THE eTOD WORKING GROUP*
CONC. 12/31:	*AWARENESS CAMPAIGNS AND TRAINING PROGRAMMES ON QMS*
DEC 12/32:	*TERMS OF REFERENCE OF THE QMS IMPLEMENTATION ACTION GROUP*
DEC.12/33:	*TERMS OF REFERENCE OF THE AIS AUTOMATION ACTION GROUP*
CONC.12/34:	*TRANSITION FROM AIS TO AIM*
DEC. 12/35:	*PLANNING FOR THE TRANSITION FROM AIS TO AIM*
CONC. 12/36:	*MID AIM SEMINAR*
DEC. 12/37:	*TERMS OF REFERENCE OF THE AIS/MAP TASK FORCE*
CONC. 12/38:	*POSTING OF AMHS PLANS IN AMC*
CONC. 12/39:	*MID IP NETWORK SURVEY*
CONC.12/40:	*USE OF PUBLIC INTERNET IN THE MID REGION*
DEC. 12/41:	*REVISED NAME AND TOR OF THE IPS WG*
DEC. 12/42:	*DISSOLVE THE AD-HOC ACTION GROUP FOR THE SUPPORT OF AERONAUTICAL FREQUENCY BANDS*

CONC. 12/43:	*SUPPORT ICAO POSITION FOR WRC-12*
CONC. 12/44:	*UPDATING THE AFTN/CIDIN DIRECTORY*
CONC. 12/45:	*MID SURVEILLANCE WORKSHOP*
CONC. 12/46:	*EXCHANGE OF SURVEILLANCE DATA*
CONC. 12/47:	*MID REGION PERFORMANCE METRICS*
CONC. 12/48:	*DATA COLLECTION FOR MID REGION PERFORMANCE METRICS*
DEC. 12/49:	*REVIEW OF THE MID AIR NAVIGATION PLAN (ANP)*
DEC. 12/50:	*TERMS OF REFERENCE OF THE INFPL STUDY GROUP*
CONC. 12/51:	*INFPL IMPLEMENTATION DIFFICULTIES*
CONC. 12/52:	*ICAO NEW FLIGHT PLAN FORMAT IMPLEMENTATION*
CONC. 12/53:	*QUESTIONNAIRE ON THE STATUS OF INFPL IMPLEMENTATION*
CONC. 12/54:	*STRATEGY FOR THE IMPLEMENTATION OF INFPL*
CONC. 12/55:	*INFPL IMPLEMENTATION PLANS AND PROGRESS REPORT*
CONC. 12/56:	*STRATEGY FOR THE IMPLEMENTATION OF GNSS IN THE MID REGION*
CONC. 12/57:	*MID REGION PBN IMPLEMENTATION STRATEGY AND PLAN*
CONC. 12/58:	*PBN IMPLEMENTATION PROGRESS REPORT*
DEC. 12/59:	*TERMS OF REFERENCE OF THE PBN/GNSS TASK FORCE*
DEC. 12/60:	*LIST OF TASK FOR PBN/GNSS TASK FORCE*
CONC. 12/61:	*IMPLEMENTATION OF CONTINUOUS DESCENT OPERATIONS*
DEC. 12/62:	*DISSOLVE MID-FIT*
CONC. 12/63:	*ADOPTION OF GOLD*
CONC. 12/64:	*TRAINING FOR THE NEW WAFS FORECASTS*

CONC. 12/65:	*FINALIZED SIGMET TEST PROCEDURES AND CONDUCTING OF REGULAR SIGMET TESTS IN THE MID REGION*
CONC. 12/66:	*SIGMET GUIDE FOR THE MID REGION*
CONC. 12/67:	*IMPROVING OPMET DATA IN THE MID REGION*
CONC. 12/68:	*HARMONIZATION OF PROCEDURES FOR OPMET DATA ISSUANCE*
CONC. 12/69:	*ACTIVATION AND PROPOSED MEETING OF THE MID OPMET BULLETIN MANAGEMENT GROUP*
CONC. 12/70:	*REGIONAL SURVEY ON THE IMPLEMENTATION OF MET SERVICES AND FACILITIES*
CONC. 12/71:	*FACILITATING THE IMPLEMENTATION OF QMS FOR MET IN THE MID REGION*
DEC.12/72:	*VOLCANIC ASH CONTINGENCY PLAN FOR THE MID REGION*
CONC 12/73:	*REVIEW OF PART VI (MET) OF THE MID AIR NAVIGATION PLAN VOLUME II (FASID)*
CONC. 12/74:	*UPDATED TRAFFIC FORECASTING REQUIREMENTS IN THE MID REGION*
CONC.12/75:	*ELIMINATION OF AIR NAVIGATION DEFICIENCIES IN THE MID REGION*
DEC. 12/76:	*DISSOLUTION OF THE AIR NAVIGATION SAFETY SUB-GROUP*
CONC. 12/77:	*ATS SAFETY MANAGEMENT*
CONC. 12/78:	*USE OF THE ENGLISH LANGUAGE AND STANDARD ICAO PHRASEOLOGY*
CONC. 12/79:	*SURVEY ON THE STATUS OF IMPLEMENTATION OF ENGLISH LANGUAGE PROFICIENCY (ELP) IN THE MID REGION*
CONC. 12/80:	*ESTABLISHMENT OF MID REGIONAL SAFETY OVERSIGHT ORGANIZATION (RSOO)*

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MIDANPIRG/12
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MIDANPIRG/12
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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.

REPORT ON AGENDA ITEM 2: FOLLOW-UP ON THE OUTCOME OF MIDANPIRG/11 MEETING

2.1 REVIEW OF ACTION TAKEN BY THE ANC ON THE REPORT OF MIDANPIRG/11

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 Eleventh Meeting of MIDANPIRG held in Cairo, Egypt from 9 to 13 February 2009. 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 in **Appendix 2.1A** to the Report on Agenda Item 2.1.

2.1.2 While noting with concern the unsatisfactory provision of data by States pertaining to traffic, RVSM approvals, altitude deviation reports and coordination failure reports, the Commission opined that the recommendation of MIDANPIRG for the inclusion of provisions related to mandatory reporting of data in Annex 6 and Annex 11 would not resolve this issue (Conclusion 11/20 refers). The Commission requested the Secretariat to increase the awareness of importance of provision of data to the Regional Monitoring Agency (RMA) by States. In addition, as the establishment of a monitoring programme and operation of RMA is a requirement as per provisions in Annex 11, any State not complying with timely and satisfactory submission of data to RMA will need to be reflected in the MID air navigation systems (ANS) deficiency list.

2.1.3 The Meeting noted that the Commission endorsed Conclusion 11/41 requesting ICAO to review the current provisions of Annex 15 — Aeronautical Information Services, Chapter 6 and Appendix 4 related to aeronautical information regulation and control (AIRAC) by replacing the words “significant” and “major” changes by a comprehensive list of changes, and noted that the subject is already covered under Amendment 36 to Annex 15 with an applicability date of 2010.

2.1.4 The Commission noted that MIDANPIRG reviewed and endorsed the MID Region electronic terrain and obstacle data (eTOD) Implementation Strategy (Conclusion 11/43 refers).

2.1.5 On the subject of protection of the aeronautical frequency spectrum, the Commission recognized the ongoing contribution of the MID Region in addressing this issue. However, as the frequency bands allocated to aviation use are highly attractive to commercial users, the Commission reiterated the need for the civil aviation community to continue to remain vigilant in safeguarding aeronautical interest (Conclusion 11/56 refers).

2.1.6 Referring to Conclusions 11/70 and 11/71 regarding the adoption of regional and national performance frameworks for air navigation systems respectively, the Commission welcomed the approach and confirmed the need for MIDANPIRG to take into account user expectations in the development of performance framework forms.

2.1.7 The Commission congratulated MIDANPIRG for taking proactive action in terms of urging States (Conclusion 11/84 refers) to establish Quality Management System (QMS) for the provision of meteorological service for international air navigation in anticipation of a new standard for QMS to be incorporated in Amendment 75Annex 3.

2.1.8 The Meeting thanked the ANC for their valuable guidance on various activities of the MIDANPIRG and that it would be taken into account in the development of ongoing work programme of the Region.

MIDANPIRG/12
Appendix 2.1A to the Report on Agenda Item 2.1

IMPLEMENTATION OF SELECTED CONCLUSIONS/DECISIONS OF MIDANPIRG/11MEETING — ACTION PLAN —

Conc/Dec --- Strategic Objectives*	Title of Conclusion/ Decision	Text of Conclusion/Decision	Proposed Follow-up	Responsibility	Deliverable	Action taken by ANC	Reporting/ Completion Date
C 11/10 **A**	**DEVELOPMENT OF RUNWAY INCURSION PREVENTION PROGRAMME AT MID AERODROMES**	That, each MID State provide the MID Regional Office with the following information, not later than, 30 August 2009: a) status of development and implementation of runway incursion programme and if not yet done so, prepare a detailed action plan for each International aerodrome, to fulfil relevant ICAO requirements contained at Annex 14 Volume I and relevant ICAO specifications; b) advise if ICAO assistance is required; and c) AOP Sub-Group to review information collected on the status of development of runway incursion prevention programme for further course of actions.	Coordination with States	ICAO MID Office States AOP SG	State letter Action Plan AOP SG/7 Report	Noted	July 2009 November 2009 December 2009

Conc/Dec --- Strategic Objectives*	Title of Conclusion/ Decision	Text of Conclusion/Decision	Proposed Follow-up	Responsibility	Deliverable	Action taken by ANC	Reporting/ Completion Date
C 11/13 **D**	MID BASIC ANP AND FASID (DOC 9708)	That, a) further to the approval of the proposal for amendment MID Basic ANP 08/05-AOP, the ICAO MID Regional Office, on behalf of MIDANPIRG, initiate all necessary amendment proposals to the MID Basic ANP and FASID, prior to MIDANPIRG/12, in order to update the AIS, AOP, ATM, CNS and MET Tables; and	Process amendment proposals to the MID Basic ANP and FASID.	ICAO MID office	Amendment proposal issued Amendment proposal approved and incorporated in the final version of Doc 9708	Noted	June 2009 March 2010
		b) ICAO allocates sufficient resources and higher priority for the publication of Doc 9708 in English and Arabic versions, incorporating all approved amendments.	Prepare an issue form	ICAO MID Office	Issue form	Noted	Completed
			Finalize and publish the approved version of Doc 9708	ICAO HQ ANB/CNS/ AIRS	Publication of Doc 9708 in English and Arabic versions.	Noted that the issue would be considered during the priority board meeting and in the meantime a working version of the regional plan with updates as applicable is available on the ICAO NET.	2010

Conc/Dec --- Strategic Objectives*	Title of Conclusion/ Decision	Text of Conclusion/Decision	Proposed Follow-up	Responsibility	Deliverable	Action taken by ANC	Reporting/ Completion Date
C 11/16 **D**	MID ATS ROUTE CATALOGUE	That, in order to support the process of ATS route development in the MID Region, including the keeping of a record of ATS routes proposed for development and facilitating follow- up on the actions pertaining to the routes' development: a) the MID ATS Route Catalogue is adopted as at Appendix **5.2C** to the Report on Agenda Item 5.2; and b) MID States and concerned International Organizations are urged to periodically review the Catalogue, note developments and take action as applicable.	Adoption of ATS route catalogue Take action as indicated in catalogue	MIDANPIRG States ICAO International organizations	ATS Route catalogue Inputs from States and international organizations	Noted	Completed Ongoing

Conc/Dec --- Strategic Objectives*	Title of Conclusion/ Decision	Text of Conclusion/Decision	Proposed Follow-up	Responsibility	Deliverable	Action taken by ANC	Reporting/ Completion Date
C 11/20 **D**	ICAO PROVISIONS RELATED TO MANDATORY REPORTING OF DATA TO THE RMAS	That, taking into consideration the unsatisfactory level of reporting of data by States to the RMAs, ICAO consider to include provisions related to mandatory reporting of data (list of RVSM approved aircraft, Altitude Deviation Reports and Coordination Failure Reports) in Annex 6 and Annex 11, as appropriate.	Prepare an issue form Follow-up with ICAO HQ	ICAO MID Office ICAO HQ ANB/ATM	Issue form Appropriate provisions in Annexes 6 and 11 related to mandatory reporting of data	Noted that inclusion of provisions related to mandatory reporting of data in Annex 6 and Annex 11, would not resolve this issue. In the short term, requested the Secretariat to increase the awareness of importance of provision of data to RMA by States. In the long term, as the establishment of a monitoring programme and operation of RMA is a requirement as per provisions in Annex 11 and Doc 9574 any State not complying with timely and satisfactory submission of data to RMA will need to be reflected in the MID ANS deficiency list.	Completed Ongoing

Conc/Dec --- Strategic Objectives*	Title of Conclusion/ Decision	Text of Conclusion/Decision	Proposed Follow-up	Responsibility	Deliverable	Action taken by ANC	Reporting/ Completion Date
C 11/25 **D**	MEASURES TO ADDRESS NON-SYSTEM SSR CODE ASSIGNMENT PROBLEMS	That, in order to address those SSR code assignment problems that are not typically the Code Allocation Plan (CAP) system problems: a) MID States are urged to undertake necessary coordination with adjacent States/FIRs to address identified SSR code assignment problems or potential problems with such adjacent FIRs; and b) in cases where identified code assignment conflicts are beyond the ability of States' bilateral or multilateral initiatives to address, the ICAO MID Regional Office be notified as soon as practical, in order to take necessary action.	Coordination with States	States	Optimally managed SSR Code assignments	Noted	Ongoing

Conc/Dec --- Strategic Objectives*	Title of Conclusion/ Decision	Text of Conclusion/Decision	Proposed Follow-up	Responsibility	Deliverable	Action taken by ANC	Reporting/ Completion Date
C 11/31 **E**	406 MHZ BEACONS	That, in order to continue receiving beyond 1 February 2009, the Cospas-Sarsat services that are currently available to owners and users of 121.5/243 Mhz ELTs, and to further benefit from the added services available to owners and users of 406MHz beacons, MID States that have not done so are urged to: a) require ELT owners and users of 121.5/243 Mhz ELTs to upgrade to 406 Mhz ELTs as soon as possible, and register their 406 Mhz ELTs in the International 406 Mhz Registration Database (IBRD); and b) designate to the Cospas-Sarsat Secretariat, an IBRD focal point and request Cospas-Sarsat for access to the IBRD in order to benefit from the services available.	Follow-up with States	ICAO MID Office States States	State letter Beacon upgrades and registration Focal points	Noted	Completed Ongoing July 2009

Conc/Dec --- Strategic Objectives*	Title of Conclusion/ Decision	Text of Conclusion/Decision	Proposed Follow-up	Responsibility	Deliverable	Action taken by ANC	Reporting/ Completion Date
C 11/36 **D**	**ICAO LANGUAGE PROFICIENCY**	That, in order to expedite the process of implementation of the ICAO Language Proficiency requirements, MID States that have not already done so are urged to: a) ensure that all stakeholders (pilots, controllers, language teachers, regulators, etc.) are familiar with the ICAO language proficiency requirements; b) adopt/incorporate the ICAO language proficiency requirements (Amendment 164 to Annex 1) into national legislation; c) establish a plan to coordinate administrative and training matters (testing, number of personnel to be trained, training centres, duration of training, etc.); d) develop/select test(s) to meet ICAO language proficiency requirements; e) assess current language proficiency level of controllers and pilots, according to the ICAO rating scale;	Follow-up with States	ICAO MID Office ICAO HQ/ ANB/FLS	Adopt ICAO language proficiency requirements	Noted ICAO HQ is releasing a State letter to obtain updates to implementation of the ICAO language Proficiency requirements	Ongoing June 2009

Conc/Dec --- Strategic Objectives*	Title of Conclusion/ Decision	Text of Conclusion/Decision	Proposed Follow-up	Responsibility	Deliverable	Action taken by ANC	Reporting/ Completion Date
C 11/36 (cont'd) **D**	**ICAO LANGUAGE PROFICIENCY**	f) develop language training packages designed to reduce the gap between current language proficiency level and ICAO Level 4; g) develop language training package to maintain language proficiency and a schedule of language refresher training; h) review recruitment and selection procedures and consider a minimum of at least ICAO level 3 in language proficiency before entry to professional training programmes; and i) present reports to ICAO on progress achieved in preparing for implementation of ICAO language proficiency requirements, on regular basis.					

Conc/Dec --- Strategic Objectives*	Title of Conclusion/ Decision	Text of Conclusion/Decision	Proposed Follow-up	Responsibility	Deliverable	Action taken by ANC	Reporting/ Completion Date
C 11/41 **D**	**ANNEX 15 PROVISIONS RELATED TO AIRAC**	That, ICAO consider to review the current provisions of Annex 15 Chapter 6 and Appendix 4 related to AIRAC by replacing the words "significant" and "major" changes, which lead to different interpretations, by a comprehensive list of changes which necessitate the use of the AIRAC System.	Prepare an issue form Follow-up with ICAO HQ	ICAO MID Office ICAO HQ ANB/MET/ AIM	Issue form Appropriate provisions in Annex 15	Noted Noted and that the subject is already covered under Amendment 36 to Annex 15 with an applicability date of 2010 , which will be reviewed by the Commission in due course.	Completed December 2009
C 11/43 **D**	**MID REGION eTOD IMPLEMENTATION STRATEGY**	That, the MID Region eTOD implementation Strategy is adopted as at **Appendix 5.3B** to the Report on Agenda Item 5.3.	Follow-up the eTOD implementation status	ICAO MID Office ICAO HQ ANB/MET/ AIM	Updated eTOD status of implementation	Noted The timeframe for eTOD implementation will be reviewed as a part of Amendment 36 to Annex 15.	July 2009 December 2009

Conc/Dec --- Strategic Objectives*	Title of Conclusion/ Decision	Text of Conclusion/Decision	Proposed Follow-up	Responsibility	Deliverable	Action taken by ANC	Reporting/ Completion Date
C 11/46 **D**	**IMPLEMENTATION OF QMS WITHIN MID STATES' AISs**	That, in accordance with Annex 15 provisions, States, that have not yet done so, are urged to implement/complete the implementation of a QMS within their AIS, before **December 2010**, based on the methodology for the implementation of QMS at **Appendix 5.3F** to the Report on Agenda Item 5.3.	Follow-up with concerned States	ICAO MID Office States	State Letter Feed back from States	Noted and supported the initiative	July 2009 Dec 2010
C 11/47 **A**	**LICENSING OF THE AIS/MAP PERSONNEL**	That, recognizing the importance of AIS and the safety implication of the non-provision of timely and high quality aeronautical information, and taking into consideration Annex 15 requirements for the evaluation and maintenance of the competence/skill of the AIS staff, States are encouraged to include in their national regulations provisions related to the licensing of the AIS/MAP personnel.	Coordination with States	ICAO MID Office	Licensing of personnel	Noted and emphasized that competency of AIM personnel is more important rather than licensing.	Ongoing

Conc/Dec --- Strategic Objectives*	Title of Conclusion/ Decision	Text of Conclusion/Decision	Proposed Follow-up	Responsibility	Deliverable	Action taken by ANC	Reporting/ Completion Date
C 11/53 **D**	**HARMONIZATION OF THE PUBLICATION OF LATITUDE AND LONGITUDE COORDINATES**	That, in order to prevent proliferation of the formats used in the publication of the geographical coordinates in form of Latitude and Longitude: a) States are urged to comply with the provisions of Annexes 4 and 15 related to the format and publication resolution of latitude and longitude; and b) ICAO consider the review and harmonization of the different provisions related to the subject contained in the different ICAO Annexes and documents.	Prepare and submit the Issue form Coordination with States Follow-up with States and ICAO HQ	ICAO MID Office ICAO MID Office ICAO HQ ANB/MET/ AIM	Issue form Feed back from States Appropriate provisions in relevant ICAO Annexes	Noted Noted and that format for publication of latitude and longitude coordinates is coherent in all Annexes and any differences that exist are because of different resolution requirements. However, the Secretariat will review the Annexes as appropriate and harmonize if necessary.	Completed December 2009 2010

Conc/Dec --- Strategic Objectives*	Title of Conclusion/ Decision	Text of Conclusion/Decision	Proposed Follow-up	Responsibility	Deliverable	Action taken by ANC	Reporting/ Completion Date
C 11/56 **D**	UPDATE AD HOC ACTION GROUP MEMBERS AND PARTICIPATE IN NATIONAL AND REGIONAL ACTIVITIES RELATED TO WRC-11	1.1 That, a) MID States that have not nominated experts to the ad hoc Action Group are requested to do so as soon as possible; b) the Terms of Reference (TOR) of the ad hoc Action Group be revised as in **Appendix 5.4C** to the report on Agenda Item 5.4; and c) Civil Aviation Authorities, aviation spectrum experts to participate in the national and regional level activities related to WRC-11 to support ICAO position for WRC-11.	Follow up with States Adopted Follow up with States	States States	Updated list of members Support to ICAO position at WRC 2011	Noted and requested the Secretary general to urge States to participate at various levels in different fora to provide support to the ICAO position.	July 2009 Nov 2011
C 11/59 **D**	FOLLOW-UP SPECIAL BAGHDAD FIR CO-ORDINATION MEETING (SBFCM)	That, Iraq take the lead and assign resources for the implementation of the SBFCM follow-up action plan in full coordination the ICAO MID Regional Office and concerned MID States.	Follow up with Iraq	Iraq	Assignment of resources	Noted	July 2009

Conc/Dec --- Strategic Objectives*	Title of Conclusion/ Decision	Text of Conclusion/Decision	Proposed Follow-up	Responsibility	Deliverable	Action taken by ANC	Reporting/ Completion Date
C 11/60 **D**	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; - the study group to follow the ICAO guidance for the implementation of Flight plan and Implementation check list in **Appendices 5.5B** and **5.5C** to the Report on Agenda Item 5.5; and b) implement the new ICAO model Flight Plan form by applicability date.	Coordination with the group Follow-up with States	ICAO MID Office States	Study Group Established New Flight Plan Implemented	Noted	Completed Nov 2012

Conc/Dec --- Strategic Objectives*	Title of Conclusion/ Decision	Text of Conclusion/Decision	Proposed Follow-up	Responsibility	Deliverable	Action taken by ANC	Reporting/ Completion Date
C 11/61 **D**	IFPS PROJECT SUPPORT	That, a) MID State that have not yet designated focal points to do so and send their contact details to ICAO MID Regional Office prior to 30 June 2009; b) the IFPS focal points participate in the finalization of the feasibility study led by Bahrain for the implementation of an IFPS in the MID Region; and c) ICAO MID Regional Office request additional support from EUROCONTROL with a view to benefit from their experience and expertise in the establishment of an IFPS, including development of a regulatory framework.	Coordination with States Follow up the progress on the finalization of the Study Coordination with EUROCONTROL	ICAO MID Office Bahrain ICAO MID Office	Designate focal points Feasibility study report Regulatory framework definition	Noted	July 2009 Jan 2010 2010

Conc/Dec --- Strategic Objectives*	Title of Conclusion/ Decision	Text of Conclusion/Decision	Proposed Follow-up	Responsibility	Deliverable	Action taken by ANC	Reporting/ Completion Date
C 11/70 **D**	REGIONAL PERFORMANCE FRAMEWORK	That, a) a regional performance framework be adopted on the basis of and alignment with the Global Air Navigation Plan, the Global ATM Operational Concept, and ICAO guidance material and planning tools. The performance framework should include the identification of regional performance objectives and completion of regional performance framework forms; and b) ALLPIRG/5 Conclusion 5/2: Implementation of Global Plan Initiatives (GPIs, be incorporated into the terms of reference of the MIDANPIRG subsidiary bodies).	Follow-up on conclusion Coordination with subgroups	ICAO CNS/ATM IC SG MIDANPIRG ICAO MID Office	Adoption of performance framework approach and regional performance objectives In corporation of GPIs in the TOR of subgroups	Noted and that MIDANPIRG is requested to take into account the user expectations in the development of performance framework forms.	Completed July 2009

Conc/Dec --- Strategic Objectives*	Title of Conclusion/ Decision	Text of Conclusion/Decision	Proposed Follow-up	Responsibility	Deliverable	Action taken by ANC	Reporting/ Completion Date
C 11/71 **D**	NATIONAL PERFORMANCE FRAMEWORK	That, MID States be invited to adopt a national performance framework on the basis of ICAO guidance material and ensure their alignment with the regional performance objectives, the Regional Air Navigation Plan and the Global ATM Operational Concept. The performance framework should include identification of national performance objectives and completion of national performance framework forms.	Follow up with States	ICAO MID Office	Adoption of National performance framework approach Development of national Performance Objectives Updated Regional performance objectives	Noted and that States are requested to take into account the user expectations in the development of performance framework forms.	Completed December 2009 Ongoing
C 11/74 **D**	PBN STATE IMPLEMENTATION PLAN	That, in order to give effect to Assembly Resolution A36-23: Performance based navigation global goals, MID States are urged to complete development of their individual State Implementation plans based on the regional PBN implementation plan by 30 September 2009 so that it may be reviewed by the ATM/SAR/AIS SG as part of the Regional agreement process.	Coordination with States	States	State Implementation Plans PBN Implementation	Noted and complimented MIDANPIRG for the initiative.	September 2009 Ongoing

Conc/Dec --- Strategic Objectives*	Title of Conclusion/ Decision	Text of Conclusion/Decision	Proposed Follow-up	Responsibility	Deliverable	Action taken by ANC	Reporting/ Completion Date
C 11/76 **D**	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, a) WAFC Provider States be invited to organize in 2010 a training seminar for the MID Region on the use of the new gridded WAFS forecasts for convective clouds, icing and turbulence; and b) WAFSOPSG be invited to consider alternative methods of provision of training to the States regarding the new gridded forecasts for turbulence, icing and cumulonimbus clouds, including electronic training packages, in order to ensure that a maximum number of WAFS users in the States would have access to the training.	Prepare and submit the Issue form Letter to WAFS Provider State Consideration of the proposal by the WAFSOPSG	ICAO MID Office ICAO HQ ANB/MET/ AIM ANB/MET/ AIM WAFSOPSG	Issue form sent to HQ Regional Seminar Computer based training programme and seminars, if appropriate	Supported and requested the Secretary General to call upon the WAFC Washington Provider State, in coordination with WMO, to organize the required workshop in 2010.	Completed December 2010 March 2010

Conc/Dec --- Strategic Objectives*	Title of Conclusion/ Decision	Text of Conclusion/Decision	Proposed Follow-up	Responsibility	Deliverable	Action taken by ANC	Reporting/ Completion Date
C 11/84 **A**	FOSTERING THE IMPLEMENTATION OF QMS FOR THE PROVISION OF METEOROLOGICAL SERVICE FOR INTERNATIONAL AIR NAVIGATION	That, a) The MID States that have not already done so, are urged to establish Quality Management System (QMS) for the provision of meteorological service for international air navigation; and	Follow-up with the States concerned	ICAO MID office States	State letter QMS for MET	Noted and congratulated MIDANPIRG for taking proactive action in terms of urging States to establish QMS for the provision of meteorological service in anticipation of new standard for QMS to be incorporated in Annex 3 effective 2010.	July 2009 Ongoing
		b) ICAO, in coordination with the WMO, be invited to organize a training event on the QMS for MET in the MID Region in 2009.	Coordination with WMO	ICAO HQ ANB/MET/ AIM	Letter to WMO	Noted that a SIP has been established by HQ.	Seminar to be held in December 2009

Conc/Dec --- Strategic Objectives*	Title of Conclusion/ Decision	Text of Conclusion/Decision	Proposed Follow-up	Responsibility	Deliverable	Action taken by ANC	Reporting/ Completion Date
C11/86 **A**	ELIMINATION OF AIR NAVIGATION DEFICIENCIES IN THE MID REGION	That, a) States 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; b) States and Users Organizations 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) States increase their efforts to overcome the delay in mitigating air navigation deficiencies identified by MIDANPIRG and explore ways and means to eliminate deficiencies;	Follow-up with States	States Users States	Action plans for elimination of deficiencies Feedback from users and States received through MANDD Elimination of deficiencies	Noted and acknowledge that the regional online database developed by MIDANPIRG would enable information to be current and formatted by State, type, deficiency, date, etc., and assist in speedy resolution of the deficiencies.	July 2009 Ongoing Ongoing

Conc/Dec --- Strategic Objectives*	Title of Conclusion/ Decision	Text of Conclusion/Decision	Proposed Follow-up	Responsibility	Deliverable	Action taken by ANC	Reporting/ Completion Date
C11/86 (cont'd) **A**	ELIMINATION OF AIR NAVIGATION DEFICIENCIES IN THE MID REGION	d) ICAO continue to provide assistance to States for the purpose of rectifying deficiencies; and when required, States request ICAO assistance through Technical Co-operation Programme, Special Implementation Projects (SIP) and/or other available mechanisms such as IFFAS; and	Coordination with ICAO HQ	ICAO MID Office	Assistance to States		Ongoing
		e) States are encouraged to seek support from regional and international organizations (i.e: ACAC, GCC, etc.) for the elimination of identified air navigation deficiencies.	Coordination with regional and international organizations	ICAO MID Office	Assistance to States		Ongoing

Conc/Dec --- Strategic Objectives*	Title of Conclusion/ Decision	Text of Conclusion/Decision	Proposed Follow-up	Responsibility	Deliverable	Action taken by ANC	Reporting/ Completion Date
Paras 8.2 and 8.3 **D**	NEED FOR RAN MEETING	The meeting was of the opinion that the DGCA meeting which is tentatively planned to be organized for the MID Region during the year 2010 could be a good forum to decide on the need to have a MID RAN meeting. However, it was emphasized that a MID RAN meeting should not be convened just for the sake of having a RAN meeting or because the last RAN meeting was convened some 12 years ago. Strong justifications would be needed. Further, the Secretariat explained the requirements for holding RAN meetings and indicated that such will have to be approved by ICAO Headquarters and the Council, as at present PIRGs suffice and are the best venue to discuss air navigation issues. Based on the above, the meting agreed that the ICAO Regional Director further study the issue in coordination with ICAO Headquarters.	Coordination with ICAO HQ	ICAO MID Office	RAN Meeting	Noted and emphasized that a RAN meeting should not be convened just for the sake of having a RAN meeting or because the last RAN meeting was convened a long time ago. Furthermore, these regional planning groups have become a reliable and mature mechanism for the management of regional plans. Also, the Assembly Resolution A36-13 specifically states that "RAN meetings shall be convened only to address issues which cannot be adequately addressed through PIRGs".	Not applicable

*** Note:** ICAO has established the following Strategic Objectives for the period 2005-2010: TBD: To be decided

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*.

REPORT ON AGENDA ITEM 2: FOLLOW-UP ON THE OUTCOME OF MIDANPIRG/11 MEETING

2.2 REVIEW STATUS OF MIDANPIRG/11 CONCLUSIONS AND DECISIONS

2.2.1 The meeting reviewed the progress made on the MIDANPIRG/11 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 as at **Appendix 2.2A** to the Report on Agenda Item 2.2.

2.2.2 The meeting noted that out of the 87 MIDANPIRG/12 Conclusions and Decisions appropriate action has been taken and 53 of the Conclusions and Decisions were closed/completed. However action on the remaining 34 Conclusions is still ongoing.

2.2.3 The meeting acknowledged that significant progress (61%) had been made by ICAO MID Regional Office and States in completing the required action on the MIDANPIRG/11 Conclusions and Decisions and recommended continued follow up action for completion of the remaining outstanding Conclusions as listed at **Appendix 2.2A** to the Report on Agenda Item 2.2.

MIDANPIRG/12
Appendix 2.2A to the Report on Agenda Item 2

FOLLOW-UP ACTION PLAN ON MIDANPIRG/11 CONCLUSIONS AND DECISIONS

CONCLUSIONS AND DECISIONS	FOLLOW-UP	TO BE INITIATED BY	DELIVERABLE	TARGET DATE	REMARKS
CONC. 11/1: FOLLOW UP ON MIDANPIRG CONCLUSIONS AND DECISIONS That, a) States send their updates related to the MIDANPIRG follow up action plan to the ICAO MID Regional Office on regular basis (at least once every six months); b) the MIDANPIRG subsidiary bodies review the appropriate actions/tasks of the MIDANPIRG follow up action plan and undertake necessary updates based on the feedback from States; and c) ICAO MID Regional Office post the MIDANPIRG follow up action plan on the ICAO MID website and ensure that it is maintained up-to-date.	Implement Conclusion	ICAO States Subsidiary Bodies ICAO	State Letter Updated Action Plan Updated Action Plan Updated follow up Action Plan posted on web	Every six months Every six months Every six months	Closed
DEC. 11/2: REVISED MIDANPIRG ORGANIZATIONAL STRUCTURE That, with a view to increase MIDANPIRG efficiency, MIDANPIRG Organizational Structure be updated as at **Appendix 4B** to the Report on Agenda Item 4.	Update the Procedural Hand Book and conduct the meetings of MIDANPIRG subsidiary bodies in accordance with the revised Structure	ICAO	Updated Procedural Handbook	Feb. 2009	Closed

CONCLUSIONS AND DECISIONS	FOLLOW-UP	TO BE INITIATED BY	DELIVERABLE	TARGET DATE	REMARKS
CONC. 11/3: INCREASING THE EFFICIENCY OF MIDANPIRG					
That, with a view to increase the efficiency of MIDANPIRG:	Implement the Conclusion	ICAO States	State Letter (Reminder)	Apr. 2009	Closed
a) States appoint an ICAO Focal Point Person(s) (ICAO-FPP) using the form at **Appendix 4E** to the Report on Agenda Item 4; who would:			List of ICAO FPP	Jun. 2009	Input received from 11 States
i) ensure the internal distribution of all ICAO MID Office correspondences related to MIDANPIRG activities and the follow-up within civil aviation administration;					
ii) follow up the ICAO MID Office postings of tentative schedule of meetings, MIDANPIRG follow up action plan, State Letters, working/information papers, reports of meetings, etc, on both the ICAO MID website and the MID Forum; and					
iii) ensure that required action and replies are communicated to ICAO MID Regional Office by the specified target dates.					
b) ICAO MID Regional Office copy all correspondences related to MIDANPIRG activities to the designated ICAO-FPP as appropriate.					

CONCLUSIONS AND DECISIONS	FOLLOW-UP	TO BE INITIATED BY	DELIVERABLE	TARGET DATE	REMARKS
CONC. 11/4: IMPROVING THE EFFICIENCY OF THE ICAO MID FORUM That, a) Bahrain in coordination with ICAO: i) explore ways and means for improving the efficiency of the ICAO MID Forum; and ii) investigate the possibility of using the ICAO MID Forum for the posting of AIS publications by States b) States are urged to make use and take full benefit of the ICAO MID Forum	Implement the Conclusion	ICAO Bahrain	Draft Feasibility Study Improved MID Forum with new Functionalities	Dec. 2009 Jun. 2010	Closed
DEC. 11/5: ADOPTION OF MIDANPIRG PROCEDURAL HANDBOOK, FOURTH EDITION – FEBRUARY 2009 That, the MIDANPIRG Procedural Handbook, Fourth Edition dated February 2009 is adopted.	Finalize the Procedural Handbook	ICAO	Fourth Edition of the Procedural Handbook	Feb. 2009	Closed

CONCLUSIONS AND DECISIONS	FOLLOW-UP	TO BE INITIATED BY	DELIVERABLE	TARGET DATE	REMARKS
CONC. 11/6: ACTION PLAN FOR THE IMPLEMENTATION OF CERTIFICATION OF AERODROMES IN THE MID REGION That, MID States provide the MID Regional Office with the following information, not later than, 30 June 2009: a) status of implementation of ICAO requirements in accordance with para. 1.4 of Annex 14 Volume I. and if not done so, prepare a detailed action plan for each International aerodrome, to fulfil relevant ICAO requirements;. b) advise if ICAO assistance is required; and c) AOP SG to review information collected on the status of implementation of certification of aerodromes for further course of actions.	Implementation of the Conclusion	MID Office States AOP SG	State Letter Action Plan AOP SG/7 Report	20 Mar. 2009 30 Jun. 2009 March 2010	Closed SL Ref. ME 3/56.4 – 09/279 dated 03 September 2009 SIP/AGA Seminar on certification of aerodromes and safety of aerodrome operations was conducted in Cairo from 01 to 04 March 2010.
CONC. 11/7: ACTION PLAN FOR THE ESTABLISHMENT OF STATE'S SAFETY PROGRAMME AND ACCEPTABLE LEVEL(S) OF SAFETY TO BE ACHIEVED That, MID States provide the MID Regional Office with the following information, not later than, 30 June 2009: a) status of implementation of ICAO requirements in accordance with Annex 14 Volume I, para. 1.5 relevant to establishment of State Safety Programme (SSP), if not yet done so, prepares a detailed action plan to fulfil relevant ICAO requirements; b) advise if ICAO assistance is required; and	Implementation of the Conclusion	MID Office States AOP SG	State Letter Action Plan AOP SG/7 Report	20 Mar. 2009 30 Jun. 2009 March 2010	Closed

CONCLUSIONS AND DECISIONS	FOLLOW-UP	TO BE INITIATED BY	DELIVERABLE	TARGET DATE	REMARKS
c) the AOP Sub-Group to review information collected on the status of establishment of State Safety Programme for aerodrome operations for further course of actions.					
CONC. 11/8: REPORTING OF AIRCRAFT ACCIDENTS AND INCIDENTS AT AERODROMES That, MID States, who have not yet done so, are urged to revise their existing national regulations and ensure compliance with Annex 13 provisions on Reporting of aircraft accidents and incidents at aerodromes.	Implementation of the Conclusion	States AOP SG	States ensure compliance with ICAO requirement on reporting aircraft Acc. & inc. AOP SG/7 Report	 March 2010	Closed
CONC. 11/9: ACTION PLAN FOR THE IMPLEMENTATION OF SAFETY MANAGEMENT SYSTEM ACCEPTABLE TO THE STATE AT EACH CERTIFIED AERODROME That, MID States provide the MID Regional Office with the following information, not later than, 30 June 2009: a) status of implementation of ICAO requirements in accordance with para. 1.5 of Annex 14 Volume I, relevant to the implementation of Safety Management System at certified Aerodromes and, if not yet done so, prepare a detailed action plan for each International Aerodrome, to fulfil relevant ICAO requirements; b) advise if ICAO assistance is required; and c) the AOP Sub-Group to review information collected on the status of implementation of safety management system at aerodromes for further course of actions.	Implementation of the Conclusion	MID Office States AOP SG	State Letter Action Plan AOP SG/7 Report	20 Mar. 2009 30 Jun. 2009 March 2010	Closed

CONCLUSIONS AND DECISIONS	FOLLOW-UP	TO BE INITIATED BY	DELIVERABLE	TARGET DATE	REMARKS
CONC. 11/10: DEVELOPMENT OF RUNWAY INCURSION PREVENTION PROGRAMME AT MID AERODROMES That, MID States provide *the* MID Regional Office with the following information, not later than, 30 August 2009: a) Status of development and implementation of "Runway incursion programme and if not yet done so, prepare a detailed action plan for each International aerodrome, to fulfil relevant ICAO requirements contained at Annex 14 Volume I and relevant ICAO specifications; b) advise if ICAO assistance is required; and c) AOP Sub-Group to review information collected on the status of development of runway incursion prevention programme for further course of actions.	Implementation of the Conclusion	MID Office States AOP SG	State Letter Action Plan AOP SG/7 Report	May 2009 Aug. 2009 March 2010	Closed
CONC. 11/11: ESTABLISHMENT OF "PAVEMENT SURFACE MAINTENANCE PROGRAMME" AND "CORRECTION PROGRAMME FOR THE REMOVAL OF RUBBER BUILD-UP ON RUNWAYS" IN THE MID REGION That, MID States provide the MID Regional Office with the following information, not later than, 30 August 2009: a) status of implementation of ICAO requirements in accordance with para.. 10.2 & 10.3 of Annex 14 Volume I. and if not yet done so, prepare a detailed action plan for each International aerodrome, to fulfil relevant ICAO requirement; b) Advise if ICAO assistance is required; and	Implementation of the Conclusion	MID Office States AOP SG	State Letter Action Plan AOP SG/7 Report	May 2009 Aug. 2009 March 2010	Closed

CONCLUSIONS AND DECISIONS	FOLLOW-UP	TO BE INITIATED BY	DELIVERABLE	TARGET DATE	REMARKS
c) the AOP Sub-Group to review information collected on the status of establishment of Pavement surface maintenance programme and correction programme for the removal of rubber build-up on runways at aerodromes for further course of actions.					
DEC. 11/12: FOLLOW UP ON THE OUTCOME OF THE MID AEP SEMINAR That, The AOP Sub-Group, States and ICAO consider the recommendations emanated from the MID Aerodrome Emergency Planning Seminar as contained at **Appendix 5.1 F** to the Report on Agenda Item 5.1 and take necessary actions as appropriate.	Review and take actions to implement the Conclusion	States, AOP SG/7 ICAO	AOP SG/7 Report Updated guidance material on removal of disabled aircraft and aerodrome epidemic emergency planning.	Dec. 2009 Ongoing	Ongoing Replaced and superseded by the Decision 12/6
CONC. 11/13: MID BASIC ANP AND FASID (DOC 9708) That, a) further to the approval of the Proposal for amendment of the MID Basic ANP 08/05-AOP, the ICAO MID Regional Office, on behalf of MIDANPIRG, initiate all necessary Amendment Proposals to the MID Basic ANP and FASID, prior to MIDANPIRG/12, in order to update the AIS, AOP, ATM, CNS and MET tables; and b) ICAO is to allocate sufficient resources and give high priority for the publication of Doc 9708 in English and Arabic languages, incorporating all approved Amendments.	Process Amendments Proposals to the MID Basic ANP and FASID Finalize and publish the approved version of Doc 9708	ICAO	Amendment Proposal issued Amendment Proposal approved and incorporated in the final version of Doc 9708 Final Version of Doc 9708 published	Mar. 2010 Sep. 2010	Closed All Amendments Proposals of MID BASIC ANP & FASID processed in accordance with established procedures were approved and incorporated

CONCLUSIONS AND DECISIONS	FOLLOW-UP	TO BE INITIATED BY	DELIVERABLE	TARGET DATE	REMARKS
DEC. 11/14: TERMS OF REFERENCE OF THE MID ATS ROUTE NETWORK TASK FORCE (ARN TF) That, the Terms of Reference of MID Region ATS Route Network Task Force is revised as at **Appendix 5.2A** to the Report on Agenda Item 5.2.	- Development of routes - Convening of meetings	ARNTF, ICAO	Task Force Reports	Ongoing	Closed
CONC. 11/15: AMENDMENT AND EDITORIAL CHANGES TO THE REGIONAL ATS ROUTE NETWORK That, in order to maintain the integrity, objectives and benefits of the MID Basic Air Navigation Plan Table ATS-1 and related Charts, MID States are urged to: a) adhere to established ICAO procedures for amendments and establishment of ATS routes that form part of the Regional ATS route network; b) inform ICAO when minor editorial changes in the Regional ATS routes are deemed necessary, before any such changes take effect; and c) submit to the MID Regional Office, descriptions of existing Regional ATS routes that are at variance with the MID Basic ANP Table ATS-1 in a format that will be detailed by a State Letter, including proposals for amendment of Table ATS-1 as applicable.	Implement Conclusion	States	State Letter Amendment of the ANP in accordance with established procedures Editorial updates from States Comprehensive Table ATS 1 Amendment	Feb. 2009 Ongoing Ongoing Jun. 2009	Proposal for Amendment issued 20 Apr. 2010 Closed

CONCLUSIONS AND DECISIONS	FOLLOW-UP	TO BE INITIATED BY	DELIVERABLE	TARGET DATE	REMARKS
CONC. 11/16: MID ATS ROUTE CATALOGUE That, in order to support the process of ATS route development in the MID Region, including the keeping of a record of ATS routes proposed for development and facilitating follow- up on the actions pertaining to the routes' development: a) the MID ATS Route Catalogue is adopted as at Appendix **5.2C** to the Report on Agenda Item 5.2; and b) MID States and concerned International Organizations are urged to periodically review the Catalogue, note developments and take action as applicable.	Implement the Resolution Take action as indicated in catalogue	States, ICAO International Organizations	Development of route proposals Inputs from States and International Organizations	Ongoing	Closed
CONC. 11/17: MEMBERSHIP OF THE MID RMA That, a) Bahrain, Egypt, Iran, Jordan, Kuwait, Lebanon, Oman, Saudi Arabia, Syria, Yemen and UAE committed themselves to participate in the MID RMA project, through the signature of the Memorandum of Agreement (MOA); and b) taking into consideration the tremendous efforts deployed by UAE in the preparation for the successful and safe implementation of RVSM in the MID Region, UAE is exempted from the payment of contributions to the MID RMA for the first ten (10) years of operation (up-to end of 2015).	Implement the Conclusion	MID RMA Board and ICAO	MID RMA Board Reports	Ongoing	Actioned (Replaced and superseded by Conc. 12/11)

CONCLUSIONS AND DECISIONS	FOLLOW-UP	TO BE INITIATED BY	DELIVERABLE	TARGET DATE	REMARKS
CONC. 11/18: PAYMENT OF ARREARS TO THE MID RMA That, a) Kuwait and Syria are urged to pay their contributions (arrears) to the MID RMA Project as soon as possible and in any case before 31 March 2009; b) deadline for the payment of contributions to the MID RMA Project for year 2009 is extended to 31 March 2009; and c) in case a State does not pay the contributions to the MID RMA within the agreed timescales, the MID RMA Board might consider; i) to review the membership of this State; and ii) to exclude this State from the MID RVMS SMR	Follow-up with concerned States	MIDRMA Board Chairman and ICAO	Contributions/arrears paid	31 Mar. 2009	Closed
CONC. 11/19: RADAR DATA RECORDING AND ANALYSIS SOFTWARE That, considering the importance of availability of radar data for the assessment of the horizontal overlap, the MID RMA, on behalf of MID RMA Member States and in coordination with, Bahrain, Kuwait, Oman, Saudi Arabia, UAE and Yemen, develop the technical specifications/requirements related to the radar data recording and analysis software and proceed with the purchase of such software as soon as possible.	Implement the Conclusion	MIDRMA	Letters to concerned States Technical specifications of the software developed Software purchased	28 Feb.2009 31 Mar.2009 15 Apr. 2009	Closed

CONCLUSIONS AND DECISIONS	FOLLOW-UP	TO BE INITIATED BY	DELIVERABLE	TARGET DATE	REMARKS
CONC. 11/20: ICAO PROVISIONS RELATED TO MANDATORY REPORTING OF DATA TO THE RMAS That, taking into consideration the unsatisfactory level of reporting of data by States to the RMAs, ICAO consider to include provisions related to mandatory reporting of data (list of RVSM approved aircraft, Altitude Deviation Reports and Coordination Failure Reports) in Annex 6 and Annex 11, as appropriate.	Follow up with ICAO HQ	ICAO	Appropriate provisions in Annexes 6 and 11	TBD	Closed (Not supported by the ANC)
CONC. 11/21: SUSTAINED RVSM SAFETY ASSESSMENT ACTIVITY IN THE MID REGION That, considering the on-going requirement for RVSM safety assessment in the MID Region: a) the MID RMA is responsible for the development of the RVSM Safety Monitoring Reports (SMR); b) the MID RMA determine the exact type and format of data necessary for performing collision risk calculations and inform States accordingly; c) States provide the required data in a timely manner. The data will include, but not necessarily be limited to: i) approval of operators and aircraft for RVSM operations (on monthly basis); ii) Altitude Deviation Reports (ADR) for deviations exceeding 300 ft (on monthly basis); iii) Coordination Failure Reports (CFR) (on monthly basis); and iv) traffic data (as requested by the MID RMA Board) d) Bahrain, Kuwait, Oman, Saudi Arabia, UAE and Yemen are committed to provide their radar data to the MID RMA, as, when and where required; and	Follow up the implementation of the Conclusion	MIDRMA States ICAO	Data provided to the MIDRMA as required	Ongoing	Closed (Replaced and superseded by Con.12/6)

CONCLUSIONS AND DECISIONS	FOLLOW-UP	TO BE INITIATED BY	DELIVERABLE	TARGET DATE	REMARKS
e) States not providing the required data to the MID RMA 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 SMR.					
CONC. 11/22: 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: that the vertical-collision risk in MID RVSM airspace due solely to technical height-keeping performance meets the ICAO target level of safety (TLS) of 2.5 x 10^{-9} fatal accidents per flight hour; b) Safety Objective 2: that the overall vertical-collision risk – i.e. the overall risk of mid-air collision in the vertical dimension in MID RVSM airspace meets the ICAO overall TLS of 5 x 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 adversely affect the risk of en-route mid-air collision over the years.	Follow up the implementation of the 3 safety objectives	MIDRMA MIDANPIRG	SMR 2010	Jun. 2010	Closed (To be included in the MIDRMA Manual)

CONCLUSIONS AND DECISIONS	FOLLOW-UP	TO BE INITIATED BY	DELIVERABLE	TARGET DATE	REMARKS
DEC. 11/23: ESTABLISHMENT OF THE BAGHDAD FIR RVSM IMPLEMENTATION WORKING GROUP (BFRI WG) That, the Baghdad FIR RVSM Implementation Working Group is established with Terms of Reference as at **Appendix 5.2G** to the Report on Agenda Item 5.2	Conduct the BFRI WG meetings	ICAO	Reports of the BFRI WG meetings	Aug. 2009	Closed
DEC. 11/24: MID REGION SSR CODE ALLOCATION STUDY GROUP (SSRCA SG) That, the MID Region SSR Code Allocation Study Group revised Terms of Reference are adopted as at **Appendix 5.2H** to the Report on Agenda Item 5.2.	Convene Study Group Meetings and discussions through correspondence	ICAO, SSCASG	Revised MID SSR Code Allocation system	May 2009	Closed
CONC. 11/25: MEASURES TO ADDRESS NON-SYSTEM SSR CODE ASSIGNMENT PROBLEMS That, in order to address those SSR code assignment problems that are not typically the Code Allocation Plan (CAP) system problems: a) MID States are urged to undertake necessary coordination with adjacent States/FIRs to address identified SSR code assignment problems or potential problems with such adjacent FIRs; and b) in cases where identified code assignment conflicts are beyond the ability of States' bilateral or multilateral initiatives to address, the ICAO MID Regional Office be notified as soon as practical, in order to take necessary action.	Implement Conclusion	States	Optimally managed SSR Code assignments	Ongoing	Ongoing

CONCLUSIONS AND DECISIONS	FOLLOW-UP	TO BE INITIATED BY	DELIVERABLE	TARGET DATE	REMARKS
CONC. 11/26: ADOPTION OF THE ORIGINATING REGION CODE ASSIGNMENT METHOD (ORCAM) IN THE MID REGION That, in order to improve the MID SSR Code Allocation System: a) the MID Region adopts the Originating Region Code Assignment Method (ORCAM). The MID Region will consider three ORCAM Participating Areas (PA); the number of PAs to be finalised based on studies of Regional traffic patterns and volume data, and coordination with adjacent ICAO Regions; b) the ICAO MID Regional Office take necessary action to obtain data from States and other ICAO Regions for the Study Group to complete its work; and c) in order to facilitate an effective analysis of the traffic statistics required for decision on PAs, MID FIRs provide traffic data in accordance with the format provided by the MID Regional Office.	Follow-up Collection of Data	ICAO, States	Adoption of the MID ORCAM Compilation of Data Study Group Report Electronic Communication Follow-up State Input	May 2009 Feb. 2009 Mar. 2009 Feb. 2009	Ongoing (Replaced and superseded by Conc. 12/21)
CONC. 11/27: SSR CODES SHARING IN THE MID REGION That, in order to increase the availability of SSR codes in the MID SSR code allocation system: a) the MID Region adopt the approach of "code sharing" between FIRs that are geographically adequately disparate and where directional assignment of SSR codes makes "code sharing" practical; b) the "code sharing" be implemented after an amendment of the MID ANP FASID to this effect has been approved, appropriate safety assessments have been carried out, and	Follow-up on aspects of the Draft Conclusion	States, ICAO	MIDANPIRG/11 Report FASID Amendment CNS SG Reports	Feb. 2009 May 2009 Nov. 2009	Ongoing (Replaced and superseded by Conc. 12/21)

CONCLUSIONS AND DECISIONS	FOLLOW-UP	TO BE INITIATED BY	DELIVERABLE	TARGET DATE	REMARKS
the concerned FIRs signed the relevant Letters of Agreement (LOA), except where a Regional arrangement obviates such action; and c) the CNS Sub-Group be requested to consider the feasibility of FDPS upgrades in the MID Region to further support SSR code sharing approach.					
CONC. 11/28: REDUCTION OF SSR CODE OCCUPANCY TIME That, in order to increase the availability of SSR codes allocated to each MID FIR: a) the SSR code occupancy time be changed from three hours to a maximum of two hours where practicable; b) the time to be applied by each FIR continue to be predicated by safety and be based on the requirement of the FIR as dictated by such factors as the size of the FIR; and c) the Secretariat take appropriate measures to process the amendment of the MID ANP FASID Part V Attachment B.	Follow-up on aspects of the Draft Conclusion	States, ICAO	Adoption of code occupancy time principles FASID Amendment	Mar. 2009 May 2009	Ongoing (Replaced and superseded by Conc. 12/21)

CONCLUSIONS AND DECISIONS	FOLLOW-UP	TO BE INITIATED BY	DELIVERABLE	TARGET DATE	REMARKS
CONC. 11/29: DEVELOPMENT AND PROMULGATION OF CONTINGENCY PLANS That, taking into account that the applicability date for the Annex 11 and Annex 15 provision regarding contingency measures has past: a) MID States are urged to develop and promulgate contingency plans in accordance with Annex 11 and Annex 15 provisions by June 2010; and b) use the template at **Appendix 5.2I** to the Report on Agenda Item 5.2 for the development and promulgation of contingency plans.	Follow-up on Conclusion	States, ICAO	Sub-Group Report	Nov. 2009	Closed
CONC. 11/30: SEARCH AND RESCUE (SAR) AGREEMENTS That, in order to strengthen search and rescue cooperation and coordination, including the giving effect to ICAO provisions, in particular Annex 12 Chapter 3 and Conclusion 3/7 of LIM MID RAN 1996: a) MID States are urged to sign SAR agreements with their neighbouring States; b) MID States are urged to develop legislative and regulatory provisions to enable the signing of SAR agreements; c) MID States designate SAR focal points with whom other States and ICAO can communicate and coordinate development of SAR agreements, forward contact details of the focal points to ICAO MID Regional Office by 30 June 2009, and update such details as necessary; d) model of SAR agreement available in the International Aeronautical and Maritime Search and Rescue	Follow-up Implementation of Conclusion	ICAO States	SAR Agreements Focal Points	Dec. 2009 Jun. 2009	Closed

CONCLUSIONS AND DECISIONS	FOLLOW-UP	TO BE INITIATED BY	DELIVERABLE	TARGET DATE	REMARKS
(IAMSAR) Manual, reproduced at **Appendix 5.2 K** to the Report on Agenda Item 5.2 be used ; and e) ICAO assist States in their efforts to sign SAR agreements.					
CONC. 11/31: 406 MHZ BEACONS That, in order to continue receiving beyond 1 February 2009, the Cospas-Sarsat services that are currently available to owners and users of 121.5/243 Mhz ELTs, and to further benefit from the added services available to owners and users of 406MHz beacons, MID States that have not done so are urged to: a) require ELT owners and users of 121.5/243 Mhz ELTs to upgrade to 406 Mhz ELTs as soon as possible, and register their 406 Mhz ELTs in the International 406 Mhz Registration Database (IBRD); and b) designate to the Cospas-Sarsat Secretariat, an IBRD focal point and request Cospas-Sarsat for access to the IBRD in order to benefit from the services available.	Follow-up Implementation of Conclusion	States ICAO	State Letter Beacon upgrades and registration Focal points	Feb. 2009 Feb. 2009 Feb. 2009	Ongoing (Replaced and superseded by Conc. 12/23)
DEC. 11/32: SAR AD-HOC WORKING GROUP (SAR AWG) That, in order to review and develop updates to the MID ANP with regard to SAR requirements, as well as develop recommendations to foster implementation of provisions in the SAR field, the MID SAR Ad-Hoc Working Group is established with Terms of Reference (TOR) as at **Appendix 5.2L** to the Report on Agenda Item 5.2	Discussions through email Convene SAR AWG	ICAO States	Implementation Guidance and Assistance	Jul. 2009	Closed (Replaced and supersede by Dec. 12/24)

CONCLUSIONS AND DECISIONS	FOLLOW-UP	TO BE INITIATED BY	DELIVERABLE	TARGET DATE	REMARKS
CONC. 11/33: CIVIL/MILITARY COORDINATION That, in order to facilitate effective civil/military co-ordination and joint use of airspace in accordance with ICAO provisions, MID States that have not already done so, are urged to: a) implement ICAO provisions in Annexes 2, 11 and 15, and give effect to LIM MID (COM/MET/RAC) RAN 1996, Recommendations 2/9, 2/10 and 2/13 as well as Assembly Resolution A36-13 Appendix O, regarding coordination of civil air traffic with military activities; b) arrange for Letters of Agreement (LOAs) to be signed between ATS authorities and Military authorities in order to establish coordination procedures for the exchange of information; 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	Nov. 2009 Ongoing Ongoing	Ongoing (Replaced and superseded by Conc. 12/25)

CONCLUSIONS AND DECISIONS	FOLLOW-UP	TO BE INITIATED BY	DELIVERABLE	TARGET DATE	REMARKS
CONC. 11/34: COORDINATION OF FLIGHTS OPERATING OVER HIGH SEAS That, taking into consideration that the Convention on International Civil Aviation shall be applicable to civil aircraft: a) all parties involved are urged to ensure that proper coordination between the ATS authorities and foreign military units operating over the high seas be carried out to the extent practicable; b) State aircraft operating in the airspace over high seas, should: i) adhere, to the extent practicable, to ICAO provisions; or ii) operate with "Due Regard" for the safety of navigation of civil aircraft where there are operational situations that do not lend themselves to ICAO flight procedures. c) States report any incident/s relating to uncoordinated flights operating over high seas, in a timely manner (within 15 days) and in accordance with the suggested mechanism illustrated in the flow chart at **Appendix 5.2N** to the Report on Agenda Item 5.2.	Implement Conclusion	States, ICAO	Input from States	Nov. 2009	Ongoing (Replaced and superseded by Conc. 12/25)

CONCLUSIONS AND DECISIONS	FOLLOW-UP	TO BE INITIATED BY	DELIVERABLE	TARGET DATE	REMARKS
CONC. 11/35: UNCOORDINATED FLIGHTS OVER THE RED SEA AREA That, a) the procedures at **Appendix 5.2O** to the Report on Agenda Item 5.2 be followed by all civil uncoordinated flights and, to the extent practicable, by military aircraft operating over the Red Sea area; b) States, that have not yet done so, publish an AIP Supplement, as soon as possible, for the promulgation of these procedures; c) IATA continue effort to ensuring that concerned operators are fully conversant with these procedures; d) all parties involved, through their proper channels, take appropriate action to ensure that the airspace users are informed of and comply with the agreed procedures; and e) States: i) report without delay all incidents relating to civil uncoordinated flights over the Red Sea Area; and ii) report any incident relating to State aircraft operating over the Red Sea Area, in a timely manner (within 15 days) and in accordance with the suggested mechanism illustrated in the flow chart at **Appendix 5.2N** to the Report on Agenda Item 5.2.	Implement Conclusion	States, ICAO	Implementation of Procedures Input from States Coordination with adjacent Regions	Ongoing Nov. 2009 Ongoing	Ongoing (Replaced and superseded by Conc. 12/26)

CONCLUSIONS AND DECISIONS	FOLLOW-UP	TO BE INITIATED BY	DELIVERABLE	TARGET DATE	REMARKS
CONC. 11/36: ICAO LANGUAGE PROFICIENCY That, with a view to expedite the process of implementation of the ICAO Language Proficiency requirements, States are urged to: a) ensure that all stakeholders (pilots, controllers, language teachers, regulator,s etc.) are familiar with the ICAO language proficiency requirements; b) adopt/incorporate the ICAO language proficiency requirements (Amendment 164 to Annex 1) into national legislation; c) establish a plan to coordinate administrative and training matters (testing, number of personnel to be trained, training centres, duration of training, etc.); d) develop/select test(s) to meet ICAO language proficiency requirements; e) assess current language proficiency level of controllers and pilots, according to the ICAO rating scale; f) develop language training packages designed to reduce the gap between current language proficiency level and ICAO Level 4; g) develop language training package to maintain language proficiency and a schedule of language refresher training; h) review recruitment and selection procedures and consider a minimum of at least ICAO level 3 in language proficiency before entry to professional training programmes; and i) present reports to ICAO on progress achieved in preparing for implementation of ICAO language proficiency requirements, on regular basis.	Implement Conclusion	States	Compliance with ICAO provisions	Ongoing	Ongoing (Replaced and superseded by Conc. 12/78 & 12/79)

CONCLUSIONS AND DECISIONS	FOLLOW-UP	TO BE INITIATED BY	DELIVERABLE	TARGET DATE	REMARKS
CONC. 11/37: USE OF THE ENGLISH LANGUAGE STANDARD ICAO PHRASEOLOGY					
That,	Implement Conclusion	States	Compliance with ICAO provisions	Ongoing	Ongoing
a) States are urged to ensure that their air traffic controllers and pilots use the standard ICAO phraseology in aeronautical communication; and	Implement Conclusion	States	Use of common language/s in ATS provision	Ongoing	(Replaced and superseded by Conc. 12/78 & 12/79)
b) in order to improve situational awareness and prevent the occurrence of ATS incidents and accidents, States are invited to implement measures that require or encourage air traffic controllers and pilots to:					
i) use as much as possible the English language in aeronautical communication; and					
ii) use only the English language in aeronautical communication, in all situations where at least one of the pilots in the environment (sector) does not speak the national language.					

CONCLUSIONS AND DECISIONS	FOLLOW-UP	TO BE INITIATED BY	DELIVERABLE	TARGET DATE	REMARKS
CONC. 11/38: ATS SAFETY MANAGEMENT That, MID States that have not yet done so: a) are urged to establish safety programmes and ensure the implementation of safety management systems by their ATS service providers in accordance with the provisions of Annex 11; b) are urged to adjust their laws, regulations and policies, as necessary, regarding, safety management systems, collection and protection of safety information, and improving accident prevention to comply with relevant provisions contained at Chapter of Annexes 11, Chapter 8 of Annex 13 to Chicago Convention; c) designate focal points to whom operators may send incident reports for investigation and resolution, and from whom they may request pertinent information; d) share safety information including information on ATS incidents and accidents; and e) take advantage of the safety management guidance material and training offered by ICAO.	Follow-up implementation of the Conclusion	MID Office, States	State Letter Feed-back from States Focal points	May 2009 Nov. 2009 ATM/SAR/AIS SG/11 Jul. 2009	Ongoing (Replaced and superseded by Conc. 12/ 77)

CONCLUSIONS AND DECISIONS	FOLLOW-UP	TO BE INITIATED BY	DELIVERABLE	TARGET DATE	REMARKS
CONC. 11/39: USE OF THE PUBLIC INTERNET FOR THE ADVANCE PUBLICATION OF AERONAUTICAL INFORMATION That, in order to improve the timeliness of aeronautical information and in accordance with the ICAO Guidelines on the use of Public Internet for Aeronautical Applications (Doc 9855), MID States are encouraged to use the internet for the advance publication of the following elements of the Integrated Aeronautical Information Package containing non-time critical aeronautical information (i.e.: posting of the information on the web and/or dissemination by email): - AIP; - AIP Amendments (both AIRAC and non AIRAC); - AIP Supplements (both AIRAC and non AIRAC); - Aeronautical Information Circulars (AIC); - monthly printed plain-language list of valid NOTAM; and - NOTAM containing a checklist of valid NOTAM. Note: Appropriate arrangements for the provision of information in paper copy form should remain available.	Implement the Conclusion	States ICAO	State Letter Feed back from States and users	Mar 2009 May 2009	Closed (SL Ref.: AN 8/4 – 09/133 dated 16 April 2009)

CONCLUSIONS AND DECISIONS	FOLLOW-UP	TO BE INITIATED BY	DELIVERABLE	TARGET DATE	REMARKS
CONC. 11/40: 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, are urged to: a) fully comply with the AIRAC procedures, in accordance with specifications provided in Annexes 11, 14 (both volumes) and 15 as well as the provisions of the MID Basic ANP Chapter VIII; b) 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	States	Feed back from States (awareness campaigns, SLAs) Report of the AIS/MAP TF/5 Meeting	May 2009 May 2009	Ongoing (Replaced and superseded by Conc. 12/27)
CONC. 11/41: ANNEX 15 PROVISIONS RELATED TO AIRAC That, ICAO consider to review the current provisions of Annex 15 Chapter 6 and Appendix 4 related to AIRAC by replacing the words “significant” and “major” changes, which lead to different interpretations, by a comprehensive list of changes which necessitate the use of the AIRAC System.	Follow up with ICAO HQ	ICAO	Appropriate provisions in Annexes 15 (Amendment 36 to Annex 15)	Nov. 2010	Closed (Amendment 36 to Annex 15)

CONCLUSIONS AND DECISIONS	FOLLOW-UP	TO BE INITIATED BY	DELIVERABLE	TARGET DATE	REMARKS
CONC. 11/42: IMPLEMENTATION OF WGS-84 IN THE MID REGION					
That, taking into consideration the status of implementation of WGS-84 in the MID Region as reflected in **Appendix 5.3A** to the Report on Agenda Item 5.3 and recognizing that WGS-84 is an important pre-requisite for the implementation of PBN and for the transition from AIS to AIM; States that have not yet done so are urged to: a) develop effective and detailed WGS-84 implementation plans with clear timelines and send these plans to the ICAO MID Regional Office, prior to 30 June 2009; b) adopt appropriate procedures to validate the WGS-84 data and ensure the quality (accuracy, integrity and resolution) of the published WGS-84 coordinates, in accordance with ICAO Annex 15 requirements; c) achieve the total implementation of the WGS-84 System, in accordance with ICAO Annexes 4, 11, 14 and 15 provisions, prior to 31 December 2010 ; and d) report the status of implementation of WGS-84 on a regular basis to the ICAO MID Regional Office and appropriate MIDANPIRG subsidiary bodies, until the system is fully implemented.	Follow up with concerned States	ICAO States	State Letter WGS-84 implementation plans Report on the status of implementation of WGS-84	Apr 2009 Jun 2009 Ongoing	Closed (SL Ref.: AN 8/1.1 – 09/128 dated 14 April 2009)

CONCLUSIONS AND DECISIONS	FOLLOW-UP	TO BE INITIATED BY	DELIVERABLE	TARGET DATE	REMARKS
CONC. 11/43: MID REGION eTOD IMPLEMENTATION STRATEGY That, the MID Region eTOD implementation Strategy is adopted as at **Appendix 5.3B** to the Report on Agenda Item 5.3.	Follow up the eTOD implementation status	States eTOD WG AIS/MAP TF	Feed back from States updated eTOD status of implementation	May 2009	Actioned (Replaced and superseded by Conc. 12/28)
CONC. 11/44: DRAFT FASID TABLE RELATED TO eTOD That, ICAO consider to include the Draft FASID Table at **Appendix 5.3D** to the Report on Agenda Item 5.3, into the MID FASID, Part VIII (AIS), with necessary amendments, as appropriate.	Follow up with ICAO HQ	ICAO	eTOD FASID Table included in the MID FASID	TBD	To be reconsidered, taking into consideration the new provisions introduced by Amendment 36 to Annex 15
DEC. 11/45: TERMS OF REFERENCE OF THE eTOD WORKING GROUP That, the Terms of Reference of the eTOD Working Group be updated as at **Appendix 5.3E** to the Report on Agenda Item 5.3.	Implement the eTOD WG Work Programme	eTOD WG AIS/MAP TF	eTOD WG/2 Report	May 2009	Closed (Replaced and superseded by Conc. 12/30)
CONC. 11/46: IMPLEMENTATION OF QMS WITHIN MID STATES' AISs That, in accordance with Annex 15 provisions, States, that have not yet done so, are urged to implement/complete the implementation of a QMS within their AIS, before **December 2010**, based on the methodology for the implementation of QMS at **Appendix 5.3F** to the Report on Agenda Item 5.3 and the EUROCONTROL CHAIN deliverables.	Follow up with concerned States	ICAO States	State Letter Feed back from States	Jun. 2009 Dec. 2009	Ongoing (SL Ref.: AN 8/4.1 – 09/213 dated 30 June 2009)

CONCLUSIONS AND DECISIONS	FOLLOW-UP	TO BE INITIATED BY	DELIVERABLE	TARGET DATE	REMARKS
CONC. 11/47: LICENSING OF THE AIS/MAP PERSONNEL That, recognizing the importance of AIS and the safety implication of the non-provision of timely and high quality aeronautical information, and taking into consideration Annex 15 requirements for the evaluation and maintenance of the competence/skill of the AIS staff, States are encouraged to include in their national legislations/regulations provisions related to the licensing of the AIS/MAP personnel.	Implement the Conclusion	States	Feed back from States	May 2009	Closed
CONC. 11/48: ELECTRONIC AIP (eAIP) That, pending the development of Global eAIP provisions, MID States, that have not yet done so, are invited to publish their eAIP based on the EUROCONTROL eAIP specifications.	Follow up with States	States	States publish their eAIP.	TBD	Closed
CONC. 11/49: EXTENSION OF THE EAD TO THE EMAC STATES That, the EMAC States are encouraged to initiate formal coordination with EUROCONTROL and take appropriate actions in order to be connected to the European AIS Database (EAD).	Follow up with concerned States	EMAC States Eurocontrol ICAO	Feed back from EMAC States (Migration to EAD)	May 2009	Closed
CONC. 11/50: ESTABLISHMENT OF AN AIS AUTOMATION ACTION GROUP That, the AIS Automation Action Group is established with Terms of Reference as at **Appendix 5.3H** to the Report on Agenda Item 5.3.	Follow-up the activities of the Action Group	AIS/MAP TF ICAO	Feedback from the Action Group reported to the AIS/MAP TF/5	May 2009	Ongoing (Replaced and superseded by Dec. 12/33)

CONCLUSIONS AND DECISIONS	FOLLOW-UP	TO BE INITIATED BY	DELIVERABLE	TARGET DATE	REMARKS
CONC. 11/51: PRE-REQUISITES FOR THE TRANSITION TO AIM That, as a pre-requisite for the transition from AIS to AIM, States that have not yet done so, are urged to give high priority to the implementation of existing Annex 15 SARPs, in particular, WGS-84, Quality Management System and automation.	Follow up with concerned States	States ICAO	State Letter (Reminder) Feedback from States	Jun. 2009 Sep. 2009	Ongoing (Replaced and superseded by Conc. 12/34)
DEC. 11/52: PLANNING FOR THE TRANSITION FROM AIS TO AIM That, based on the ICAO Global ATM Operational Concept and in support of the Global Plan Initiative (GPI-18: Aeronautical Information), the AIS/MAP Task Force: a) include in its work programme the development of an action plan/strategy for the transition from AIS to AIM in the MID Region; 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 Conclusion	AIS/MAP TF	AIS/MAP TF/5 Report	May 2009	Ongoing (Replaced and superseded by Conc. 12/34 & 12/35)

CONCLUSIONS AND DECISIONS	FOLLOW-UP	TO BE INITIATED BY	DELIVERABLE	TARGET DATE	REMARKS
DEC. 11/53: HARMONIZATION OF THE PUBLICATION OF LATITUDE AND LONGITUDE COORDINATES That, in order to prevent proliferation of the formats used in the publication of the geographical coordinates in form of Latitude and Longitude: a) States are urged to comply with the provisions of Annexes 4 and 15 related to the format and publication resolution of Latitude and Longitude; and b) ICAO consider the review and harmonization of the different provisions related to the subject contained in the different ICAO Annexes and Documents.	Follow up with States and ICAO HQ	ICAO	Feed back from States Appropriate provisions in relevant ICAO Annexes	TBD	Closed
DEC. 11/54: 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 5.3J** to the Report on Agenda Item 5.3.	Implement the AIS/MAP TF Work Programme	AIS/MAP TF	AIS/MAP TF/5 Report	May 2009	Actioned (Replaced and superseded by Dec. 12/37)
CONC. 11/55: COMPLETION OF THE MID VSAT PROJECT That, following the successful implementation of Phase I of the MID VSAT project and in order to avoid the proliferation of the VSAT networks; MID States requiring VSAT connections may join the NAFISAT network project and participate in its steering Group.	Implement the Conclusion	ICAO States	Project closed	Feb. 2009	Closed

CONCLUSIONS AND DECISIONS	FOLLOW-UP	TO BE INITIATED BY	DELIVERABLE	TARGET DATE	REMARKS
CONC. 11/56: UPDATE ADHOC ACTION GROUP MEMBERS AND PARTICIPATE IN NATIONAL AND REGIONAL ACTIVITIES RELATED TO WRC-11 That, a) MID States that have not nominated experts to the Adhoc Action Group are requested to do so as soon as possible; b) the Terms of Reference (TOR) of the Adhoc Action Group be revised as in **Appendix 5.4C** to the report on Agenda Item 5.4; and c) Civil Aviation Authorities, aviation spectrum experts to participate in the national and regional level activities related to WRC-11 in order to support ICAO Position for WRC-11.	State letter States assign members Communication and sharing of information between members	ICAO States	State Letter (Reminder) Updated list of members CNS SG Report	Jun. 2009 Nov. 2009	Ongoing (Replaced and superseded by Con 12/42 & 12/43)
CONC. 11/57: DIGITAL HIGH SPEED LINKS That, in support of ATN implementation, MID States are urged to continue with the implementation of digital high speed links.	Implement high speed links	States	CNS SG Report	Nov. 2009	Closed
DEC. 11/58: ESTABLISHMENT OF AN INTERNET PROTOCOL SUITE (IPS) WORKING GROUP That, an IPS Working Group is established with Terms of Reference as at **Appendix 5.4E** to the Report on Agenda Item 5.4.	Group Established Implement the work programme of the IPS working Group	ICAO States	State Letter List of WG members WG Report CNS SG Report	Jun. 2009 Nov. 2009	Ongoing (Replaced and superseded by Dec. 12/41)

CONCLUSIONS AND DECISIONS	FOLLOW-UP	TO BE INITIATED BY	DELIVERABLE	TARGET DATE	REMARKS
CONC. 11/59: FOLLOW-UP SPECIAL BAGHDAD FIR CO-ORDINATION MEETING (SBFCM)					
That, Iraq take the lead and assign resources for the implementation of the SBFCM follow-up action plan in full coordination the ICAO MID Regional Office and concerned MID States	Implement Conclusion	Iraq	Focal point Identification of resources Update of follow-up action plan	Mar. 2009 Apr. 2009 Every six months	Closed
CONC. 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; - the Study Group to follow the ICAO guidance for the implementation of Flight plan and Implementation check list in **Appendices 5.5B** and **5.5C** to the Report on Agenda Item 5.5; and b) implement the new ICAO model Flight Plan form by applicability date.	State Letter Study Group Established Follow-up with States	ICAO States Study group	State Letter Members of the Group Report of CNS and CNS/ATM/IC SG New FPL Implemented	Mar. 2009 Jun. 2009 Jan. 2010 Nov. 2012	Ongoing (Replaced and superseded by Dec. 12/50, and Conc.12/54 and 12/55)

CONCLUSIONS AND DECISIONS	FOLLOW-UP	TO BE INITIATED BY	DELIVERABLE	TARGET DATE	REMARKS
CONC. 11/61: IFPS PROJECT SUPPORT That, a) MID State that have not yet designated focal points to do so and send their contact details to ICAO MID Regional Office prior to 30 June 2009; b) the IFPS focal points participate in the finalization of the feasibility study led by Bahrain for the implementation of an IFPS in the MID Region; and c) ICAO MID Regional Office request additional support from EUROCONTROL with view to benefit from their experience and expertise in the establishment of an IFPS, including development of a regulatory framework.	Designate focal points Follow up the progress on the finalization of the Study Coordination with EUROCONTROL	States ICAO Bahrain CNS SG CNS/ATM/IC SG	State Letter Updated list of focal points Report of CNS and CNS/ATM/IC SG Regulatory framework definition Final Study finalized	Mar. 2009 May 2009 Jan. 2010 TBD TBD	Closed
DEC. 11/62: ESTABLISHMENT OF MID-FANS IMPLEMENTATION TEAM (FIT) That, MID-FIT is established with TOR as in **Appendix 5.5E** to the report on Agenda Item 5.5.	Notify States Conduct of MID-FIT	ICAO States and Organizations	State Letter MID-FIT members Report of CNS and CNS/ATM/IC SG	Mar. 2009 Jun. 2009 Jan. 2010	Closed (Replaced and superseded by Dec. 12/62)

CONCLUSIONS AND DECISIONS	FOLLOW-UP	TO BE INITIATED BY	DELIVERABLE	TARGET DATE	REMARKS
CONC. 11/63: INTRODUCTION OF FANS 1/A CAPABILITIES IN THE MID REGION STABLISHMENT OF MID-FANS IMPLEMENTATION TEAM That, MID States, in coordination with users, are encouraged to consider implementing FANS 1/A (ADS-C/CPDLC) as appropriate to the desired operational outcome.	Follow-up on implementations activities	States Users Data link service providers	FANS 1/A implementation Feed Back from States and users CNS/ATM/IC SG Report	Jan 2010	Closed
DEC. 11/64: MID-FIT IMMEDIATE TASKS That, MID-FIT, reschedule the tasks that are essential for the implementation of FANS1/A in the MID Region, in coordination with AFIG.	Task rescheduled	MID-FIT CNS/ATM/IC SG	Task identified and rescheduled	Jan. 2010	Closed (Replaced and superseded by Dec.12/62)
CONC. 11/65: PROTECTION OF GNSS SIGNAL That, MID States with their names listed in the footnotes 5.362B and 5.362C are urged to take necessary measures to delete their names from these footnote as soon as possible in order to protect the GNSS signal.	State Letter State CAA Follow up with regulators	ICAO State	State Letter CNS SG Report Deletion of State Name from FN	Nov. 2009 On going	Closed

CONCLUSIONS AND DECISIONS	FOLLOW-UP	TO BE INITIATED BY	DELIVERABLE	TARGET DATE	REMARKS
DEC. 11/66: DISSOLUTION OF THE RVSM/PBN AND GNSS TASK FORCES AND ESTABLISHMENT OF THE PBN/GNSS TASK FORCE That, taking into consideration the status of implementation of RVSM and PBN in the MID Region and the close inter-relationship between the PBN goals and GNSS implementation, and with in order to enhance the efficiency of MIDANPIRG, the RVSM/PBN and the GNSS Task Forces are dissolved and the PBN/GNSS Task Force is established with TOR as at **Appendix 5.5F** to the Report on Agenda Item 5.5.	Implement the PBN/GNSS TF Work Programme	ICAO States	PBN/GNSS TF Reports	Oct. 2009	Closed
CONC. 11/67: STRATEGY FOR THE IMPLEMENTATION OF GNSS IN THE MID REGION That, the Revised Strategy for implementation of GNSS in the MID Region is adopted as at **Appendix 5.5G** to the Report on Agenda Item 5.5.	Implement Strategy	PBN/GNSS TF State	PBN/GNSS 2 Report	Oct. 2009	Actioned (Replaced and superseded by Conc. 12/57)
CONC. 11/68: GNSS STUDIES IN MID REGION That, a) ICAO MID Regional Office Communicate with GSA/ESA for the provision of support and detailed studies on EGNOS Extension to the MID Region; b) MID States that are in position to support the cost benefit analysis to provide their experience through PBN/GNSS TF to MID Region; and c) MID States share experience gained during the GNSS implementation.	Follow-up State Letter Support to CB Sharing Exp.	ICAO MID States Lead by Saudi Arabia MID States	State Letter PBN/GNSS TF Report Experience from States and CBA Report WP/IP	Mar. 2009 Oct. 2009 Ongoing	Closed

CONCLUSIONS AND DECISIONS	FOLLOW-UP	TO BE INITIATED BY	DELIVERABLE	TARGET DATE	REMARKS
CONC. 11/69: MID REGION STRATEGY FOR THE IMPLEMENTATION OF ADS-B That the MID Region Strategy for the implementation of ADS-B to be amended as at **Appendix 5.5H** to the Report on Agenda Item 5.5.	Implement Strategy	States, Users	CNS/ATM/IC SG Report	Jan 2010	Ongoing
CONC. 11/70: REGIONAL PERFORMANCE FRAMEWORK **That,** a) a regional performance framework be adopted on the basis of and alignment with the Global Air Navigation Plan, the Global ATM Operational Concept, and ICAO guidance material and planning tools. The performance framework should include the identification of regional performance objectives and completion of regional performance framework forms; and b) ALLPIRG/5 Conclusion 5/2: Implementation of Global Plan Initiatives (GPIs, be incorporated into the terms of reference of the MIDANPIRG subsidiary bodies.	Follow up on Conclusion Update Regional performance objectives	ICAO, CNS/ATM IC SG MIDANPIRG	Adoption of Performance Framework approach and Regional Performance Objectives Updated Regional performance objectives	Feb. 2009 Ongoing	Closed

CONCLUSIONS AND DECISIONS	FOLLOW-UP	TO BE INITIATED BY	DELIVERABLE	TARGET DATE	REMARKS
CONC. 11/71: NATIONAL PERFORMANCE FRAMEWORK That, MID States be invited to adopt a national performance framework on the basis of ICAO guidance material and ensure their alignment with the regional performance objectives, the Regional Air Navigation Plan and the Global ATM Operational Concept. The performance framework should include identification of national performance objectives and completion of national performance framework forms.	Follow up on Conclusion Update National performance objectives	ICAO, MIDANPIRG, States	Adoption of National performance framework approach Development of State Performance Objectives Updated Regional performance objectives	Feb. 2009 Nov. 2009 Ongoing	Closed
CONC. 11/72: PBN IMPLEMENTATION SUPPORT That, in order to address challenges in PBN implementation, stakeholders in the PBN implementation Air Navigation Service Providers (ANSP's), aircraft operators, user communities, etc.) be encouraged to provide support including resources to the States and ICAO PBN programme.	Communication of Conclusion to stakeholders and follow-up	ICAO, Stakeholders	State Letter Stakeholder Inputs	Feb. 2009 Ongoing	Closed
CONC. 11/73: MID REGION PBN IMPLEMENTATION STRATEGY AND PLAN That, in order to provide direction to the Stakeholders in their strategic planning during the transition to full implementation of PBN: a) the Middle East Regional Strategy for Implementation of PBN is adopted as at **Appendix 5.5Q** to the Report on Agenda Item 5.5. b) The PBN Regional Implementation Plan is adopted as at **Appendix 5.5R** to the Report on Agenda Item 5.5.	Implementation of PBN Strategy and Plan	ICAO, States	Adoption by MIDANPIRG/11 State Letter PBN Implementation	Feb. 2009 Mar. 2009 Ongoing	Ongoing (Replaced and superseded by Conc.12/57)

CONCLUSIONS AND DECISIONS	FOLLOW-UP	TO BE INITIATED BY	DELIVERABLE	TARGET DATE	REMARKS
CONC. 11/74: PBN STATE IMPLEMENTATION PLAN That, in order to give effect to Assembly Resolution A36-23: Performance based navigation global goals, MID States are urged to complete development of their individual State Implementation plans based on the regional PBN implementation plan by 30 September 2009 so that it may be reviewed by the ATM/SAR/AIS SG as part of the Regional agreement process.	Implement the Conclusion	States	State Implementation Plans PBN Implementation	Nov. 2009 Ongoing	Ongoing (Replaced and superseded by Conc. 12/58)
DEC. 11/75: REVIEW AND AMENDMENT OF THE FASID MET TABLES That, the MID OPMET Bulletin Management Group, assisted by the ICAO Secretariat, is tasked to review of the FASID Tables related to the OPMET exchange (FASID Tables MET 1A, 2A, 2C, 4A and 4B), and propose amendments, as necessary.	Review and update FASID	OPMET BMG ICAO	FASID amendment proposal	Sep. 2009	Closed (Replaced and superseded by Conc. 12/73)

CONCLUSIONS AND DECISIONS	FOLLOW-UP	TO BE INITIATED BY	DELIVERABLE	TARGET DATE	REMARKS
CONC. 11/76: 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, a) WAFC Provider States be invited to organize in 2010 a training seminar for the MID Region on the use of the new gridded WAFS forecasts for convective clouds, icing and turbulence; and b) WAFSOPSG be invited to consider alternative methods of provision of training to the States regarding the new gridded forecasts for turbulence, icing and cumulonimbus clouds, including electronic training packages, in order to ensure that a maximum number of WAFS users in the States would have access to the training.	Follow up with WAFSOPSG	WAFS Provider States WAFSOPSG	Training Seminar Electronic training packages	2010	Ongoing (Replaced and superseded by Conc. 12/64)
CONC. 11/77: SADIS STRATEGIC ASSESSMENT TABLES That, the MID SADIS Strategic Assessment Tables 2008 - 2012 at **Appendix 5.6A** to the Report on Agenda Item 5.6, be adopted and forwarded to the SADISOPSG for planning the future SADIS bandwidth requirements**.**	Follow-up with the SADISOPSG	ICAO SADISOPSG	MID SADIS Strategic Assessment Tables	Mar. 2009	Closed
DEC. 11/78: FINALIZING THE MID SIGMET TEST PROCEDURES That, an ad-hoc working group composed by experts from the Inter-Regional OPMET Gateway (IROG) Vienna (Austria) and the VAAC Toulouse (France), and the MET SG Rapporteur on SIGMET Tests, assisted by the Secretariat, is tasked to finalize the MID SIGMET Test Procedures, based on the proposals presented at MET SG/1 meeting.	Prepare regional guidance document	Ad-hoc working group ICAO	MID SIGMET Tests Procedures	May 2009	Ongoing (Replaced and superseded by Conc. 12/65)

CONCLUSIONS AND DECISIONS	FOLLOW-UP	TO BE INITIATED BY	DELIVERABLE	TARGET DATE	REMARKS
CONC. 11/79: CONDUCTING REGULAR SIGMET TESTS IN THE MID REGION That, a) the final MID SIGMET Tests Procedures be adopted and forwarded to the MID States for implementation; b) the MID States are urged to participate in the regular SIGMET test; c) in order to facilitate the conduct of the SIGMET tests, MID States are invited to designate SIGMET focal points; and d) the results of the SIGMET tests are reported to the MET Sub-Group and feed-back on any identified deficiencies is provided to the MID States concerned with proposed corrective actions.	Follow-up with States, MET Sub-Group	ICAO States VAAC MET Sub-Group	State Letter Nomination of focal points SIGMET test Analysis of test's results and feed-back	May 2009 Oct. 2009 MET SG/2	Ongoing (Replaced and superseded by Conc. 12/65)
CONC. 11/80: IMPROVING THE TROPICAL CYCLONE ADVISORIES AND WARNINGS FOR AVIATION That, in order to improve the quality and timeliness of the Tropical Cyclone Advisories and SIGMETs, the States in the MID Region, having the capability to forecast tropical cyclones tracks in the Arabian Sea and related hazardous aviation weather, be encouraged to establish close collaboration with the Tropical Cyclone Advisory Centre (TCAC) New Delhi and provide feed-back to the TCAC in case of identified forecast errors or other operational problems.	Follow-up with the States concerned	ICAO States concerned	State Letter	May 2009	Closed

CONCLUSIONS AND DECISIONS	FOLLOW-UP	TO BE INITIATED BY	DELIVERABLE	TARGET DATE	REMARKS
CONC. 11/81: IMPROVING THE PROCEDURES FOR SENDING MID OPMET DATA TO EUR REGION That, MID States a) be advised to use **LOZZMMID** as a single AFTN address for sending OPMET data to the EUR Region; and b) that have not yet implemented the correct METAR and TAF format be urged to do so as soon as possible.	Follow-up with States	ICAO States	State Letter Feed-back	Mar. 2009 Jul. 2009	Closed
DEC. 11/82: ACTIVATION OF MID OPMET BULLETIN MANAGEMENT GROUP (BMG) That, a) the MID OPMET Bulletin Management Group be activated with the Terms of Reference and Work Programme as at **Appendix 5.6B** to the Report on Agenda Item 5.6; and 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.	Follow-up with States participating in the OPMET BMG	ICAO States	State Letter Nomination of experts	Mar. 2009 ASAP	Ongoing (Replaced and superseded by Conc. 12/79)

CONCLUSIONS AND DECISIONS	FOLLOW-UP	TO BE INITIATED BY	DELIVERABLE	TARGET DATE	REMARKS
CONC. 11/83: REGIONAL SURVEY ON THE IMPLEMENTATION OF THE MET SERVICES AND FACILITIES That, a) the MID Regional Office conduct a regional survey on the status of implementation of the MET services and facilities in the MID Region, including up-to-date information on the designated meteorological authorities and authorised meteorological service provider(s), through a comprehensive questionnaire encompassing the main implementation MET areas; and b) the results of the survey be reported to MET SG/2 meeting.	Follow-up with States	ICAO States	State Letter Questionnaire Response to Questionnaire Survey report to MET SG/2	May 2009 Jul. 2009 Dec. 2009	Ongoing (Replaced and superseded by Conc. 12/70)
CONC. 11/84: FOSTERING THE IMPLEMENTATION OF QMS FOR THE PROVISION O METEOROLOGICAL SERVICE FOR INTERNATIONAL AIR NAVIGATION REGIONAL SURVEY ON THE IMPLEMENTATION OF THE MET SERVICES AND FACILITIES That, a) the MID States, that have not already done so, are urged to establish Quality Management System (QMS) for the provision of meteorological service for international air navigation; and b) ICAO, in coordination with the WMO, is invited to organize a training event on the QMS for MET in the MID Region in 2009.	Follow up with the States Organize seminar	ICAO States ICAO & WMO	State Letter Action plans Training Seminar	May 2009 TBD Dec. 2009	Closed a) (Replaced and superseded by Concl.12/70) b) Seminar held in Cairo, 13-14 Dec. 2009

CONCLUSIONS AND DECISIONS	FOLLOW-UP	TO BE INITIATED BY	DELIVERABLE	TARGET DATE	REMARKS
CONC. 11/85: UPDATED TRAFFIC FORECASTING REQUIREMENTS IN THE MID REGION That, a) the ICAO MID Regional Office coordinate with other international and regional organizations; including IATA, 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.	Sub-Groups to meet and establish the database Secretariat to co-ordinate with States Update information to be provided by States	TF SG and ICAO States and ICAO States and ICAO	Meeting of the SG Reminder State letter For traffic data	Apr. 2009 Apr. 2009 Mar. 2009 Apr. 2009	Ongoing (Replaced and superseded by Conc.12/74)
CONC. 11/86: ELIMINATION OF AIR NAVIGATION DEFICIENCIES IN THE MID REGION That, a) States 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; b) States and Users Organizations 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;	Implementation of the Conclusion	States Users	Action plans for elimination of deficiencies Feedback from Users and States received through MANDD	May 2009 Ongoing	Ongoing (Replaced and superseded by Conc.12/75)

CONCLUSIONS AND DECISIONS	FOLLOW-UP	TO BE INITIATED BY	DELIVERABLE	TARGET DATE	REMARKS
c) States increase their efforts to overcome the delay in mitigating air navigation deficiencies identified by MIDANPIRG and explore ways and means to eliminate deficiencies; d) ICAO continue to provide assistance to States for the purpose of rectifying deficiencies; and when required, States request ICAO assistance through Technical Co-operation Programme, Special Implementation Projects (SIP) and/or other available mechanisms such as IFFAS; and e) States are encouraged to seek support from regional and international organizations (i.e: ACAC, GCC, etc.) for the elimination of identified air navigation deficiencies.		ICAO	Assistance provided to States, as requested and as appropriate	Ongoing	
CONC. 11/87: ENHANCEMENT OF MID STATES' CAPABILITIES FOR SAFETY OVERSIGHT That, in order to improve aviation safety in the MID Region; MID States are urged to: a) enhance their individual safety oversight capabilities and ensure the establishment and management of a sustainable safety oversight system, and b) cooperate bilaterally and/or jointly as a group of States to make the appropriate arrangements in order to strengthen their safety oversight capabilities.	Implementation of the Conclusion	States ANS SG	Feedback from States ANS SG/1 Report	2010	Ongoing (Replaced and superseded by Conc. 12/80)

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

Keeping Standards Relevant

3.1 The meeting was informed that an extensive analysis of the NextGen and SESAR programmes was conducted to determine their impact on ICAO Standards, manuals and circulars. Although both programmes are based on the *Global Air Navigation Plan* (GANP, Doc 9750), it was found that the programmes have significant differences; and the programmes will result in substantial work with a number of changes to the Standards.

3.2 The work identified was divided into two categories: clearly defined document changes; and new concepts that require further development. In total, over 300 changes to ICAO documentation were identified. Of these approximately 170 are in the first category, while over 130 are in the second category. For each category, ICAO has initiated the "standards roundtable" process in which ICAO will meet regularly with the management personnel of NextGen and SESAR and the various industry standards-making bodies. In the standards roundtable process, work schedules will be driven by implementation dates. Standards development will be treated like a project and will adopt a multi-disciplinary approach to SARPS development.

3.3 The meeting also noted that many other States have developed next generation plans for air navigation modernization. As the number of modernization plans increases, so also does the challenge of ensuring harmonization. ICAO is about to begin the task of ensuring harmonization between NextGen and SESAR and sees benefit in extending this to all new air navigation modernization plans. The benefits of this approach include: the availability of best practices to all; and a reduction in transition problems. Consequently, States should submit their modernization plans to ICAO so that the impact on ICAO's work programme and standards development activities can be determined. Consequently, ICAO will send the plans back to States with appropriate recommendations which may be as follows: for clearly defined needs, engagement in appropriate standards development work; and if necessary, a standards roundtable process like that applied to NextGen and SESAR will be implemented.

3.4 The meeting noted that ICAO would be revising the Global Air Navigation Plan (GANP) with an expected date of completion by 2012 in time for 12 ANConf scheduled for November 2012.

3.5 The meeting, in concluding the discussions on this subject, called upon States developing their national air navigation modernization plans, which have an impact on ICAO SARPs, to share those plans in a timely manner with ICAO to ensure global compatibility and harmonization.

Establishment of the Regional Aviation Safety Groups (RASGs) – Need to Amend TOR of MIDANPIRG

3.6 The meeting was informed that, subsequent to the decision of the Council in March 2008, which called on the ANC to present a report regarding the development of new structures for the implementation Business Plan related to safety, the Commission through an ad-hoc working group initiated a study aimed at identifying a regional mechanism to address safety issues.

3.7 As the current regional mechanisms (such as PIRGs, COSCAPs, RSOOs, DGCA meetings) were not sufficient in addressing and harmonizing regional flight operations safety issues, it was proposed that a new follow-up body is needed that would monitor progress, coordinate actions among States and make recommendations to ICAO to facilitate the implementation of the Global Aviation Safety Plan (GASP) and the associated Global Aviation Safety Roadmap (GASR).

3.8 Further to consultations with States and international organizations, the Commission agreed with the concept of establishing a new regional mechanism, the Regional Aviation Safety Groups (RASGs) and noted that in some areas (e.g. Pan-America), States have already established their own regional mechanism for addressing flight safety issues. The meeting noted that the establishment of RASGs would not fundamentally change the efforts that are presently underway in several ICAO regions.

3.9 In May 2010, on the recommendation of the Commission, the Council approved establishment of RASGs in all regions: Regional Aviation Safety Group – Pan American (RASG-PA) for the Caribbean, South American and North American Regions; Regional Aviation Safety Group – Europe (RASG-EUR) for the European Region; Regional Aviation Safety Group – Asia Pacific (RASG-APAC) for the Asia and Pacific Regions; Regional Aviation Safety Group – Africa (RASG-AFI) for the African Region; and Regional Aviation Safety Group – Middle East (RASG-MID) for the Middle East Region. The RASG will develop and implement a work programme that supports a regional performance framework for the management of safety on the basis of the GASP and the GASR. The reports of RASG meetings will be reviewed by the Commission on a regular basis and by the Council as deemed necessary.

3.10 The meeting noted that a concern arose related to the parallels that were being drawn between the PIRG framework and the RASGs. It was noted that while the PIRGs did touch on some safety issues related to ATM, they had been developed to deal with air navigation plans at a regional and global level with ICAO playing a key leadership role. In contrast, safety continued to lie within the sovereignty of individual States. Also, the need for a mechanism for coordination between PIRGs and RASGs was discussed and this aspect has been reflected in the suggested terms of reference for RASGs as well as for PIRGs. Furthermore, the meeting took this opportunity to amend item e) of TOR of MIDANPIRG to include SUPPs amendment. Accordingly, the revised Terms of Reference of MIDANPIRG is at **Appendix 3A** to the Report on Agenda Item 3**.** Concluding the discussions on RASGs, the meeting agreed to the following Conclusion:

CONCLUSION 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.*

Civil Aviation and the Environment

3.11 The meeting received a summary of current ICAO activities related to environmental protection. In support of the ICAO environmental goals, the meeting noted that Committee on Aviation Environmental Protection (CAEP) has taken a structured approach of first quantifying the environmental impacts and then establishing mitigation measures to address the impacts. The CAEP/8 meeting, held in February 2010, committed to a timetable for the development of a CO_2 Standard for commercial aircraft, aiming at 2013 and recommended for new NOx standards. Also, for market based measures, it recommended that reports related to voluntary emissions trading systems, linking of open emissions trading systems, and offsetting emissions from aviation sector be published.

3.12 The meeting recalled that, at the request of PIRGs in 2006, CAEP delivered simple methodologies for estimating environmental benefits of CNS/ATM systems at the national level (rules of thumb). As this approach does not meet all of the operational requirements, the meeting was apprised that the work of CAEP during the CAEP/9 cycle includes preparing CNS/ATM systems environmental assessment best practices and high-level principles document by 2012. The scope of this document is broader than the rules of thumb and it is envisioned that globally agreed methodologies to account for benefits from operational changes could facilitate access to financial resources.

3.13 The meeting acknowledged that regional initiatives such as AIRE (Atlantic Interoperability Initiative to Reduce Emissions), ASPIRE (Asia and South Pacific Initiative to Reduce Emissions) and INSPIRE (Indian Ocean Initiative to Reduce Emissions) have delivered substantial emissions reductions through improvements in operational performance.

3.14 The meeting noted that the 37th session of the ICAO General Assembly, adopted Resolution A37/19 which includes the following goals for addressing international aviation's contribution to climate change: States and relevant organizations will work through ICAO to achieve a global annual average fuel efficiency improvement of 2 per cent until 2020 and an aspirational global fuel efficiency improvement rate of 2 per cent per annum from 2021 to 2050, calculated on the basis of volume of fuel used per revenue tonne kilometre performed. The resolution also "e*ncourages* States to submit their action plans outlining their respective policies and actions, and annual reporting on international aviation CO_2 emissions to ICAO." It "*invites* those States that choose to prepare their action plans to submit them to ICAO as soon as possible preferably by the end of June 2012". The meeting noted that ICAO is developing guidance and templates to support the development of action plans and will be conducting training in the form of regional workshops in 2011. A workshop for Africa and the Middle East is tentatively being planned for June 2011.

3.15 The meeting, recognizing the environmental benefits, agreed to continue to consider environmental issues in the planning and implementation of regional air navigation systems and encouraged States to develop action plans on international aviation CO_2 emissions and to submit them to ICAO by June 2012.

MIDANPIRG/12
Appendix 3A to the Report on Agenda Item 3

REVISED TERMS OF REFERENCE FOR THE MIDDLE EAST AIR NAVIGATION PLANNING AND IMPLEMENTATION REGIONAL GROUP (MIDANPIRG)

(C-WP/13558, C 190/4 on 25 May 2010)

1. MEMBERSHIP

All ICAO Contracting States, who are service providers in an air navigation region and part of that region's ANP, should be included in the membership of that region's PIRG. Furthermore, user States are entitled to participate in any other PIRG meetings as a non-member. International organizations recognized by the Council may be invited as necessary to attend PIRG meetings as observers.

2. THE TERMS OF REFERENCE OF THE GROUP ARE:

a) to ensure continuous and coherent development of the Middle East Regional Air Navigation Plan and other relevant regional documentation in a manner that is harmonized with adjacent regions, consistent with ICAO SARPs and Global Air Navigation Plan for CNS/ATM systems (Doc 9750) and reflecting global requirements;

b) to facilitate the implementation of air navigation systems and services as identified in the Middle East Regional Air Navigation Plan with due observance to the primacy of air safety, regularity and efficiency; and

c) to identify and address specific deficiencies in the air navigation field.

3. IN ORDER TO MEET THE TERMS OF REFERENCE, THE GROUP SHALL:

a) review, and propose when necessary, the target dates for implementation of facilities, services and procedures to ensure the coordinated development of the Air Navigation System in the Middle East Region;

b) assist the ICAO Middle East Regional Office in fostering the implementation of the Middle East Regional Air Navigation Plan;

c) in line with the Global Aviation Safety Plan (GASP), ensure the conduct of any necessary systems performance monitoring, identify specific deficiencies in the Air Navigation field, especially in the context of safety and security, and propose corrective action;

d) facilitate the development and implementation of an action plan by States to resolve identified deficiencies, where necessary;

e) develop amendment proposals for the update of the Middle East Regional Air Navigation Plan and Regional Supplementary Procedures (SUPPs) to reflect changes in the operational requirements;

f) monitor implementation of air navigation facilities and services and where necessary, ensure interregional harmonization, taking due account of organizational aspects, economic issues (including financial aspects, cost/benefit analyses and business case studies) and environmental matters;

g) examine human resource planning and training issues and propose where necessary human resource development capabilities in the region that are compatible with the Middle East Regional Air Navigation Plan;

h) review the Statement of Basic Operational Requirements and Planning Criteria and recommend to the Air Navigation Commission such changes to them as may be required in light of new developments;

i) request financial institutions, on a consultative basis as appropriate to provide advice in the planning process;

j) maintain close cooperation with relevant organizations and State grouping to optimize the use of available expertise and resources;

k) conduct the above activities in the most efficient manner possible with a minimum of formality and documentation and call meetings of the MIDANPIRG, when it is necessary to do so;

l) invite senior officials of the State, as required, to seek the endorsement of regional air navigation plans, expeditious implementation of air navigation systems elements and the resolution of air navigation deficiencies; and

m) coordinate with respective RASG-MID on safety issues.

REPORT ON AGENDA ITEM 4: INCREASING THE EFFECTIVENESS OF PIRGS

4.1 The meeting was apprised of the outcome of the Second meeting of the MIDANPIRG Steering Group (MSG/2) held in Amman, Jordan, from 9 to 11 March 2010.

4.2 In accordance with the ICAO Business Plan and the requirements for performance monitoring, the meeting re-iterated that the MIDANPIRG Conclusions/Decisions and associated follow-up action plan should be formulated with clear tasks, specific deliverables and defined target dates. Accordingly, the meeting agreed that those statements without requirement for specific follow-up activities should be reflected in the report and should not be formulated in the form of Conclusion or Decision.

4.3 Based on the above, the meeting agreed that each Conclusion and Decision formulated by MIDANPIRG and its subsidiary bodies should respond clearly to the following four Questions (4-Ws):

Why	Why this Conclusion or Decision is needed (subject)
What	What action is required (State Letter, survey, proposal for amendment, seminar, etc)
Who	Who is the responsible of the required action (ICAO, States, etc)
When	Target date

4.4 The meeting noted that the ICAO MID Regional Office is still facing some difficulties communicating with a number of States by electronic means (email). It was also highlighted that the level of participation of some States in the meetings of MIDANPIRG subsidiary bodies and associated activities has been irregular and sometimes below expectation as reflected in **Appendix 4A** to the Report on Agenda Item 4. Furthermore, the meeting noted with concern that responses from States to confirm attendance to meetings are generally not received on time. Accordingly, reminders to State Letters are sent, almost systematically, and sometimes follow-up by telephone is carried out to seek confirmation of attendance of States to allow enough time for Go/No-Go decision to hold or postpone the meeting/activity.

4.5 The meeting noted that, as a follow-up action to MIDANPIRG/11 Conclusion 11/3, the ICAO MID Regional Office sent State Letter Ref.: ME 3/56A-09/303 dated 22 September 2009 to those States that have not replied to previous State Letters on the subject (Sep.2008 and Jan. 2009), requesting them to appoint ICAO Focal Point Persons (FPP). The Table below shows a summary of the situation with regard to the appointment of ICAO-FPP by MID States:

States	Main ICAO-FPP	AGA ICAO-FPP	ANS ICAO-FPP	MET ICAO-FPP	Air Transport ICAO-FPP	Training ICAO-FPP	Flight Safety ICAO-FPP
Bahrain	X	X	X	X	X	X	X
Egypt	X*(Personal E-mail)*	X*(Personal E-mail)*	X*(Personal E-mail)*	X	X*(Personal E-mail)*	X*(Personal E-mail)*	X
Iran							X
Iraq	X*(Personal E-mail)*	X*(Personal E-mail)*	X	X	X*(Personal E-mail)*	X*(Personal E-mail)*	X
Israel	X	X	X	X	X	X	X
Jordan	X	X	X	X	X	X	X
Kuwait	X	X	X	X	X	X	
Lebanon	X	X	X	X	X	X*(Personal E-mail)*	X
Oman	X*(Personal E-mail)*						
Qatar							
Saudi Arabia	X	X*(Personal E-mail)*	X	X	X*(Personal E-mail)*	X	X*(Personal E-mail)*
Syria			X(*Need update)*				X
UAE	X						
Yemen							

4.6 The meeting recognized that the major difficulty facing the ICAO MID Regional Office with regard to communication with States by emails (both the official DGCAs' emails and the ICAO-FPP emails) is the use of personal emails with the risk of changing of positions, retirement, etc, of the concerned persons. Accordingly, the meeting agreed that States should use official email addresses for the communication with ICAO, for example: dans@caa.gov.bh, airports@carc.gov.jo, met@gcaa.ae, ais@airport.ir, etc.

4.7 With regard to the active and efficient contribution of States to the work of MIDANPIRG and its contributory bodies, the meeting referred to the MIDANPIRG Procedural Handbook Part I, para. 3.2 and Part IV, para. 2.4 related to the qualification, experience and continuity of specialists nominated for membership in the MIDANPIRG and its subsidiary bodies.

4.8 Based on the above and with a view to maintain the continuity in the activity of the MIDANPIRG subsidiary bodies and increase their efficiency, the meeting agreed that Members should be designated for the different MIDANPIRG subsidiary bodies, which will facilitate also the communication between the ICAO Regional Officers and the Experts from States directly involved in the work of the concerned subsidiary body. Accordingly, the meeting agreed to the following Conclusion:

CONCLUSION 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.

4.9 The meeting noted that the MSG/2 meeting further explored ways and means to increase the efficiency of MIDANPIRG and supported the following Recommendations:

a) a regional survey related to States' expectations of the MID Regional Office and MIDANPIRG work programme should be carried out;

b) States send their management experts to the MID Regional Office to discuss matters of mutual concern, as necessary;

c) States to organize at the National Level Seminars, Workshop and Training courses, in coordination with and with the support of the ICAO MID Regional Office;

d) the ICAO MID Regional Office to carry out more missions to States, preferably based on States' requests, in order to, amongst others:

- review the status of implementation of SARPs and Air Navigation Plan provisions;
- review the Civil Aviation System and safety oversight functions;
- provide necessary assistance for the elimination of deficiencies (air navigation deficiencies and USOAP findings, as appropriate); and
- collect relevant data necessary for performance monitoring of the air navigation systems.

e) States to improve their internal administrative coordination process for the nomination of participants to attend the ICAO meetings, and activities. In this regard, it was emphasized that an advance notices to the ICAO MID Regional Office of the proposed participants is required, which should be confirmed officially, at a later stage. Whenever, there's a necessity to process entry visa, this process should be initiated from the beginning (at least 1 month prior to the meeting) concurrently with the initial nomination of participants. The list of proposed participants should contain their contact details, especially the email

addresses, in order to facilitate the communication between the concerned ICAO Regional Officer and the participant(s) prior to the meeting with regard to working papers, information papers, presentations, etc. In this respect, the meeting agreed that a Registration Form should be attached to all ICAO MID Regional Office invitation letters, in order to be used for the notification/confirmation of attendance by States.

4.10 The meeting noted that currently the outcome of all MIDANPIRG subsidiary bodies is presented to MIDANPIRG for endorsement, which makes the volume of documentation presented to MIDANPIRG huge, including some tasks which could be delegated to the MSG, such as the update of Terms of Reference (TOR) of the subsidiary bodies, update of the MIDANPIRG Procedural Handbook and other management and technical issues which do not raise any concern. Reference was also made to the MSG TOR, the meeting recalled that the MSG can approve, on behalf of MIDANPIRG, those Draft Conclusions/Decisions emanating from MIDANPIRG subsidiary bodies, which necessitate urgent follow-up action(s).

4.11 Based on the above, the meeting agreed that for the future, when preparing the provisional agenda of the MSG meetings, the secretariat will coordinate with the MIDANPIRG Chairperson the issues which could be fully addressed and closed by the MSG, i.e. MSG is authorized to develop its own Conclusions/Decisions, which will not be in the form of Draft Conclusions/Decisions necessitating the formal endorsement by MIDANPIRG itself. However, it was highlighted that issues necessitating the agreement of all MID States will continue to be presented to MIDANPIRG.

MIDANPIRG Procedural Handbook

4.12 The meeting recalled that the MIDANPIRG Procedural Handbook Fourth Edition - February 2009, has been approved by the MIDANPIRG/11 meeting, through Decision 11/5 and posted on the ICAO Middle East Regional Office website.

4.13 The meeting agreed that the following changes/additions should be reflected in the MIDANPIRG procedural handbook:

- The drafting of Conclusions and Decisions using the 4-Ws;
- The revised TOR of MSG, the ATM/SAR/AIS SG, AOP SG, CNS SG, CNS/ATM/IC SG and MET SG;
- The establishment of the “Implementation of Certification of Aerodromes” Task Force and the dissolution of the ANS Sub Group;
- The deletion of Afghanistan from the lists in page I-1, para.1.3; and page V-1, para. 1.4; and
- The revised MIDANPIRG Organizational Structure.

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

CONCLUSION 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.

Coordination between ICAO MID Regional Office and Arab Civil Aviation Commission (ACAC)

4.15 The meeting recalled that during the MSG/1 meeting the need for a mechanism for coordination between the ICAO MID Regional Office and the Arab Civil Aviation Commission (ACAC) was raised, in order for ACAC to assist its Member States in implementing MIDANPIRG requirements. The meeting noted with appreciation that in order to improve coordination and cooperation mechanism a Memorandum of Cooperation (MoC) between ICAO and ACAC was signed at ICAO HQ on 27 September 2010 prior to the 37th General Assembly Meeting.

ICAO MID Forum

4.16 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.

4.17 It was further recalled that MSG/1 and MIDANPIRG/11 recognized that it's necessary to improve the MID forum to enhance communication and information sharing among MID States through the internet.

4.18 Based on the above, MIDANPIRG/11, through Conclusion 11/4 agreed that Bahrain in coordination with ICAO should explore ways and means for improving the efficiency of the ICAO MID Forum; and investigate the possibility of using the ICAO MID Forum for the posting of AIS publications by States.

4.19 The meeting noted with appreciation that Bahrain has reserved a budget of Bahrain Dinars (BD) 13,000 (approximately USD $ 34,500.00) for the creation of a new ICAO MID Forum and that work is in progress with the Consultant to implement all the requirements identified by Both Bahrain and the ICAO MID Regional Office.

4.20 The meeting noted that the new URL address of the ICAO MID Forum will be: www.midforum.net, and that a Beta version of the Forum will be launched on 20 November 2010. Accordingly, the meeting urged States to register and participate in the MID Forum (effect from, 20 November 2010) and provide their feedback to the ICAO MID Regional Office.

MIDANPIRG/12
Appendix 4A to the Report on Agenda Item 4

FREQUENCY OF STATES' ATTENDANCE 2009/2010
ICAO MID REGIONAL OFFICE MEETINGS

STATES	Bahrain	Egypt	Iran	Iraq	Israel**	Jordan	Kuwait	Lebanon	Libya	Oman	Qatar	Saudi Arabia	Sudan*	Syria	United Arab Emirates	Yemen	Others	TOTAL
CNS/ ATM/IC SG/4	2	8	1	4	0	2	3	0	…	0	0	4	…	0	1	2	3	30
MIDANPIRG /11	6	21	1	3	0	6	6	2	…	2	2	13	…	6	5	0	9	82
WS ICAO Safety Oversight Audit	1	2	0	0	…	4	0	0	…	2	0	59	…	0	0	1	0	69
PBN Procedure Design Course	2	2	2	0	….	4	3	1	…	1	0	2	…	0	4	0		21
ARN TF/2	2	5	1	0	0	5	2	0	…	1	0	8	…	0	1	0	7	32
TF SG/3	2	3	0	0	0	0	4	0	…	0	0	4	2	0	0	0	0	15
eTOD WG/2	2	1	31	0	0	2	3	0	…	4	0	4	…	0	0	0	0	47
AIS/ MAP TF/5	2	2	44	0	0	2	3	0	…	2	0	4	…	5	0	0	0	64
IPS WG/1	2	1	2	2	0	1	0	0	2	0	0	2	…	3	0	0	0	15
MID RMA Board/8	5	2	2	0	…	2	0	2	…	1	…	5	…	1	2	0	0	22
Special ATS Route Coord. MTG	2	…	…	4	…	…	4	…	…	…	0	0	…	0	…	0	2	12
ATFM Seminar	4	5	3	0	0	2	4	0	…	2	0	6	…	3	1		9	39
IPS WG/2	2	1	2	2	0	1	0	0	2	0	0	2	…	3	0		0	15
AMC Training	2	10	3	3	0	4	0	0	1	0	0	6	…	3	0	0	2	34
MID RMA Board/9	4	2	3	3	…	2	0	3	…	2		3	…	2	2	1	2	29
PBN/ GNSS TF/2	3	5	4	0	0	2	6	0	…	0	0	3	…	0	2	0	1	26
PF Work Shop	2	3	0	0	0	0	0	0	…	0	0	4	…	0	0	1	2	12
MET SG/2	3	5	0	0	0	0	1	0	…	2	1	4	…	3	0	0	3	22
QMS for MET Seminar	3	7	0	2	0	0	0	0	…	0	1	4	…	3	0	0	2	22
ATM/SAR/AIS SG/11	12	5	2	1	0	2	0	0	…	2	2	4	…	2	2	0	4	38
BFRI WG/1	2	…	0	6	…	4	4	…	…	…	…	3	…	3	…	…	7	29
INFPL SG/1	1	7	2	3	0	4	3	0	…	0	2	3	…	2	6	1	3	37
RVSM Safety Ass. Seminar	8	2	2	2	…	4	0	0	…	2	2	3	…	3	3	0	3	34

STATES	Bahrain	Egypt	Iran	Iraq	Israel**	Jordan	Kuwait	Lebanon	Libya	Oman	Qatar	Saudi Arabia	Sudan*	Syria	United Arab Emirates	Yemen	Others	TOTAL
Seminar on Certification of Aerodrome & Safety of Aerodrome Operation	2	31	0	3	1	1	0	0	0	0	0	9	…	0	0	0	0	47
AOP SG/7	1	15	2	4	0	1	4	0	0	0	0	4	…	0	0	0	0	31
MSG/2	3	3	2	0	…	9	…	1	…	4	…	4	…	…	3	…	…	29
ATS Route Network (ANR) TF/3	3	7	0	4	0	3	2	0	…	0	1	6	…	3	3	2	5	39
Secondary Surveillance Radar (SSR) Code Allocation Study Group (SSRCA SG/3)	…	7	0	…	…	…	…	…	…	0	…	2	…	4	2	…	0	15
MID RMA Board/10	3	4	24	2	…	0	0	0	…	2	…	5	…	0	1	0	1	42
CNS SG/3	3	7	0	4	0	2	3	0	…	2		5	…		1		1	28
SAR ad-hoc WG/1	4	3	2	0	0	3	0	0	…	4	…	2	…	2	2	0	0	22
CNS/ATM/IC SG/5	3	7	0	5	0	2	4	0	…	0	….	3	…	3	3	0	0	30
Air Navigation Safety (ANS) SG/1	3	7	2	6	0	1	0	0	…	4	0	2	…	0	3	0	0	28
Work Shop on ICAO New Flight Plan format	2	12	3	4	0	6	5	0	…	2	3	4	1	0	10	0	13	65
ICAO New Flight Plan format Study Group (INFPL SG*/2)	2	14	2	4	0	4	5	0	2	2	3	4	4	0	8	0	6	60
Regional Planning Seminar on WRC 12	2	8	0	3	0	0	0	0	0	2	0	1	0	0	0	0	17	33
ACP WG F/23	1	5	2	3	0	0	2	0	2	2	0	0	0	0	0	0	23	40
Total	106	229	142	77	1	85	71	9	7	47	17	201	7	54	65	8	125	1255

*** : Libya and Sudan not part of MID Region ANP**
**** : Israel Accredited to EUR/NAT**
... : Not Required
0 : No Attendance

REPORT ON AGENDA ITEM 5: PERFORMANCE FRAMEWORK FOR REGIONAL AIR NAVIGATION PLANNING AND IMPLEMENTATION ISSUES

5.1 AOP

Implementation of certification of aerodromes

5.1.1 The meeting recognized the States safety oversight obligations with regard to Airports and the importance of the implementation of certification of aerodromes requirement as a tool for a State to ensure adequacy of an aerodrome infrastructure, facilities, services and operational procedures for safe aircraft operations at aerodromes and that increased number of certified aerodromes would be a performance key indicators.

5.1.2 The meeting noted that all proposals for amendments to the list of aerodromes open for international air transport have been processed and approved and incorporated in the first edition -2010 of the MID Basic Air Navigation Plan (Doc 9708) – Part III - Aerodromes, Volumes I and II..

5.1.3 The meeting was apprised on the outcome of the seventh meeting of the AOP Sub-Group that was held in Cairo from 06 to 08 March 2010 pertaining to the status of implementation of certification of aerodromes and further updates as contained at **Appendix 5.1A** to the Report on Agenda Item 5.1, which indicate that:

- Around 32% of MID Intl Aerodromes have been certified
- Around 46% of MID Intl Aerodromes will be certified before the end of 2010

5.1.4 The meeting was presented with the outcome of the MID Seminar on certification of aerodromes and safety of aerodrome operations that was organized by ICAO as a Special Implementation Project (SIP) in Cairo from 1 to 4 March 2010, as contained at **Appendix 5.1B** to the Report on Agenda Item 5.1. The meeting was of the view that there is an urgent need for additional guidance material to address air navigation procedures specific to aerodromes (PANS-AGA) to assist States on the proper implementation of ICAO SARPs relevant to aerodromes and, noted with appreciation the progress made by ICAO for addressing this requirement.

5.1.5 In support of ICAO initiatives, the meeting was of the view to expedite the issue of PANS-AGA to include particularly, safety assessment of aeronautical studies and safety mitigation measures that allow exemptions or exceptions as specified by Annex 14 Volume I. Accordingly; the meeting agreed to the following conclusion:

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CONCLUSION 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, Volume I.

5.1.6 The meeting noted the relatively good progress made with regard to the implementation of certification of aerodrome in the MID Region and encouraged States that have not finalized their certification process to give priority to its final implementation. In order to harmonize and foster the implementation of certification of aerodromes in the MID Region the meeting agreed to the AOP SG/7 proposal on the establishment of a "Aerodrome Certification Implementation Task Force" (ADCI TF) and agreed on its Terms Of References, work programme, expected deliverables and target dates as contained at **Appendix 5.1C** to the Report on Agenda Item 5.1. Accordingly; the following Decision was formulated:

DECISION 12/5: ESTABLISHMENT OF THE 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).

Effectiveness of Aerodrome Emergency Planning (AEP)

5.1.7 The meeting recalled the recommendation made by MIDANPIRG/11 meeting through Conclusion 11/12 for AOP SG to follow-up the recommendation made by the MID Seminar on Aerodrome Emergency Planning (AEP) in May 2008 and was apprised with the relevant outcome of the AOP SG/7 meeting. In order to assist MID States to tackle the effectiveness of AEP, particularly the aerodrome Emergency Operating Centre (EOC), as a safety operational requirement the meeting supported the need for a survey to be conducted by ICAO MID Office on the status of development and assessment of aerodrome emergency planning in the MID Region and that results and analysis of the survey to be presented to the next AOP SG meeting in the Form contained at **Appendix 5.1D** to the Report on Agenda Item 5.1.

5.1.8 Accordingly the meeting agreed to the following Decision:

DECISION 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.

MID Regional Aerodrome Performance Objectives

5.1.9 The meeting was apprised on the transition to a performance-based planning approach through Global, Regional and National frameworks relevant to safety and efficiency of aerodrome operations and related outcome of the following MIDANPIRG subsidiary bodies as a follow up on MIDANPIRG/11 Cons 11/70, 11/71:

- The AOP SG/7 Meeting
- The MSG/2 Meeting
- The CNS/ATM/IC SG/5 Meeting

5.1.10 The meeting reviewed and agreed to the following set of aerodrome performance metrics proposed by the AOP SG/7 meeting, which are in line with the MID Regional aerodrome performance objectives and was of the view that further updates might be introduce at a later stage:

a) MID AOP Metric 1:	*Number of certified international aerodromes;*
b) MID AOP Metric 2:	*Number of Runway incursions and excursions per year;*
c) MID AOP Metric 3:	*Number of air navigation deficiencies in the aerodrome area of priority "A" eliminated;*
d) MID AOP Metric 4:	*Number of Aerodromes that are ready to accommodate NLA operations; and*
e) MID AOP Metric 5:	*Number of movements in the mean busy hour (the arithmetic mean over the year of the number of movements in the daily busiest hour.*

5.1.11 The meeting, in order to standardise and harmonize the National Performance Framework Forms (PFFs), and to avoid duplicated efforts, agreed to close MIDANPIRG/11 Conclusion 11/6 and to monitor the Status of implementation of States action plans, target dates with regard to certification of aerodrome requirements as one of the State Performance key indicators. The meeting agreed that the draft Conclusion proposed by the AOP SG/7 with respect to "Development of National Performance Objectives and Related Measurable Indicators, Targets and Metrics in the Aerodrome Field" which was superseded by the CNS/ATM/IC SG/5 Draft Conclusion(s) relevant to Regional and National Performance Based Framework (PFF) in all air navigation fields, including aerodromes, would be subject to updates in a later stage in line with the Performance Based Global and Regional Air Navigation System.

Runway Safety

5.1.12 The meeting noted with concern the result of statistical analysis based on the data contained at the ICAO ADREP system which shows that runway-related accidents and serious incidents continue to be a serious safety concern and that runway excursions alone are the highest single occurrence category of all accidents over the last ten years for all commercial and general aviation operations. The percentage of all runway excursions accidents continues to increase with a twenty-year average of 21.4 per cent, a 24.1 per cent average over the last five years and 24.5 per cent for 2009. The meeting also noted that in the past ten years there have been twenty-five runway incursions (RI) accidents and ninety-eight serious incidents reported to ADREP.

5.1.13 The meeting was informed that runway surface conditions, including friction characteristics, contamination and foreign object debris (FOD), etc., and bird/wildlife strike issues are not identified as separate ADREP occurrence categories, however, they are major contributors to runway-related accidents and serious incidents and are also addressed within the ICAO Runway Safety Programme and as the frequency and severity of RE became more apparent through the analysis of ADREP data, The meeting also was informed that it is considered appropriate to address all runway-related safety issues in a comprehensive manner. Therefore, the ICAO Runway Safety Programme has been expanded to cover both RI and RE, as well as other runway-related safety occurrences and activities.

5.1.14 The meeting noted the follow-up action taken by the AOP SG/7 on MIDANPIRG/11 Conclusions 11/10 and 11/11 and also noted the outcome of the ANS SG/1.

5.1.15 The meeting noted the outcome of the AOP SG/7 and the ANS SG/1 meetings relevant to MIDANPIRG/11 Conclusions 11/10 and 11/11 and was of the view that the responses of MID States (five States responses) and the information available were not indicative to analyze and present the status of implementation of runway safety measures in the MID Region and urged MID States to place appropriate measures to enhance runway safety through the development and implementation of a Runway Safety Programme with a focus on Runway Excursion Prevention Programme.

5.1.16 The meeting also noted the outcome of the MSG/2 and the CNS/ATM/IC SG/5 meeting related to safety of runway operations and recognized that the term Runway Safety Programme that includes runway incursions, excursion prevention and runway maintenance programme would represent one of the aerodrome performance objectives in the MID Region and that "*Number of Runway incursions and excursions per year"* would be one of the MID Regional metrics was adopted.

5.1.17 The meeting recalled that a national performance framework, which includes under AGA; implementation of Runway safety programme as part of safety of aerodrome operations, should detail relevant national action plans, target dates and performance key indicator. Based on the above and to avoid duplicated State' efforts, the meeting agreed to close MIDANPIRG/11 Conclusions 11/10 and 11/11.

5.1.18 The meeting was apprised of the outcome of the High-Level Safety Conference relevant to runway safety and supported the need to raise the awareness of MID States on the requirement for development and implementation of runway safety measures and to share worldwide experience, as appropriate, on the use of new technology relevant to runway safety. The meeting also agreed to the AOP SG/7 proposal to conduct a Runway Safety Seminar in the MID Region, and endorsed the specific topics contained at **Appendix 5.1E** to the Report on Agenda Item 5.1 to be part of the proposed MID seminar activities.

5.1.19 Accordingly, the meeting agreed to the following Conclusion:

CONCLUSION 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.

Reporting of Aerodrome Technical Data and Coordination between Aeronautical Information Services and Aerodrome Authorities

5.1.20 The meeting recalled the ICAO requirement for quality and timely reporting of aerodrome technical data and the need for proper coordination between aeronautical information services and aerodrome authorities and the requirement for the application of the classification which has a specific data integrity level, in accordance with Annex 14 Volume I and Annex 15.

5.1.21 The meeting recognized that ICAO Guidance material on the aeronautical data quality requirements (accuracy, resolution, integrity, protection and traceability) is contained in the World Geodetic System — 1984 (WGS-84) Manual (Doc 9674), however, a number of safety audit findings in the MID Region fall under the provision of aeronautical data that are required to be reported by the aerodrome operator. Many States have not met the requirement relevant to a quality system for ensuring the accuracy, integrity and protection requirements for aeronautical data are met throughout the data transfer process.

5.1.22 Of a Particular importance are changes to aeronautical information that affect charts and/or computer-based navigation systems which qualify to be notified by the aeronautical information regulation and control (AIRAC) system, as specified in Annex 15, Chapter 6 and Appendix 4. The predetermined, internationally agreed AIRAC effective dates in addition to 14 days postage time are required to be observed by the responsible aerodrome services when submitting the raw information/data to aeronautical information services.

5.1.23 The meeting noted the action taken by the AOP SG/7 as part of its TOR relevant to identification of the lack of implementation of ICAO requirement related to reporting of the basic aeronautical data and other technical data considered being of operational safety significance in a timely manner. The meeting agreed on the need to harmonize the implementation of these requirements through development of harmonized guidance material that would support States and enhance the proper implementation of ICAO requirement.

5.1.24 The meeting accordingly, agreed to the following Conclusion:

CONCLUSION 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.

MIDANPIRG/12
Appendix 5.1A to the Report on Agenda Item 5.1

STATUS OF IMPLEMENTATION OF AERODROME CERTIFICATION IN THE STATES OF THE MID REGION

AERODROMES INCLUDED IN THE REGIONAL AIR NAVIGATION PLAN (ANP - Doc 9708)

OCTOBER 2010

State/Aerodrome				Responsible Agency	Certification implementation				
					Finished	Underway		Future Planned	
					Date of publication	Dates		Dates	
State	Number of Aerodromes Open for Intl Use	Number of Aerodromes Open for Domestic Use	Name of Aerodrome			Beginning	Scheduled publication before end of 2010	Beginning	End Update is required
Bahrain	1				-		1	-	-
Egypt	15				4		4	7	Nov. 2012
Iran	8							8	
Iraq	5						3 Dec 2010	2	June 2011
Israel	5							5	
Jordan	3				3				
Kuwait	1				1				
Lebanon	1							1	
Oman	2	4			1 Intl + 4Dom			1	Dec 2012
Qatar	1						1 Dec 2010		
Saudi Arabia	4				4				
Syria	3							3	
UAE	6				6				
Yemen	5							5	
Total	60				19		9	321	

Around 32% of MID Intl Aerodromes have been certified
Around 46% of MID Intl Aerodromes will be certified before the end of 2010

MIDANPIRG/12
Appendix 5.1B to the Report on Agenda Item 5.1

RECOMMENDATIONS BY MID CERTIFICATION OF AERODROMES AND SAFETY OF AERODROME OPERATIONS (CADS) SEMINAR

(Cairo, 01-04 March 2010)

A. In order to effectively, expedite the implementation of aerodrome certification and safety management of aerodrome operations, the seminar, guided by Doc 9774, recommends that MID States that have not already done so, should:

1) Conduct a gap analysis and ensure that the basic aviation law includes , *inter alia*: provisions to:

   a. Require certification of aerodromes according to specific criteria and well defined procedures;
   b. provide for the adoption of aerodrome certification regulations;
   c. authorize the establishment of the CAA, where appropriate, to be headed by a person (DGCA) with defined duties and responsibilities;
   d. entrust the DGCA with the duties and responsibilities to issue, review, transfer, refuse and cancel aerodrome certificates; develop, issue and amend Aerodrome Directives, Bulletins, Orders, etc., consistent with the regulations;
   e. establish an entity to assist in carrying out the functions and responsibilities of the DGCA;
   f. require the CAA, as the certification authority, to be satisfied that the holder of an aerodrome certificate is competent to ensure that the aerodrome, its associated airspace and the operating procedures are safe for use by aircraft;
   g. provide for the necessary coordination with other agencies and service providers, such as aeronautical information services, air traffic services, designated meteorological authorities, local land-use authorities and security, to ensure safe aircraft operations;
   h. provide for authorized personnel to have right of access to such places as necessary to carry out safety audits, inspections and testing as provided for in the regulations; and
   i. provide for the enforcement and imposition of sanctions for non-compliance with the regulations.

2) Conduct a gap analysis and ensure that necessary technical documentation. processes and procedures for both regulatory and aerodrome operators are available and maintained.

3) Ensure that adequate training and awareness is provided to all staff concerned. (training policy, develop a training programme and implement training plans).

4) Conduct a gab analysis to identify difficulties encountered, if any, during the implementation of certification process for each aerodrome and take appropriate measures to resolve them that might include request for ICAO TC assistance.

5) Take necessary measures to determine, satisfy and continuously monitor safety requirements of aerodrome operations (Aerodrome surveillance programme that include periodic and random audits and inspections).

6) Share experience and exchange safety information related to aerodrome operations amongst stakeholders.

7) Provide information on the status of certification of aerodromes to the appropriate aeronautical information services for promulgation in the Aeronautical Information Publication (AIP) in accordance with Annex 14 Chapter 2.13.1 and Annex 15, Appendix 1, AD 1.5.

B. With a view to standardize and harmonize the implementation of Annex 14 SARPS relevant to aerodrome operations and management services, the Seminar requested ICAO to expedite the development and issuance of the PANS/AGA (Procedures for Air Navigation Services for Aerodromes and Ground Aids) as complementary to the implementation of the SARPs contained in Annex 14, Volume I.

MIDANPIRG/12
Appendix 5.1C to the Report on Agenda Item 5.1

TERMS OF REFERENCE FOR CERTIFICATION OF AERODROMES TASK FORCE

1. TERMS OF REFERENCE

a) Carry out specific studies in support of the implementation of certification of aerodromes in the MID Region, according to the ICAO Strategic Objectives and guided by Global Plan Initiative (GPI/13 & GI/14) 5 and related GPIs (GPIs 6, 9, 18).

b) Identify other issues/action items arising from the work of ICAO or for consideration by ICAO in order to facilitate regional harmonization of existing as well as future implementation of certification of aerodrome requirements.

c) Determine and recommend, on the basis of studies, the Implementation of annex 14 Volume I requirements in the MID Region, based on the Global and regional performance goals as reflected in assembly resolution 36-13-Appendix P on "The Provision of adequate Aerodrome" for safe aircraft operations .

d) Assist States that may require support in the implementation of certification of their aerodromes.

2. In order to carry out the above TOR; the Certification of Aerodrome Task Force shall:

a) Study and assess the Regional aerodrome requirements.

b) Initially focus assistance to States that may require support on development of the State certification of aerodromes implementation plans.

c) Identify guidance material and training needs.

d) Coordinate with other ICAO Regions as necessary to address implementation difficulties issues.

e) Undertake other functions relevant to implementation of certification of aerodromes as assigned by the AOP SG or MIDANPIRG.

f) Complete the development of the Regional Runway Safety Implementation Programme and Plans and

g) Apply ICAO guidance material and information as may be applicable to the Region to facilitate the implementation of certification of aerodromes and safety of aerodrome operations.

f) Report to the AOP SG to keep the MIDANPIRG closely briefed.

3. COMPOSITION OF THE TASK FORCE

Aerodrome Experts from:
STATES: MID Region States
ORGANIZATIONS *(AS OBSERVERS):* IATA

MIDANPIRG/12
Appendix 5.1D to the Report on Agenda Item 5.1

AERODROME EMERGENCY PLAN (AEP) AND EMERGENCY OPERATION CENTRES (EOC) SURVEY

STATE: _____

AERODROMES INCLUDED IN THE AOP 1 TABLE ;
DOC 9807 – AIR NAVIGATION PLAN FOR THE MIDDLE EAST REGION, VOLUME II, FASID

Please fill in the columns from 1 to 10 according to the following indications:

1 = Is there an Emergency Plan (YES or NO)
2 = Preparation date
3 = Date of the last update
4 = Date of the last full-scale exercise
5 = Date of the last partial exercise
6 = Dates of the next complete exercise
7 = Dates of the next partial exercise
8 = Is there an Emergency Operation Centre – EOC (YES or NO)
9 = Date of installation
10 = Date of the last training

AERODROME	EMERGENCY PLANS							EOC		
	1	2	3	4	5	6	7	8	9	10
OBSERVATIONS:										

MIDANPIRG/12
Appendix 5.1E to the Report on Agenda Item 5.1

**TOPICS RELATED TO RUNWAY EXCURSIONS
AS PART OF A PROPOSED
MID REGIONAL RUNWAY SAFETY SEMINAR**

- Review of Excursion Accidents

- The Approach and Landing Accident Reduction (ALAR) Task Force developed conclusions and recommendations for practices that would improve safety in approach-and-landing, in the following domains:

  Air Traffic Control (ATC) - Training and Procedures;
  Aircraft Equipment;
  Aircraft Operations and Training; and
  Airport Facilities

- Identify factors that prevent the effective implementation of the ALAR recommended practices.

- Flight Operations Inspector (FOI) role in preventing excursions:

  Ensure mature operations manual guidance
  Ensure SOP's incorporate best practise philosophy
  Crew Resource Management (CRM) training emphasis on effective communication
  Integrated approach with Check & Training Captains
  Initial and recurrent training that attains best practise standards

- Topics:

  Attaining full reverse position
  Braking technique
  Call outs for spoiler non activation
  Correct setting of auto brakes
  Flap usage
  Go around criteria
  Stabilised approach criteria
  Touchdown in touch down zone

- ATC

  Accurate winds vs. ATC winds
  Avoid nominating downwind runways especially in wet
  "Hot & High" approaches
  Location of transfer to tower control from approach control
  Speed requirements on final
  Wind shear reports

- Airport

  Declared distances quality requirements
  Runway End Safety Area (RESA) requirement
  Runway drainage, identification of minimum friction level below which information that a runway may be slippery when wet should be made available
  Runway contaminants removal in particular rubber deposits and sand removal
  Measurements for runway friction characteristics and runway pavement maintenance
  Runway strip characteristics and frangibility requirements
  Foreign Object Damage (FOD), movement area inspection and monitoring

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REPORT ON AGENDA ITEM 5: PERFORMANCE FRAMEWORK FOR REGIONAL AIR NAVIGATION PLANNING AND IMPLEMENTATION:

5.2 ATM/SAR

Improvement of the MID ATS Route Network

5.2.1 The meeting was apprised on the outcome of the ATM/SAR/AIS SG/11 and the ARN TF/3 meetings related to the MID ATS Route Network.

5.2.2 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.

5.2.3 The meeting noted that Bahrain, Oman and UAE have established RNAV 1 Routes in their FIRs (A419, B457, B505, N563, N571, P307, Q111, Q112, Q114 and Q300). The meeting noted that these routes have already been included in the MID Basic ANP Table ATS 1- ATS Routes and that appropriate route designators are assigned to these routes.

5.2.4 The meeting noted that during the review of the Table ATS 1 it was agreed that in order to facilitate the amendment proposal to the Table ATS 1, an additional explanatory Note *"Note 8"* be added to the Table ATS 1 to indicate that an ATS route or part thereof is an RNAV 1 route, in the BASIC ANP Doc 9708.

5.2.5 The meeting recognized the need to harmonize the implementation of RNAV 5 in the MID Region. In this regard, the meeting noted that a number of States have not yet updated their AIPs to change RNP 5 to RNAV 5. Furthermore, the meeting noted that the RNAV 5 area is implemented in MID FIR's/States with a different base Flight Level (FL150, FL195, FL245, FL280). Accordingly, the meeting agreed to the following Conclusion:

CONCLUSION 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).

5.2.6 The meeting further noted that:

a) there was a proposal to remove segment Jeddah-Abu Dhabi from ATS route G660; however IATA requested the meeting to retain this segment in the Plan for future use.

b) IACA and IATA urged States concerned to accord high priority to the implementation of ATS route UL602/UP975;

c) a number of ATS Route proposals were submitted by Iran. However, Bahrain requested additional information regarding the connection (MIDSI - IMDAT) before considering the proposal. Bahrain also informed the meeting that they had discussed (MIDSI - DASDO) with Iran and that the proposal is subject to bi-lateral discussions between Bahrain and Iran.

5.2.7 The meeting noted that the First meeting of Baghdad FIR RVSM Implementation Working Group (BFRI WG/1) held in Cairo 18 – 20 January 2010, reviewed a number of ATS route proposals made by Iraq.

5.2.8 The meeting was apprised on Iraq submission of several proposals for establishment of a number of ATS routes within Baghdad FIR to relieve congestion and increase capacity, and requested concerned States to review and agree on a reasonable time frame to implement these routes.

5.2.9 The meeting noted that the MIDRMA advised the ARN TF/3 meeting that the proposals submitted by Iraq require assessment by MIDRMA to ensure the passing frequencies to be within specified limits and an estimate of expected traffic volume would be required to conduct the assessment of passing frequencies.

5.2.10 The meeting noted that the ARN TF/3 meeting was briefed on the outcome of the Route Development Group- Eastern Part of the ICAO EUR Region (RDGE/12) meeting held in Paris, 8-12 March 2010 and noted with appreciation the successful conclusion and signature of the Letters of Agreement (LOA) between Ankara and Baghdad ACCs to open ATS route UT888.

5.2.11 The meeting noted that in order to relieve congestion, increase capacity, and maintain the safety of the parallel route structure concept, within Baghdad FIR. Iraq proposed re-routing of the UP975 route within the Baghdad FIR from the existing Boundary waypoint RAGAN, then straight to NADOX by passing MUTAG in order to avoid Holy Shrines. In this regard the meeting agreed that any ATS route proposals should be submitted to the ARN TF for getting the experts advice.

5.2.12 It was also noted that Jordan submitted several proposals to re-structure the airspace in Jordan; Syria advised the meeting that it is still considering parts of the proposal and intends to hold discussions with Jordan.

5.2.13 The meeting noted that the ATS Route Catalogue proposals are for consideration/processing, in the near term or future, until such ATS route proposals have been processed as amendments to Table ATS-1 and approved by the ICAO Council, or agreed to be removed from the Catalogue for such reasons as being improbable, overtaken by events, or replaced by an agreed alternative. The Catalogue will be used to record and track the routes' development, and will as such be a living document updated at relevant meetings. It shall not be the purpose or intention of the *MID ATS Route Catalogue*, to duplicate the ANP Table ATS-1 or its purpose.

5.2.14 The meeting recognised the benefit of including in the ARN TF agenda the ATS route proposals emanating from adjacent ICAO Regions affecting interface areas of the MID Region and encouraged States to consider implementation of the route proposals.

5.2.15 In view of the above the meeting agreed on a draft proposal format for amendment of MID Basic Air Navigation Plan (ANP) that could be used by States for their required ATS route changes, as at **Appendix 5.2A** to the Report on Agenda Item 5.2.

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

5.2.16 The meeting recalled that the use of the ICAO Five-Letter Name Codes and Route Designator (ICARD) System for the allocation of five-letter-name codes (5LNC) started in the MID Region in 2004.

5.2.17 The meeting noted that the ATM/SAR/AIS SG/11 meeting held in Bahrain, 10-12 November 2009, recognized that the use of the ICARD system for the allocation of 5LNCs 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. Accordingly, the list of 5LNCs allocated by State was made available on a CD-ROM distributed to the participants and States were requested to check their lists of allocated 5LNCs and inform the Secretariat of any necessary update.

5.2.18 The meeting noted that as a follow-up action to the ATM/SAR/AIS SG/11 Draft Conclusion 11/3, the ICAO MID Regional Office requested all States to give effect to the above-mentioned Draft Conclusion. Accordingly, seven (7) States replied positively; and an important number of duplicate and non-ICAO codes were eliminated. However, work has to be pursued with the remaining States that have not yet taken necessary action.

5.2.19 The meeting recalled that further to the ALLPIRG/5 Conclusions 5/5 and 5/6, ICARD was endorsed by ICAO as the global system for the allocation and management of 5LNCs.

5.2.20 The meeting noted that the ICARD hosting has been transferred from EUROCONTROL to ICAO as of 23 August 2010. Accordingly, the ICAO MID Regional Office sent State Letter Ref.: AN8/15.2 – 10/300 dated 30 August 2010 to all MID States requesting them to take necessary action in order for their designated ICARD Route Planner(s) to register to the ICAO ICARD 5LNC web-based System and to give effect to the ATM/SAR/AIS SG/11 Draft Conclusion 11/3.

5.2.21 Based on the above the meeting agreed to the following Conclusion:

CONCLUSION 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).

RVSM Operations and Monitoring Activities in the MID Region

5.2.22 The meeting was apprised of the outcome of the ATM/SAR/AIS SG/11, MIDRMA Board/9 and Board/10 meetings related to the MIDRMA activities and RVSM safety monitoring activities.

MIDRMA Financial and Managerial Issues

5.2.23 The meeting noted with appreciation the improvement in the payment of contribution/arrears to the MIDRMA Project. However, it was highlighted that Syria was the only State that has yet to pay its arrears to the MIDRMA Project (US$ 18,750). Accordingly, the meeting urged Syria to ensure that all arrears are paid, as soon as possible, and in any case prior to 1 November 2010, the deadline for payment of contributions for the year 2011.

5.2.24 The meeting recalled that the MIDRMA funding mechanism was agreed to by the MIDRMA Board/3 meeting held in Muscat, Oman, 24-25 November 2006, through Draft Conclusion 3/5 and endorsed by MIDANPIRG/10 held in Doha, Qatar, 15-19 April 2007, through Conclusion 10/33 and accordingly, the MIDRMA Member States were divided into two categories:

- Category 1: Bahrain, Egypt, Iran, Oman and Saudi Arabia paying 15% each of the yearly total cost of operation of the MIDRMA, and

- Category 2: Jordan, Kuwait, Lebanon, Syria and Yemen paying 5% each of the yearly total cost of operation of the MIDRMA.

5.2.25 The meeting noted with appreciation that Iraq joined the MIDRMA on 11 January 2010 by signing the MIDRMA Memorandum of Agreement (MOA), as reflected in **Appendix 5.2B** to the Report on Agenda Item 5.2. Accordingly, with a view to further simplify the MIDRMA funding mechanism the MIDRMA Board/10 meeting held in Tehran, Iran Islamic Republic of, 3-5 May 2010, agreed that the contributions of the MIDRMA Member States shall be maintained as follows:

- Bahrain, Egypt, Iran, Oman and Saudi Arabia pay **US$ 30,000** each, and

- Iraq, Jordan, Kuwait, Lebanon, Syria and Yemen pay **US$ 10,000** each.

5.2.26 Based on the above, the meeting agreed to the following Conclusions which replace and supersede MIDANPIRG/11 Conclusion 11/17 related to the Membership of the MIDRMA and MIDANPIRG/10 Conclusion 10/33 related to the MIDRMA funding mechanism:

CONCLUSION 12/11: MEMBERSHIP OF THE MID RMA

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).

CONCLUSION 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;

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;

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;

k) the MIDRMA funding mechanism be revised by the MIDRMA Board when necessary.

5.2.27 The meeting noted that the MIDRMA Board/10 meeting recognized that the scope of activities and work of the MIDRMA has increased significantly since its establishment. In this regard, it was highlighted that the work of the MIDRMA includes some tasks which are carried out on daily basis, in particular, the required coordination and follow-up with Member States, Aircraft Operators, and other RMAs especially those adjacent to the MID Region. Accordingly, the meeting agreed that, in order to increase the efficiency of the MIDRMA, the appointment of a full-time employee to the MIDRMA became a necessity. Based on a proposal by Bahrain for the appointment of Mr. Fathi Al-Thawadi as a full-time MIDRMA Officer, the MIDRMA Board/10 meeting reviewed the Curriculum Vitae (CV) of Mr. Fathi Al-Thawadi and recognized that the incumbent has the necessary expertise and experience to assume the responsibility of a full-time MIDRMA Officer. In addition, it was highlighted that the expertise needed for an RMA Officer is not easily available in the market, and taking into consideration the background and previous experience of Mr. Al-Thawadi in the MIDRMA (as a part-time staff), the meeting agreed to the appointment of Mr. Al-Thawadi as a full time MIDRMA Officer. Accordingly, the meeting agreed to the following Conclusion:

CONCLUSION 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.

5.2.28 Based on the above, the meeting noted that Mr. Al-Thawadi, MIDRMA Officer, will also be responsible of the MIDRMA financial and administrative issues and expressed, accordingly appreciation to Mr. Sanad S. Salim, who served the MIDRMA since its establishment as the MIDRMA Administrator and wished him all the success in his new assignment.

MID RVSM SMR 2010

5.2.29 The meeting noted that the MIDRMA Board/10 reviewed the Draft MID RVSM Safety Monitoring Report for 2010 (MID RVSM SMR 2010). It was recalled that, in accordance with MIDANPIRG/11 Conclusion 11/21, States not providing the required data to the MIDRMA on a regular basis and in a timely manner, are to be included in the MIDANPIRG List of Air Navigation Deficiencies. The meeting noted with concern that Yemen has not been complying with the above-mentioned Conclusion. Accordingly, the meeting agreed to the inclusion of Yemen in the MIDANPIRG List of Air Navigation Deficiencies for not providing the required data to the MIDRMA on a regular basis and in a timely manner.

5.2.30 The meeting noted with concern that the reporting of Altitude Deviation Reports (ADRs), which is considered one of the most important elements for the development of the Safety Monitoring Reports, is far below expectations. In this regard, it was recognized that it's unrealistic that a number of FIRs experiencing high volume of traffic continue to report NIL ADRs since 2007.

5.2.31 The meeting noted that in other Regions Scrutiny Groups were established to perform the review of ADRs, with the objective of determining which reports have an influence on the risk of collision associated with the application of RVSM. In addition, the Scrutiny Group analyses and validates the Coordination Failure Reports (CFRs), and where applicable proposes remedial actions and procedures. Accordingly, the meeting agreed to the establishment of a MID RVSM Scrutiny Group with Terms of Reference (TOR) as at **Appendix 5.2C** to the Report on Agenda Item 5.2 and agreed to the following Decision:

DECISION 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.*

5.2.32 The meeting noted also with concern that despite the follow-up actions carried out by both the MIDRMA and the ICAO MID Regional Office with a view to update the list of RVSM approved aircraft in the MID Region, a number of States were not providing the required data on a regular basis and timely manner. In this regard, the meeting agreed that those aircraft which are not listed in the MIDRMA database as having valid RVSM approvals, should be considered as non-RVSM compliant and accordingly, prohibited from entering any RVSM airspace.

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

CONCLUSION 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.

5.2.34 The meeting noted that the draft MID RVSM Safety Monitoring Result (SMR) 2010 developed by the MIDRMA was reviewed by the MIDRMA Board/10 meeting. It was further noted that the MIDRMA Board/10 meeting, through Draft Conclusion 10/4, agreed that:

- the MIDRMA Board Members, in coordination with the appropriate experts within their States (including the RVSM Managers), further review the Draft MID RVSM SMR 2010 and provide their comments and suggestions to the MIDRMA before 30 June 2010; and

- the MIDRMA consolidate the final version of the MID RVSM SMR 2010 based on the outcome of the Scrutiny Group meeting, held concurrently with the MIDRMA Board/10 meeting on 3 May 2010, and the comments and suggestions received from States.

5.2.35 The meeting reviewed the final version of the SMR 2010 presented by the MIDRMA. It was noted with appreciation that the three safety objectives endorsed by MIDANPIRG through Conclusion 11/22, were met, including safety objective 2 related to the overall risk of collision, as follows:

Safety Objective 1: ~~That~~ the risk of ~~vertical~~ 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.

Result: The 2010 value computed for technical height risk is **3.96×10^{-15}**. This meets Safety Objective 1.

Evolution of the Technical Risk Values		
Year 2006	**Year 2008**	**Year 2010**
2.17×10^{-14}	**1.93×10^{-13}**	**3.96×10^{-15}**

Safety Objective 2: ~~That the overall risk of vertical collision risk – i.e. the overall risk of mid-air collision in the vertical dimension~~ 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.

Result: The 2010 value computed for overall risk is **6.92×10^{-12}**. This meets Safety Objective 2. The meeting further noted that the effect of future traffic growth has also been assessed and that the overall risk of collision will continue to meet the TLS at least until 2015.

Evolution of the overall Risk Estimate - Overall Risk Values		
Year 2006	**Year 2008**	**Year 2010**
Not calculated due to the absence of suitable information on atypical errors	**$4.19x10^{-13}$**	**$6.92x10^{-12}$**

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.

Result: Safety related issues regarding the Middle East RVSM operations have been identified and improved procedures and practices have been recommended for future MIDRMA practices.

5.2.36 Based on the above the meeting approved the MID RVSM SMR 2010.

5.2.37 The meeting noted that the wording used for the definition of safety objectives 1 and 2, as endorsed by MIDANPIRG through Conclusion 11/22, is slightly different from the standard wording used in Doc 9574 and agreed accordingly to the following Conclusion to eliminate the differences and avoid any confusion:

CONCLUSION 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 adversely affect the risk of en-route mid-air collision over the years.*

Height Keeping Monitoring Requirements

5.2.38 The meeting recalled that further to the amendment of Annex 6 Part I and Part II concerning long term monitoring requirements for height keeping performance, as of 18 November 2010, the State of Registry that had issued an RVSM approval to an operator would be required to establish a requirement which ensures that a minimum of two aeroplanes of each aircraft type grouping of the operator have their height-keeping performance monitored, at least once every two years or within intervals of 1000 flight hours per aeroplane, whichever period is longer. If an operator aircraft type grouping consists of a single aeroplane, monitoring of that aeroplane shall be accomplished within the specified period.

5.2.39 The meeting reviewed and approved the MID Region height-keeping monitoring Strategy developed by the MIDRMA Board/9 and Board/10 meetings as at **Appendix 5.2D** to the Report on Agenda Item 5.2 and agreed accordingly to the following Conclusion:

CONCLUSION 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.*

5.2.40 The meeting noted that the MIDRMA Board/10 meeting was apprised of the MIDRMA GMU activities. In this respect, the meeting noted that during the period 11 February - 2 March 2010, GMU checks were successfully conducted for 29 Iranian aircraft. In addition, the MIDRMA has received additional requests for the conduct of GMU checks and during the period 5 to 12 November 2010, GMU checks will be conducted for 20 Aircraft from Bahrain, Kuwait and UAE. In addition, a second mission to conduct GMU checks for a number of Iranian aircraft is tentatively scheduled for beginning of December 2010.

5.2.41 In connection with the above, it was recalled that the MIDRMA Board/9 meeting, through Draft Conclusion 9/5, agreed that the MIDRMA develop a feasibility study, cost benefit analysis and action plan related to the conduct of GMU Monitoring in the MID Region with self-sufficiency capability (acquisition of necessary hardware, software, training, etc).

5.2.42 The meeting further noted that, in accordance with the MID Region height-keeping monitoring Strategy, and due to the increased demand for the conduct of GMU checks in the MID Region, the MIDRMA Board/10 meeting, through Draft Conclusion 10/6, agreed that the MIDRMA proceed with the purchase of two (2) GPS – based Monitoring Units (GMUs).

5.2.43 Based on the information provided by the MIDRMA related to the estimated cost of the GMUs (including training requirements) and other logistic issues, the meeting agreed to refer back the subject to the MIDRMA Board for further consideration.

MID RVSM Safety Assessment Seminar

5.2.44 The meeting recalled that the MID RVSM Safety Assessment Seminar was successfully held in Bahrain from 22 to 24 February 2010. Thirty four (34) participants from 10 States (Bahrain, Egypt, Iran, Iraq, Jordan, Oman, Qatar, Saudi Arabia, Syria and UAE) and 1 International Organization (IATA) attended the Seminar. The meeting shared concern with the MIDRMA Board/10 meeting regarding the low level of attendance to such an important Seminar, which was organized upon request from States with a view to raise the knowledge of all involved parties related to the requirements for sustained RVSM safety assessment activity.

5.2.45 The meeting reviewed the outcome of the MID RVSM Safety Assessment Seminar as at **Appendix 5.2E** to the Report on Agenda Item 5.2 and invited States, the MIDRMA and all concerned parties to take necessary follow-up actions on the Recommendations developed by the Seminar.

Action Plan for the Development of the MID RVSM SMR 2012

5.2.46 The meeting noted that, in accordance with MIDANPIRG Conclusion 11/21, the required data for the MID RVSM SMR 2012, will remain exactly the same as for the previous reports; including the requirements for continuous submission of ADRs and CFRs, on a monthly basis.

5.2.47 The meeting noted that the MIDRMA Board/10 meeting developed an action plan for the MID RVSM SMR 2012. It was highlighted that the month of January 2011 will be used for the collection of the actual FPL/Traffic data.

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

CONCLUSION 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.

5.2.49 The meeting recalled that during the previous MIDRMA Board meetings, the reporting of the Aircraft Registration (ACFT REG in field B) was particularly underlined since this information is necessary for the extraction of the height monitoring results from the European HMUs. Taking into consideration the evolving implementation of Mode S in the MID Region, the meeting agreed with the MIDRMA Board/10 meeting that States will have the possibility to report either the ACFT REG or the Mode S address.

RVSM Implementation in Baghdad FIR

5.2.50 The meeting recalled that MIDANPIRG/11, through Decision 11/23, agreed to the establishment of the Baghdad FIR RVSM Implementation Working Group (BFRI WG), with Terms of Reference (TOR) as at **Appendix 5.2F** to the Report on Agenda Item 5.2, for the development of necessary planning materials related to RVSM implementation in Baghdad FIR and for assisting the Iraqi Civil Aviation Authority in expediting the implementation of such an important project.

5.2.51 The meeting was apprised of the outcome of the BFRI WG/1meeting held in Cairo, Egypt, from 18 to 20 January 2010. The meeting noted that, *inter-alia*, the BFRI WG/1 meeting:

a) reviewed the requirements for RVSM implementation within Baghdad FIR;

b) developed/updated an action plan for the improvement of CNS infrastructure within Baghdad FIR;

c) reviewed the ATS Route Network within Baghdad FIR. In this regard, the meeting was apprised of the difficulties facing Iraq and Turkey for the coordination/handover of traffic flow over KABAN (R784) and NINVA. The meeting evaluated possible solutions to improve the situation and alleviate the capacity issues within Baghdad FIR, in a safe manner, until the successful implementation of RVSM. The following options were considered:

- reopening of UP975 within Damascus FIR for southbound traffic;
- reversing of traffic flows in Kuwait FIR and beyond; or
- reversing of traffic flows in Ankara FIR, i.e.: northbound traffic over KABAN and southbound traffic over NINVA. However, it was highlighted that any long-term solution would be linked to the RVSM implementation within Baghdad FIR.

d) requested Turkey to investigate the possibility of establishment of temporary traffic flows over KABAN northbound and NINVA southbound with 2000 ft RVSM Flight Levels not later than RDGE/12 meeting (Paris, 8-12 March 2010);

e) requested Iraq to investigate the establishment of a limited RVSM airspace within Baghdad FIR to cover the crossing of North-South traffic flows (radius and centre of circle to be determined) and to present the result of this evaluation to the MSG/2 Meeting (Amman, Jordan, 9-11 March 2010);

f) developed the Action Plan for the implementation of RVSM within Baghdad FIR with tentative date of implementation 10 March 2011; and

g) agreed that the BFRI WG/2 meeting be held in Cairo, from 13 to 15 December 2010 with a view to take the Go/No-Go decision for RVSM implementation within Baghdad FIR.

5.2.52 The meeting noted that, in accordance with bullet d) above, Turkey has issued a NOTAM early March 2010, related to the dualisation of traffic over KABAN and the implementation of the unidirectional route UT888 Eastbound, which improved the traffic flow within Baghdad FIR. Accordingly, the MSG/2 meeting did not support the phased implementation of RVSM within Baghdad FIR and agreed that all efforts should be made to implement RVSM within the whole FIR on 10 March 2011.

5.2.53 The meeting noted that the Action Plan for the implementation of RVSM within Baghdad FIR was further reviewed and updated by the MIDRMA Board/10 meeting, which noted with appreciation the willingness of Iraq to implement all the requirements listed in the Action Plan and to update the ICAO MID Regional Office and the MIDRMA on regular basis. The meeting further noted that during the MIDRMA Board/10 meeting, Iraq requested that a coordination meeting between Iraq (with the presence of the Consultant supporting the RVSM programme in Iraq), the MIDRMA, the ICAO MID Regional Office and IATA be held in September 2010, in order to follow-up the status of implementation of the Action Plan for RVSM implementation and take necessary action to pave the way for the BFRI WG/2 meeting to take the Go/No-Go decision for RVSM implementation within Baghdad FIR on 10 March 2011.

5.2.54 Accordingly, the Baghdad FIR RVSM Implementation Special Coordination Meeting (BFRI SCM) was held in Bahrain, 29-30 September 2010. Fourteen (14) participants from Iraq, the MIDRMA/Bahrain, IATA and ICAO attended the meeting. The meeting reviewed the Summary of Discussion of the BFRI SCM as at **Appendix 5.2G** to the Report on Agenda Item 5.2. It was noted with appreciation that the BFRI SCM meeting reviewed the progress achieved for the implementation of the different requirements for RVSM implementation, in particular:

- the assessment of the Operators readiness for RVSM Implementation within Baghdad FIR;
- the Air Traffic Control issues and implementation readiness assessment;
- RVSM Pre-Implementation Safety Assessment:
  - ✓ Preview of Technical Risk Assessment (Safety Objective 1);
  - ✓ Preview of Operational Risk Assessment and Overall Risk (Safety Objective 2); and
  - ✓ Assessment of Safety Objective 3
- update of the Action plan for RVSM implementation within Baghdad FIR.

5.2.55 The meeting noted IFALPA's concerns related to the shortcomings in the current Baghdad FIR communications infrastructure. However, it was highlighted that Iraq is aware of these shortcomings and is implementing a comprehensive infrastructure improvement programme to ensure that reliable and redundant ground-ground and air-ground communications are available throughout the Baghdad FIR. It was further noted that the BFRI WG/2 meeting will be apprised of the actions carried out by the ICAA to improve the ground-ground communications with adjacent FIRs.

5.2.56 The meeting noted that the BFRI SCM concluded that conditions would be favourable for meeting the RVSM safety goals associated with RVSM implementation in Baghdad FIR and urged all concerned parties to take necessary actions to support the implementation of RVSM within Baghdad FIR on 10 March 2011. Accordingly, the meeting agreed to the following Decision:

DECISION 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.

RVSM Implementation in Tel-Aviv FIR

5.2.57 The meeting was apprised of the actions carried out/planned by the Civil Aviation Authority in Israel to implement RVSM in the Tel-Aviv FIR effective 16 December 2010. The meeting noted that the implementation programme was in accordance with the Action Plan suggested by the ICAO MID Regional Office based on the guidelines contained in Doc 9574. The meeting further noted that the programme was closely coordinated with the ICAO EUR/NAT Regional Office and the EUR RMA (EUROCONTROL).

5.2.58 With regard to the RVSM approval status of the operators/aircraft, the meeting noted that a sample of traffic movements in the Tel-Aviv FIR during the months of January-February 2010 was collected. The results showed that majority of civil aircraft in the sample are RVSM approved, which was expected since RVSM has been already implemented in all FIRs sharing a common boundary with the Tel-Aviv FIR.

5.2.59 The meeting noted that Israel developed a plan to ensure that all necessary ATC preparations would be completed prior to RVSM implementation. The Letter of Agreement with Nicosia ACC has been already signed. However, updated Letter of Agreements (LOAs) between Tel-Aviv and Amman ACCs and Tel-Aviv and Cairo ACCs, are yet to be signed.

5.2.60 The meeting noted that, in order to ensure the safety of RVSM operations in the Tel-Aviv FIR, the "Israel FIR RVSM Group" composed of members from the Air Traffic Services, Flight Safety and Communications, Navigation and Surveillance (CNS) Departments, has been established. It was further noted that the "Israel FIR RVSM Group", which has met eight times, concluded that conditions were favourable to meet the RVSM safety goals associated with RVSM implementation in Tel-Aviv FIR (technical and overall risk).

5.2.61 Based on the above, the meeting invited Egypt and Jordan to assign points of contact to coordinate the RVSM issues with Israel. The meeting further agreed that the ICAO MID Regional Office invites the ICAO EUR/NAT Regional Office to follow up with Israel the RVSM implementation programme, in close coordination with EUROCONTROL and to keep the MID Regional Office informed of the developments.

SSR Code Allocation Plan (CAP) for the MID Region

5.2.62 The meeting noted that when considering the matter of Originating Region Code Assignment Method (ORCAM), agreed in principle on three Participating Areas (PAs) for the MID Region. The meeting however, agreed that more data regarding, inter alia, MID Region traffic patterns and volume, Flight Data Processing Systems' (FDPS) capabilities, and requirements in adjacent ICAO Regions, was necessary in order for the Study Group to reach a decision on the number of the PAs and codes allocated to each PA.

5.2.63 The meeting was apprised of State letter dated 28 March 2010 calling States to provide FDPS capabilities. In this regard the meeting noted that only ten (10) States replied to the FPDS questionnaire. The initial analysis of the recorded responses demonstrated a large variety of ATS capabilities.

5.2.64 The meeting noted that from the replies received it was evident that FDPS's do not require upgrades to satisfactorily perform the functions according to the PA requirement. However, the use of directional assignment will require the upgrade of FDPS. Accordingly, the meeting urged MID States to upgrade their FDPSs to include the directional assignment capability in conjunction with the ICAO New Flight Plan format (INFPL) upgrade.

5.2.65 The meeting noted that based on the deliberation and the knowledge gained during the INFPL Workshop 4-6 July 2010 and considering the outcome of the workshop which recognized that the INFPL implementation is massive, agreed to the following Conclusion:

CONCLUSION 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.

5.2.66 The meeting was informed that the Gulf area is an area with considerable military activity, carrier-based aircraft on high seas of a variety of warships with air defence systems. Code changes may in stressed situations be construed by air defence units as an indication of hostile intents and increase the risk of military action against civil aircraft.

5.2.67 The meeting 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. The meeting noted that the SSR Assignment Log for assessing SSR code shortage problems in order to provide a better documented case study was circulated to States.

5.2.68 The meeting was apprised on the proposal containing immediate short term measures to address code shortage issues as follows:

a) transfer 1200 series Domestic SSR code from the Emirates and Bahrain FIR's to Jeddah FIR; and

b) in coordination with EUROCONTROL consider exchanging the Tel Aviv FIR Transit SSR code series 5100 or 6400 with the SSR "D" 20 or SSR "D" 36 series of Tehran FIR *that are geographically adequately separated.* The released "T" series from Tel Aviv-FIR be returned to the ICAO MID Regional Office for re-allocation.

5.2.69 The meeting noted that the MID Regional Office had sent a Sate Letter addressing the transfer of the 1200 SSR Code series from Bahrain to Saudi Arabia. A reply from Bahrain was received objecting to the release of 1200 SSR Code series as they have been allocated to the Bahrain Defence Force.

5.2.70 The meeting noted the agreement with EUROCONTROL for the exchange of the Tel Aviv FIR Transit SSR code series 5100 or 6400 for the Domestic 6500 series currently used by Muscat FIR.

5.2.71 The meeting agreed to the MID Region strategy for the allocation of SSR codes in the MID Region and agreed to the following Conclusion which replaces and supersedes MIDANPIRG/11 Conclusions 11/26, 11/27 and 11/28:

CONCLUSION 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.*

Air Traffic Flow Management (ATFM) and 20NM Longitudinal Separation.

5.2.72 The meeting recalled that ICAO MID Regional Office has successfully held an ATFM Seminar as a Special Implementation Project (SIP) in July 2009 to benefit from the experience of the other Regions which have already implemented ATFM before agreeing on the strategy for ATFM implementation in the MID Region. The objective of the Seminar was to facilitate the development of a clearly defined progressive strategy for the implementation of ATFM in the MID Region, taking into consideration regional and national planning processes, in accordance with the global planning framework.

5.2.73 The meeting noted that the Seminar agreed to the following outcome:

a) took note of the MID Region traffic forecast which is above world average and recognized the need to develop adequate infrastructure to handle the traffic growth within MID Region;

b) took note of the variety of ATFM resources that are available in the other Regions;

c) reviewed one model for calculating Aerodrome Acceptance Rate (AAR) and for establishing the AAR for each significant aerodrome in the MID Region;

d) reviewed one model for calculating sector capacity and establish the sector capacity for each significant en route sector in the MID Region;

e) reviewed the concept of Collaborative Decision Making (CDM) as it is applied in the other Regions and acknowledged the need to establish a CDM process in the MID Region;

f) recognized the benefits of implementing Initial Flight Plan Processing System (IFPS) in the MID Region and that IFPS would provide only a partial solution. A full Central Flow Management Unit (CFMU) should be considered in future and the EUROCONTROL model be adopted after modifications to meet local and Regional Requirements;

g) acknowledged that the introduction of IFPS to the MID Region is feasible provided that:

- the MID States are committed to the development, implementation and operation of a full scale IFPS;
- develop and maintain necessary guidelines, rules and regulations for running IFPS through an appropriate Regional mechanism; and
- a suitable funding mechanism for the initial development, implementation and long term operation is provided.

h) agreed that the political will and cooperation between MID States and commitment to provide airspace data is an imperative and is key to implementation of any successful ATFM system;

i) agreed that ATFM based on the ICAO Centralised Air Traffic Flow Management Organisation (CTMO) concept should be considered in the MID Region when all other alternative measures such as airspace initiatives; better coordination along FIR borders and CNS improvements have been implemented; and

j) urged MID States to accord high priority to measures aiming at reducing congestion by implementing PBN for en route and TMA including arrival and departure procedures (SIDs & STARs).

5.2.74 The meeting was apprised on the link between ATFM and IFPS, in this regard the meeting noted that as a follow-up action to MIDANPIRG/10 Conclusion 10/18: *Establishment of an Integrated Initial FPL Processing System (IFPS) in the MID Region*, MIDANPIRG/11 noted that Bahrain has finished the initial IFPS study which was based on Bahrain data and FDPS. It was indicated that it is necessary that all MID States need to participate for the completion of the final study. The meeting further noted that only five (5) States assigned their focal points for the IFPS and agreed that States which had not assigned focal points to do so as soon as possible and provide Bahrain with the necessary data to support the completion of the final study.

5.2.75 The meeting noted that, in accordance with MIDANPIRG/11 Conclusion 11/61, MIDANPIRG requested that the feasibility study related to IFPS be finalised before any commitment to go ahead with the project. This requires the contribution of all States. However, it was noted with concern that Bahrain has not yet received any input from States, in order to finalise the study. It was further noted that the feasibility study should identify the Short Term, Medium Term and Long Term lines of action, based on the needs and requirements of MID States.

5.2.76 The meeting was apprised of the difficulties that Bahrain is facing to accommodate the traffic growth and the airspace congestion. The meeting noted that Bahrain has already taken certain measures to face this problem, including the implementation of the Functional Airspace Block (FAB) concept and associated re-sectorization. In this regard, new Sectors have been implemented by Bahrain since 4 June 2009 with a new Central Sector encompassing the FAB which was identified in the middle of Bahrain FIR. However, the meeting noted that Bahrain is supporting the MID IFPS project, which would further improve the situation.

5.2.77 The meeting also noted that Egypt is facing some problems especially with the adjacent regions and that Egypt believes that the implementation of the MID IFPS project would to a large extent solve these problems.

5.2.78 The meeting noted that UAE's did not support the establishment of ATFM and IFPS in the MID Region. It was also recalled that UAE and IATA were of the view that all possible solutions should be explored/exhausted before deciding to implement ATFM in the MID Region. In particular, improvements in the field of Communication, Navigation and Surveillance as well as the reduction of the spacing requirement, the implementation of Flexible Use of Airspace (FUA) would increase the capacity of airspace in the MID Region.

5.2.79 The meeting was apprised on the situation in Bahrain and UAE that are desperately looking to reduce the longitudinal separation minimum from 30NM to 20NM with all concerned FIRs. This will bring the benefits to both ANS providers and aircraft operators in the form of route capacity enhancement, workload reductions for air traffic controllers, greater efficiency resulting in the provision of more optimum cruise levels for aircraft, and savings to aircraft operators in fuel burn costs and will reduce the carbon emission.

5.2.80 The meeting was informed that the current agreements between MID Region States dictate that the minimum longitudinal spacing between aircraft at the same level is either 30NM via Saudi Arabia, Jordan, Syria and Lebanon, or is 40NM via Kuwait and Iraq with no official agreement, while Bahrain, Oman and U.A.E use 10NM minimum at the interfaces, except for traffic routing via COPPI Bahrain which requires 5 minutes separation.

5.2.81 The meeting further emphasized the need to implement a reduced longitudinal separation in a harmonized manner. Accordingly, the meeting was apprised on the agreement between Bahrain, Jordan, Saudi Arabia and Syria for the implementation of 20 NM longitudinal separation on a constant or increasing orientation starting on AIRAC 29 July 2010 on trial basis. Accordingly the MID Regional Office sent a State Letter, for the confirmation on the agreement.

5.2.82 The meeting urged all MID States to implement 20 NM longitudinal separation, and further develop plans for further reduction of longitudinal separation from 20 NM to 5 NM to be included in the Regional PFFs.

Contingency Plans in the MID Region

5.2.83 The meeting acknowledged 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 in this regard, since a number of States have signed contingency planning agreements with adjacent airspaces, and some had been prepared, circulated and were pending signature.

5.2.84 The meeting recognized that progress was achieved in the implementation of contingency measures in the MID Region. The meeting urged MID States to exert extra effort to comply with the provisions of Annex 11 and Annex 15 related to the promulgation of contingency plans using the Template endorsed by MIDANPIRG. Accordingly, the meeting agreed to close Conclusion 11/29 and to monitor the status of implementation of contingency plans through the continuous update of the list of air navigation deficiencies.

Search and Rescue

5.2.85 The meeting noted that, in order to facilitate and assist States in discharging their responsibilities in various fields of air navigation, the 36th ICAO General Assembly in September 2007 adopted Resolution A36-13: *Consolidated statement of continuing ICAO policies and associated practices related specifically to air navigation,* which is reviewed and updated as necessary at every Assembly Session for which a Technical Commission is established.

5.2.86 The meeting noted 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.

5.2.87 The meeting was apprised of the importance of the legislative and regulatory framework related to the provision of SAR services. In this regard the meeting noted that the Universal Safety Oversight Audit programme (USOAP) findings revealed a lack of SAR regulations, accordingly the meeting was presented with a Sample Legislation for establishing a SAR Organization, from Document 9731 (IAMSAR), and an extract from (Annex 12 Chapter 3 and Doc 9731Chapter 1), that could be used for developing National SAR Regulations.

5.2.88 The meeting was further apprised on the development of guidelines to assist States in ensuring effective coordination in the provision of SAR services, with parties including maritime and military entities. Consequently the meeting was presented with guidance material that should be used by States for the development of National Regulations and procedures related to the provision of SAR services.

5.2.89 The meeting noted that the MID ANP contains the basic principles, operational requirements and planning criteria related to search and rescue services. However, it was pointed out that the majority of the provisions of the MID Basic ANP Part VII, SAR have already been included in the ICAO Annex 12. In this regard the meeting was apprised on the amendment of the MID BASIC ANP Doc 9708 concerning the SAR requirements.

5.2.90 The meeting recognized that the FASID Table SAR 1 is not serving its purpose since it is currently containing data which is available in the AIPs and national SAR plans of operation, while it should specify the minimum units and facilities necessary for the provision of SAR operations within a search and rescue region (SRR).

5.2.91 Based on the above, the meeting agreed that a survey be conducted by the ICAO MID Regional Office in order to collect information on the status of implementation of SAR provisions in the MID Region and accordingly agreed to the following Conclusion:

CONCLUSION 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 to15 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.

5.2.92 The meeting noted that a questionnaire on the provision of SAR in the MID Region, as at **Appendix 5.2I** to the Report on Agenda Item 5.2, was sent to States through State Letter dated 14 June 2010, and that only three States (Jordan, Oman and Saudi Arabia) replied to the questionnaire.

5.2.93 The meeting noted that the Cospas-Sarsat has ceased processing of 121.5/243 MHz ELTs from 1 February 2009 and only 406 MHz ELTs will be detected. Accordingly, all ELT owners and users of 121.5/243 MHz ELTs should upgrade to 406 MHz in a timely manner.

5.2.94 The meeting also noted that, when a 406 MHz ELT signal is relayed through the Cospas-Sarsat system, SAR Authorities, using the ELT identification, interrogate a registration database and retrieve characteristics of the subject aircraft and contact details of the ELT owner. This system could operate effectively only if owners register their ELTs and SAR providers have access to registration databases.

5.2.95 The meeting further noted that the International 406 MHz Beacon Registration Database (IBRD) is not intended to replace existing national ELT registration facilities. It is provided by Cospas-Sarsat to supplement the 406 MHz registration process by providing 24-hour access and to assist SAR service providers in retrieving valuable data during SAR operation, and also for assisting States that cannot justify the establishment and maintenance of their own database due to the limited number of beacons where they can register the 406 MHz beacons.

5.2.96 The meeting further urged MID States to request owners of ELT to upgrade their ELT from 121.5/243 MHz and register the 406MHz Beacon.

5.2.97 The meeting noted the requirements to carry ELTs as specified in Annex 6, Part I, paragraph 6.17 and Part II, paragraph 6.12 and they shall be operated in accordance with the provisions of Annex 10, Volume III, Part II, Chapter 5. In particular, it was noted that all aircraft shall be equipped with ELT capable of operating on 406 and 121.5 MHz as of 1 January 2005. In addition, States shall make arrangements for a 406 MHz ELT register that would be immediately available to search and rescue authorities. This data should therefore, be shared with COSPAS/SARSAT in order to expedite any SAR activity when required. Non-compliance with the requirements of Annex 10 would be documented in the MID Region list of deficiencies.

5.2.98 The meeting while reviewing Conclusion 11/31 was of the opinion that clarification is necessary for the designation of focal points since it is required to assign two focal points one as a SPOC for Cospas-Sarsat and other as SAR SPOC as called by Annex 12. Accordingly, the meeting agreed to the following Conclusion which was modified to clearly reflect the ICAO requirements as follows:

CONCLUSION 12/23: SAR 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

d) update the ICAO MID Regional Office on their implementation status

5.2.99 The meeting noted that the main deficiency related to the SAR in the MID Region is the SAR agreements consequently the meeting developed the table as at **Appendix 5.2J** to the Report on Agenda Item 5.2 to reflect the agreement and their status of implementation. Furthermore, the meeting noted the updated SAR points of contact as at **Appendix 5.2K** to the Report on Agenda Item 5.2.

5.2.100 The meeting was of the opinion that the deficiency would persist for a long time until States develop the necessary legislations and regulations for regulating SAR services and that States could use the guidelines and the standards in Annex 12 or seek assistance from experts in the industry to develop their own regulations.

5.2.101 The meeting noted that most of the requirement from SAR Ad-hoc Working Group (AWG) has been fulfilled and the rest of the SAR requirements should be followed within the framework of the ATM/SAR/AIS SG. Accordingly, the meeting agreed that the SAR AWG be dissolved and approved the following Decision:

DECISION 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.

ICAO Global Civil Aviation Search and Rescue Forum

5.2.102 The meeting noted that UAE GCAA hosted the ICAO Global SAR Forum in Abu Dhabi from 21 to 22 June 2010. The Forum was attended by more than two hundred fifty (250) participants from over fifty seven (57) ICAO Member States, and seven (7) International Organizations.

5.2.103 The programme consisted of presentations by highly experienced SAR specialists and industry representatives, followed by moderated interaction between expert panel members and the audience. The ICAO MID Regional Office was also represented and presented the outcome of the SAR AWG

5.2.104 The Forum identified key gaps in coverage of global civil aviation SAR services as follows:

a) Urgent and focused attention should be given to more closely implementing the established ICAO policy of sub-regionalised SAR services. Such a policy should allow flexibility in the determination, at a regional level and in close cooperation with ICAO, of the geographic areas best suited to the provision of such sub-regional SAR service taking into account operational, technical and economic factors while paying due regard to the fundamental principle of sovereignty.

b) Some areas of appropriate project activity are already evident, notably in the area of the Southern African Development Community (SADC) States where, at the States' request and in cooperation with all African and international stakeholders, an ICAO project, funded by the United Arab Emirates (UAE), is being managed by the UAE General Civil Aviation Authority (GCAA).

c) The Australian Maritime Safety Authority has recorded its intention to explore prospects for closer cooperation with its neighbouring States in the sub-region of the Indian and Pacific Ocean.

d) The UAE GCAA has also announced its intention to advance the establishment of a Regional SAR Coordinating Committee in the sub-region of the Gulf and to host a regional SAR event to that topic in the first half of 2011.

e) A project is required to educate, encourage, facilitate and coordinate the efforts of State governments, authorities and agencies in the development of sub-regional SAR services. External funding is necessary for its inception.

f) A key project activity should be to facilitate the establishment of Regional SAR Coordination Committees to make SAR service provision more consistently effective across regions and, ultimately, the world. An early action item should be to remedy the issue of non-responsive SAR Points of Contact (SPOCs).

g) Although there is organizational opportunity for States to input SAR subject material for consideration for inclusion in ICAO documents through planning and implementation regional groups (PIRGs), many States do not make SAR experts available for this purpose and a general insufficiency of data results.

h) The need exists for more relevant, accurate and detailed text to be included in appropriate ICAO documents with respect to both the organization of SAR services and SAR operational procedures, and more emphasis to be put on the procedures to be implemented by air traffic services with respect to SAR alerting and cooperative management of in-flight emergencies. This need extends to closer cooperation with military SAR providers.

i) To improve the vital aspect of communication in the coordination of SAR actions, States should ensure the sufficient proficiency in a common language of all SAR operatives interacting internationally. ICAO should publish more detailed guidance material in this respect.

j) There exists a need for a broader array of industry stakeholders to share responsibility for the development of more consistently effective global civil aviation SAR services. In particular, international airline operators should accept some responsibility for assisting the regions in the reconstruction and, thus, the strengthening of SAR services.

k) The partnership of SAR services with the Cospas-Sarsat programme should continue to be the mainstay of satellite alert and location support services.

l) ICAO and its partners can only do so much to strengthen SAR services. State administrations, working closely with SAR service providers and military authorities, must take action to develop political will, establish institutional arrangements, facilitate interaction between stakeholders, set performance objectives, elaborate practical and operational measures and, finally, implement the necessary changes to ensure adequate SAR service proficiency.

5.2.105 The forum was successful in identifying the gaps in SAR provisions throughout the world regions and identified the way forward to address them. The MID Regional Office participation by a presentation on the outcome of the SAR AWG was appreciated and provided the participants with an insight of the findings and necessary action to address SAR deficiencies in the MID Region.

Civil/Military Coordination

5.2.106 The meeting was apprised of the latest developments related to Civil/Military coordination including the outcome of the Global Air Traffic Management Forum on Civil/Military Cooperation held in ICAO HQ, Montréal, from 19 to 21 October 2009.

5.2.107 The meeting noted that the Global Air Traffic Management Forum on Civil/Military Cooperation highlighted that improved cooperation between civil and military authorities is one of the key conditions for increasing the effective use of available airspace. For civil aviation, it means being better equipped to meet the operational requirements of a safe and efficient air transportation system. For the military, it means meeting mission requirements safely and efficiently. A globally-harmonized air transport system, operating at maximum efficiency in terms of safety, security and sustainably begins with a commitment from both civil and military authorities to improve cooperation and coordination.

5.2.108 The meeting further noted the emphasis of sharing airspace between civil and military also features prominently in ICAO's vision of 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. Key principles argue that:

- airspace should be a usable resource;
- any restriction on the use of a particular segment of airspace should be considered transitory; and
- all airspace should be managed flexibly with an equitable balance between civil and military users through strategic coordination and dynamic interaction.

5.2.109 The meeting was apprised on the flexible concept for airspace use, combined with the soaring cost of fuel in recent years that has provided the motivation to rethink the traditional role of civil/military coordination and cooperation. The ultimate goal is to open up segregated airspace when it is not being used for its originally-intended purpose which will allow for better airspace management and access for all users according to their needs without impeding the military's mission or operations. In addition to the advantages that increased flexibility and balance in airspace management will bring for airspace users, there is also a positive impact for the environment: shorter flights between city pairs will mean reduced fuel burn and less CO_2 emissions released into the atmosphere.

5.2.110 The meeting was further apprised of the outcome of the Global Air Traffic Management Forum on Civil/Military Cooperation which is available on the ICAO website at: http://www.icao.int/GATM-CIV/MIL/. The meeting further noted that the Forum agreed to the following main Conclusions and Recommendations:

- there is a clear consensus that the aviation community, civil as well as military, have expressed a need and desire to work together to enhance the use of the airspace to the mutual benefit of all airspace users, and that what is needed is:

  - cooperation;
  - collaboration;
  - commitment; and
  - trust

- Civil and military should endeavour to:

  - understand each other's needs;
  - Support each other in meeting objectives; and
  - Support a more seamless and Global ATM system.

- ICAO Regional Directors will further promote civil and military cooperation through the Planning and Implementation Regional Groups (PIRGs);

- to achieve success, State administrations, working with air navigation service providers and their militaries must take action:

  - establish political will;
  - develop institutional arrangements;
  - bring civil and military authorities together;
  - set performance objectives;
  - develop practical and operational measures; and
  - implement changes

5.2.111 Based on the above, the meeting agreed to the following Conclusions:

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

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.

CONCLUSION 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.*

MIDANPIRG/12
Appendix 5.2A to the Report on Agenda Item 5.2

AMENDMENT PROPOSAL

PROPOSAL FOR AMENDMENT OF THE ICAO MID AIR NAVIGATION PLAN (DOC 9708), VOLUME I BASIC ANP

(Serial No. MID Basic ANP Year/XX - ATM) **(For ICAO Secretariat)**

Name of proponent State……Xxxxxxxxx……..

Name of focal point (Drafter) ……Mr B. Yyyyyyyyyy…..

a) Plan: MID Basic Air Navigation Plan

b) Proposed amendment: Editorial note: Amendments are arranged to show "deleted text" using strikeout (~~text to be deleted~~), and "added text" with grey shading (text to be inserted).

1) **Add** requirements for ATS routes B419 and UB419 as follows:

B419	KING FAHD ALVON 2700.2N 05007.2E KURSI 275742N 0491918E KUWAIT
UB419	KING FAHD ALVON 2700.2N 05007.2E KURSI 275742N 0491918E KUWAIT

For additions to existing (in the ANP) route

2) **Amend** requirement for ATS routes G665 and UG665 as follows:

G665	BASRAH ABADAN SHIRAZ * Note 5 (OI) NABOD 2816.1N 05825.8E EGSAL 2716.8N 06249.0E (PANJGUR)
UG665	BASRAH ABADAN SHIRAZ * Note 5 (OI) NABOD 2816.1N 05825.8E EGSAL 2716.8N 06249.0E (PANJGUR)

For changes to existing (in the ANP) route

3) **Amend** requirement for ATS route UL602 as follows:

UL602	BAHRAIN ALVON 270009N 0500711E*Note 7

For changes to existing (in the ANP) route

~~SELEG 280130N 0492212E~~
~~RAPSI 282326N 0490551E~~
~~DARVA 284814N 0484734E~~
KURSI 275742N 0491918E
DASTI 282141N 0490259E
ALVIX 2919.3N04824.2E
FALKA 292611N 0481819E
TASMI 300120N 0475505E
BASRAH
LOVEK 322206N 0444000E
DELMI 331911N 0431731E
ELEXI 344237N 0411054E
DRZ 351724N 0401124E
KUKSI 364508N 0374910E
GAZ 365701N 0372824E

4) **Add** the requirement for ATS route B650 as follows:

B650	BUNDU BATHA

To add a new route to the network

5) **Delete** the requirement for ATS routes G### as follows:

G###	~~SAMPL~~ ~~OTHER~~ ~~CROSS * Note 5 (OI)~~ ~~ROAMS 2916.1N 05825.8E~~ ~~GOING 2916.8N 06249.0E~~ ~~(DESTINATION~~)

To delete an existing (in the ANP) route.

One of the reasons could be that the route is replaced by another

(cf. Table ATS 1, Chart ATS 1/2)

c) Originated by: MIDANPIRG ATM/SAR/AIS/9, Special Baghdad FIR Coordination Meeting (SBFCM) (Cairo, 28-29 May 2008) and ATS Route Network Task Force/1 (ARN TF/1); Bahrain, Kuwait and Qatar.

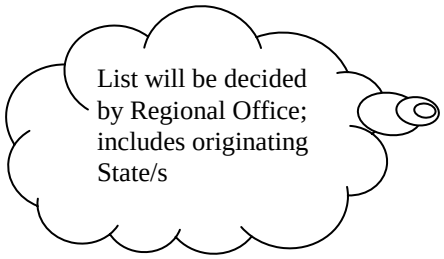
d) Originator's reasons for amendment: As a result of a review of the ATS route requirements for the MID Region, the ATM/SAR/AIS/9 and ARN TF/1 agreed that ATS route G669 which had been removed from the requirements as an editorial error, should be restored. However, the requirement has been modified by removal of segment KARIATAIN-TONTU-AL SHIGAR, which had been found not to be practical. The ARN TF/1 agreed to the proposal by Bahrain and Qatar for the establishment of an ATS route BUNDU-BATHA (B650) to provide a link from Doha to the South

into R659 at BATHA, to address immediate user needs. This provides an alternative to the segment Doha-MIGMA on ATS route R659/UR659, which remains unimplemented. The distance saving from currently available routing Doha to North and Southern Africa is about 204 nm per flight. Significant point MIGMA on ATS routes R659/UR659 in Bahrain FIR is to be replaced by BATHA at which a VOR (BAT) is located. The ARN TF/1 also endorsed the SBFCM proposal to extend G665 from Abadan to Basrah to make it accessible to route network in the Baghdad FIR.

Kuwait has proposed addition of ATS route B419 to the requirement. B419 had been removed from requirements in 2007 for future consideration. Kuwait has also proposed changes in trajectories of ATS routes UL602 and UP975 in order to achieve airspace efficiencies.

e) Intended date of implementation: As soon as practicable after approval.

f) Proposal circulated to following States and organizations:



Afghanistan	Oman
Bahrain	Pakistan
Cyprus	Qatar
Egypt	Saudi Arabia
Iran, Islamic Republic of	Sudan
Iraq	Syrian Arab Republic
Israel	United Arab Emirates
Jordan	United States of America
Kuwait	Yemen
Lebanon	IATA
Libyan Arab Jamahiriya	IFALPA

g) Originator' Comments: The changes proposed herein are the result of work undertaken by the MIDANPIRG Subsidiary Bodies the Middle East Offices of ICAO and individual States in the Region to enhance traffic flows and ATS route efficiencies.

Middle East Regional Monitoring Agency

(MID RMA)

MEMORANDUM

OF AGREEMENT

Bahrain - 27 February, 2006

MEMORANDUM OF AGREEMENT
on the establishment, operation and management of the
Middle East Regional Monitoring Agency (MID RMA)
and its funding by the Participating States

1. PARTIES

1.1 The Parties to this memorandum of agreement are: Bahrain, Egypt, Iran, Jordan, Kuwait, Lebanon, Oman, Saudi Arabia, Syria and Yemen.

2. AGREEMENT

- CONSIDERING the urgent need to institute a programme, on a regional basis, for monitoring the height-keeping performance of aircraft operating in RVSM airspace;

- CONSIDERING the Parties' earlier decision that the Middle East Regional Monitoring Agency (MID RMA) will be funded entirely by the participating States and that the budget estimate for the first year, be paid by the Parties on equal basis;

The Parties have agreed as follows:

1. The Parties to this memorandum of agreement, referred to hereunder as Participating States agree to establish the Middle East Regional Monitoring Agency (MID RMA) and undertake to become its members;

2. The MID RMA shall be managed as a Regional programme; shall have legal personality and shall act through the MID RMA Board;

3. The overall objective of the MID RMA is the promotion of safety of air navigation in the Middle East Region through the operation and management, on a sound and efficient basis, of a permanent MID Regional Monitoring Agency;

4. The MID RMA Board, in which each Participating State is entitled to appoint one member, shall retain overall direction and responsibility for the supervision and operation of the MID RMA in accordance with the relevant obligations of the Participating States under the Convention on International Civil Aviation and its Annexes. The Board shall elect its chairman. It shall inter-alia, supervise and direct the MID RMA, follow-up its activities and reports and assign its priorities. It shall also secure the commitment of Participating States for funding the MID RMA in accordance with agreed funding mechanism and for provision of necessary data for the MID RMA;

5. The MID RMA's scope, duties and responsibilities will be those agreed by the Board's first meeting and could be revised by the Board. The MID RMA will be assigned clear tasks in a step-by-step approach starting with RVSM height monitoring and RVSM post-implementation safety assessment, having in mind the end objectives, which will include RNP/RNAV and SMS. The MID RMA duties and responsibilities will include, but will not be limited to the following:

    - collecting and analysing RVSM data received from MID States as well as from Eurocontrol/FAA, IATA and airlines;

    - collecting data on aircraft approved by various States for operation within RVSM airspace in the MID Region and enter such data in the MID RMA database;

    - verification of the effectiveness of the approval process by States;

    - establishing a database for reporting height deviations of aircraft;

    - verification that the target level of safety on implementation of RVSM is met and maintained;

- monitoring the effectiveness of the altimetry system modifications to enable aircraft to meet the required height keeping performance criteria;

- evaluation of the stability of altimetry system error;

- undertake monitoring missions to States as required;

- determine in the light of analysis made of data received and of missions conducted, whether compliance with required safety standards is maintained and initiate corrective action as needed in each case; and

- submit a report to each Board meeting on MID RMA activities, its analysis of data and any identified departure from RVSM Safety limits, for its consideration and action as appropriate.

6. The Participating States have accepted Bahrain's offer to host the MID RMA in Bahrain to enable the early establishment and functioning of the MID RMA;

7. Bahrain will provide the offices, equipment and local personnel needed for the MID RMA operations and pay for the initial set up of the MID RMA without waiting for MID States' contributions. The advance payment made by Bahrain shall be recovered through States' contributions in compliance with the agreed funding mechanism;

8. Based on the agreed funding mechanism for the first year of operation of the MID RMA, the cost for the establishment of the MID RMA, its operation and management for the first year shall not exceed the estimated amount of US$ 300,000, which shall be borne by the Participating States on equal basis;

9. The funding mechanism and consequent contributions of Participating States may be modified in subsequent years by decision of the Board;

10. The MID RMA staff shall be composed of:

1.	MID RMA Manager/Team Leader	(Part Time)
2.	One Assistant MID RMA Officer	(Full Time)
3.	Database Specialist	(Part Time)

11. The MID RMA Manager/Team Leader shall manage the project on day-to-day basis and effect coordination with the Chairman of the MID RMA Board. He shall submit the MID RMA reports to the Board with copies to the ICAO Regional Office in Cairo;

12. Bahrain shall monitor the progress of the MID RMA, maintain financial accounting and provide general support and timely reporting;

13. Participating States authorize the MID RMA Board Chairman to negotiate on behalf of the MID RMA an agreement with ICAO and Bahrain specifying ICAO's role as the custodian of the funds collected for the purpose of this agreement, in compliance with ICAO's Financial Regulations and Rules;

14. This Memorandum of Agreement shall come into effect on the date it has been signed by the Participating States;

15. Any amendment to this Memorandum of Agreement, shall be carried out by the parties to this agreement;

16. Any dispute arising out of or relating to this Memorandum of Agreement, shall be settled by direct consultation between the Participating States concerned;

17. Any Participating State may withdraw from this Memorandum of Agreement by giving a prior notice of **six (6) months** to other Participating States. The obligations assumed by the Participating States under this Memorandum of Agreement shall continue to exist after the

withdrawal from this Memorandum of Agreement to the extent necessary to permit the orderly finalization of activities, the withdrawal of personnel, the distribution of funds and assets and the settlement of contractual obligations. Additional funds, if necessary, to cover the above mentioned expenditures shall be provided by the Participating States.

18. The hosting of the MID RMA by Bahrain may be terminated at the request of Bahrain, with two years advance written notification to the MID RMA Board to allow sufficient time for selection of an alternative location and necessary arrangements for transfer of the MID RMA.

19. All correspondence relating to the implementation of this Agreement, shall be addressed to:

MID RMA
Chairman of the MID RMA Board
C/o Ministry of Transportation
P.O. Box 586
Bahrain International Airport
Manama - Bahrain

With copy to the:

ICAO Regional Director
ICAO Middle East Regional Office
Egyptian Civil Aviation Complex, Airport Road
P.O Box 85, Airport Post office, Terminal One
11776, Cairo, Egypt

Agreed on behalf of MID RMA States

State	Signature	Title	Date
Bahrain		A/D. DIRECTOR AIR NAVIGATION	27/2/06
Egypt	Hassan Ismail.	ATS Safety Manager	28/2/2006
Iran		~~CAO / N. REZAEIAN MANAGER~~	~~21, 03, 2006~~
Jordan		Director ATM	28/2/2006
Lebanon		CHIEF AIR NAV DEPT	~~27th~~ Feb 2006
Kuwait		DY DGCA for NEA	27/2/2006
Oman		ADGCAM	~~27th Feb~~ 2006
Saudi Arabia		RUSM / MANAGER	27 / 2006
Syria		Director General	21. March 2006
Yemen		Chairman of Cama	21.03.2006
UAE		DG. UAE GCAA	28/10/2008
IRAQ		DG Iraq CAA	11/1/2010

MIDDLE EAST RVSM SCRUTINY GROUP (RVSM SG)

TERMS OF REFERENCE

A) TERMS OF REFERENCE

With a view to improve the quality of the MID RVSM Safety Monitoring Reports (SMR), the MID RVSM Scrutiny Group is established to:

1) review, analyze and evaluate the Altitude Deviation Reports of 300 ft or greater and Coordination Failure Reports (CFRs), in coordination with the MID RMA, as defined by ICAO Doc 9574;

2) determine/validate estimates of the duration of deviations from the cleared levels in order to be used as primary input in the preparation of the risk estimate by the MIDRMA; and

3) identify large height deviation trends and recommend remedial actions in order to improve safety.

B) COMPOSITION

The MID RVSM Scrutiny Group shall consist of ATM Experts from Bahrain, Egypt, Iran, Iraq, Saudi Arabia and Oman in addition to representatives from the MIDRMA, ICAO, IATA and IFALPA. EUROCONTROL could be also invited to participate to the Scrutiny Group meetings, when required.

C) WORKING ARRANGEMENTS

The MID RVSM Scrutiny Group should report to the ATM/SAR/AIS Sub Group and MID RMA Board.

The MID RVSM Scrutiny Group meetings should be organized by the MID RMA, which should provide necessary secretarial support (invitation letter, agenda, work programme, reports, etc).

The MID RVSM Scrutiny Group should meet when deemed necessary and at least once every 18 months (before each MIDANPIRG meeting).

MIDANPIRG/12
Appendix 5.2D 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 and Doc 9574 (RVSM Manual);
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) <u>Short Term:</u>

- 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) <u>Medium and Long Term:</u>

- the MIDRMA to conduct GMU Monitoring in the MID Region with self-sufficiency capability (acquisition of necessary hardware, software, training, etc);

- the use of the Omani Multilateration-based Height Monitoring Unit (HMU), or any other HMU that becomes available in the MID Region, as a possible means of conducting height-keeping monitoring; and

- the possibility of using a MID Region HMU infrastructure as the main mean of height-keeping monitoring in the Region, if supported by a feasibility study and business case and when decided by the MIDRMA Board to go ahead with such an important project.

MIDANPIRG/12
Appendix 5.2E to the Report on Agenda Item 5.2

International Civil Aviation Organization

MID RVSM Safety Assessment Seminar

(Bahrain, 22-24 February 2010)

SUMMARY

1. INTRODUCTION:

1.1 The MID RVSM Safety Assessment Seminar was successfully held in Bahrain from 22 to 24 February 2010. Thirty four (34) participants from 10 States (Bahrain, Egypt, Iran, Iraq, Jordan, Oman, Qatar, Saudi Arabia, Syria and UAE) and 1 international organization (IATA) have attended the seminar. The list of participants is at **Attachment A** The Seminar was hosted by the Middle East Regional Monitoring Agency (MIDRMA). It was moderated by Mr. Mohamed Smaoui, RO/AIS/MET, ICAO MID Regional Office.

1.2 The Seminar addressed different subjects related to RVSM implementation and safety assessment, according to the following agenda:

1. Introduction
2. RVSM implementation and Regional Monitoring Agencies (RMAs)
3. RVSM Safety Assessment/Height-keeping Performance Monitoring
4. Seminar Outcome/Recommendations
5. Closing Session

1.3 The main objective of the Seminar was to raise the awareness of States and their Air Navigation Service Providers about the requirements for sustained RVSM safety assessment activity.

1.4 A number of presentations covering the different agenda items were provided during the Seminar as follows:

Title of the Presentation	Speaker
RVSM Implementation in the MID Region and MID RMA Project	Mr. Mohamed Smaoui Regional Officer AIS/MET, ICAO MID Office, Cairo
RMA Issues	Mr. Saulo Da Silva Technical Officer ATM ICAO HQ, Montreal
MID RMA Activities	Mr. Fareed Al-Alawi MIDRMA Manager
Altimetry System Errors (ASE) issues	Mr. Andrew Lewis Technical Manager Airspace, Network Planning, Navigation Directorate of Airspace Policy - EUROCONTROL

Title of the Presentation	Speaker
RVSM Height-keeping Performance Monitoring	Mr. Robert L. Miller, Jr. Vice President, Aerospace Division CSSI, Inc.
Monitoring and Validation of Aircraft Height Keeping Performance in Europe	Mr. Andrew Lewis Technical Manager Airspace, Network Planning, Navigation Directorate of Airspace Policy - EUROCONTROL
The Safety Web – Real Time Risk Monitoring	Professor Hussein Abbass Director Defence & Security Applications Research Centre University of New South Wales Australian Defence Force Academy Campus
RVSM Software	Dr. Sameer Alam Research Fellow (ATM) University of New South Wales Australian Defence Force Academy Campus
RADAC System	Mr. Per-Olov Hornaeus Systems Engineer COMBITECH AB, Sweden
Efficient Air Transportation	Mr. Kenny Norberg Marketing Director, SAAB Sweden
MID RMA Safety Monitoring Activities/difficulties	Mr. Fathi Ibrahim Al-Thawadi Head of Aeronautical & Airport Ops. Systems Civil Aviation Affairs, Bahrain (MIDRMA)
Threat and Error Management (TEM) and Normal Operation Safety Survey (NOSS)	Dr. Christopher S. Henry Director NOSS Collaborative USA
European Safety Assessment Methodology	Mr. Andrew Lewis Technical Manager Airspace, Network Planning, Navigation Directorate of Airspace Policy – EUROCONTROL
RMA Manual	Mr. Saulo Da Silva Technical Officer ATM ICAO HQ, Montreal
Development of MIDRMA SMRs	Mr. Fareed Al-Alawi MIDRMA Manager

2. SUMMARY OF DISCUSSIONS

2.1 The Seminar reiterated the benefits of RVSM implementation and underlined the need for RVSM implementation within Baghdad FIR.

2.2 The Seminar recalled ICAO Annex 6, Annex 11 and Doc 9574 (RVSM Manual) provisions related to RVSM safety assessment and in particular monitoring of height-keeping performance.

2.3 The Seminar reiterated that the introduction and continued safe use of RVSM in a portion of airspace is said to be "safe" if the risk of midair collision meets the agreed Target Level of Safety (TLS). The Technical Risk or Risk associated with height-keeping performance should not exceed 2.5×10^{-9} fatal accidents per flight hour and the Overall Risk due to all causes should not exceed 5×10^{-9} fatal accidents per flight hour.

2.4 The Seminar noted that aircraft height-keeping performance is function of performance of aircraft altimetry and altitude-keeping systems. Such performance is assessed through the results of height-keeping performance monitoring.

2.5 The responsibilities of the RPG, the RMA and States/ATC with regard to RVSM implementation and continued operation were highlighted. The need for States to report required data to the RMA on regular basis and in a timely manner was particularly underlined.

2.6 The main causes of Altitude Deviations/Level Busts were presented. The Seminar recognized that the level of reporting of Altitude Deviation Reports (ADRs), which contributes to the assessment of the overall risk, is very low and does not reflect the reality.

2.7 The Seminar recognized that the quality of data reported by States to the RMA has a direct impact on the quality of the risk assessment. A good estimation of the risk could not be achieved without high-quality data. In this regard, it was recommended that States put in place a formal mechanism for the reporting of ADRs and CFRs, with appropriate procedures and forms and a continuous monitoring, if it's not already done as part of SMS implementation.

2.8 The Seminar was briefed about the MIDRMA Project and the MIDRMA activities and difficulties.

2.9 Some global issues related to the RMAs were presented especially the lack of reporting of required data by States and the lack of expertise to perform safety assessment.

2.10 The need for global coordination was highlighted. In this regard, it was recognized that the RMA coordination Group, meeting once a year, represent a good mechanism to ensure successful coordination.

2.11 The need for a suitable monitoring infrastructure was highlighted. In this regard, the advantages and drawbacks of ground-based systems (Height Monitoring Units (HMU) and Aircraft Geometric Height Measurement Element (AGHME)) and air portable GPS Monitoring Units (GMU or enhanced GMU (EGMU)) were noted. The Seminar was also informed that Research and Development is currently being carried out in Australia and USA for the use of ADS-B for height-keeping monitoring.

2.12 The Seminar was apprised of the European method of monitoring aircraft using HMU infrastructure as well as the European Safety Assessment Methodology.

2.13 It was highlighted that the height-keeping monitoring could not be carried out without RVSM approval, since the aircraft need to enter the RVSM airspace in order to be monitored. In this regard, it was recommended that Temporary approvals be granted to the aircraft/operator until the height-keeping monitoring results could be obtained.

2.14 The Seminar noted the causes and effects of Altimetry System Errors (ASE), how ASE is detected and how problems are solved. In this respect, it was highlighted that:

- Airworthiness Authorities should ensure that adequate RVSM compliance checks are made;
- a review of the compliance methods for non-standard configurations is needed;
- Manufacturers should review inspection and maintenance procedures with regard to ASE; and
- Operators should ensure that they react appropriately to RMA's ASE reports.

2.15 The three elements of the safety assessment process, as detailed in the ICAO Doc 9574, were presented:

- Quantitative safety goal: Target Level of Safety (TLS);
- Mathematical Model used to estimate risk (both Technical and Operational); and
- Decision-making process using TLS and risk estimates.

2.16 The Seminar noted with interest the Research and Development (R&D) of the University of New South Wales, Australia related to Safety Web-Real Time RVSM Risk Monitoring/Assessment based mainly on FPL, radar and ADS-B data. The main steps for the estimation of the Technical Risk carried out by the RVSM Risk Assessment Software were presented, especially:

- Passing Frequency;
- Total Vertical Error (TVE);
- Probability of vertical overlap Pz(1000); and
- Probability of horizontal (lateral) overlap.

2.17 SAAB/COMBITECH presented their RADAC System which was lately purchased by the MIDRMA. RADAC is a Radar Data Acquisition and Analysis platform composed mainly of two modules: Radar Performance Analysis (RPA) and Passing Frequency System (PFS).

2.18 NOSS Collaborative made a presentation on Threat and Error Management (TEM) and Normal Operation Safety Survey (NOSS).

2.19 The importance of gathering stakeholders and providing forums for discussion of issues related to sustained RVSM safety assessment activity was highlighted.

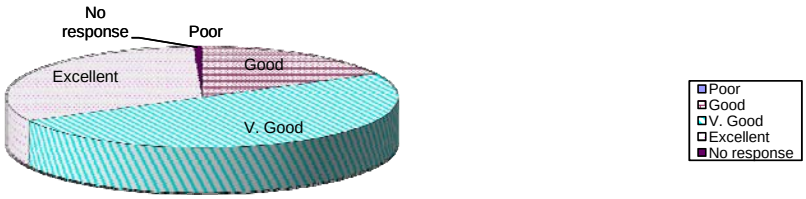
2.20 The participants expressed their gratitude to ICAO, the MIDRMA and Bahrain CAA for organizing such an important Seminar. The feedback of the participants related to the evaluation of the Seminar is at **Attachment B.**

MID RVSM SAFETY ASSESSMENT SEMINAR EVALUATION

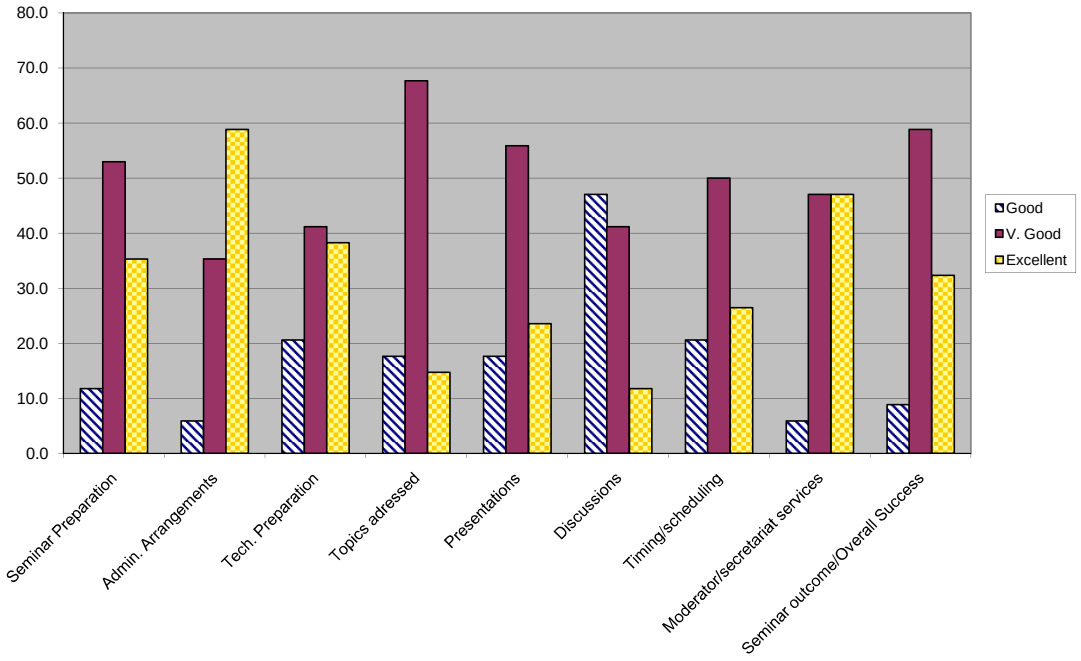
Questions	Poor		Good		V. Good		Excellent		No response		Total
	Nbr	%	Nbr	%	Nbr	%	Nbr	%	Nbr	%	
Seminar Preparation	0	**0.0**	4	**11.8**	18	**52.9**	12	**35.3**	0	**0.0**	34
Admin. Arrangements	0	**0.0**	2	**5.9**	12	**35.3**	20	**58.8**	0	**0.0**	34
Tech. Preparation	0	**0.0**	7	**20.6**	14	**41.2**	13	**38.2**	0	**0.0**	34
Topics adressed	0	**0.0**	6	**17.6**	23	**67.6**	5	**14.7**	0	**0.0**	34
Presentations	0	**0.0**	6	**17.6**	19	**55.9**	8	**23.5**	1	**2.9**	34
Discussions	0	**0.0**	16	**47.1**	14	**41.2**	4	**11.8**	0	**0.0**	34
Timing/scheduling	0	**0.0**	7	**20.6**	17	**50.0**	9	**26.5**	1	**2.9**	34
Moderator/secretariat services	0	**0.0**	2	**5.9**	16	**47.1**	16	**47.1**	0	**0.0**	34
Seminar outcome/Overall Succes	0	**0.0**	3	**8.8**	20	**58.8**	11	**32.4**	0	**0.0**	34
AVERAGE (%)		**0.0**		**17.3**		**50.0**		**32.0**		**0.7**	

Poor	Good	V. Good	Excellent	No response
0	17.3	50	32	0.7

MID RVSM Safety AssessmentSeminar Overall Evaluation



MID RVSM Safety Assessment Seminar Evaluation



MIDANPIRG/12
Appendix 5.2F to the Report on Agenda Item 5.2

BAGHDAD FIR RVSM IMPLEMENTATION WORKING GROUP (BFRI WG)

A) TERMS OF REFERENCE

With a view to coordinate and support the RVSM implementation activities in the Baghdad FIR, the Baghdad FIR RVSM Implementation Working Group (BFRI WG) shall:

1) Carry out a readiness assessment survey for RVSM implementation within Baghdad FIR;

2) Assist Iraq in the development of a comprehensive RVSM implementation plan and national safety plan;

3) Monitor and coordinate with Iraq the implementation of the RVSM programme within Baghdad FIR;

4) Carry out a Functional Hazard Analysis (FHA) which provides assurance that all hazards and risks associated with RVSM implementation within Baghdad FIR have been identified and analyzed;

5) Assist Iraq in the identification of necessary ATS equipment changes to accommodate the RVSM operations within Baghdad FIR;

6) Assist Iraq in the development of necessary ATS procedures related to RVSM operations within Baghdad FIR, including the contingency procedures;

7) Develop in coordination with the MID RMA an RVSM Pre-Implementation Safety Case (PISC) to provide evidence about the safe implementation of RVSM in Baghdad FIR;

8) Identify the needs for training and assist Iraq in the development of a training plan for the ATS personnel;

9) Consider interface issues related to RVSM implementation and operations with the adjacent Regions;

10) Assist Iraq in the publication of necessary Aeronautical Information Publication related to RVSM implementation within Baghdad FIR;

11) Monitor the process of signature of updated Letter of Agreements between Baghdad ACC and the adjacent ACCs;

12) Prepare necessary proposal for amendment to Doc 7030 related to RVSM implementation within Baghdad FIR; and

13) Address any other issue related to RVSM implementation within Baghdad FIR.

B) COMPOSITION

The BFRI WG will be composed of:

Bahrain, Iran, Iraq, Jordan, Kuwait, Saudi Arabia and Syria, MID RMA, IATA and IFALPA.

Other representatives, who could contribute to the activity of the Working Group, could be invited to participate as observers.

C) WORKING ARRANGEMENTS

1) The BFRI WG shall:

- report to the ATM/SAR/AIS Sub Group;
- appoint a Rapporteur to facilitate its proceedings; and
- meet as required and be dissolved once RVSM is implemented within Baghdad FIR.

2) The work of the BFRI WG shall be carried out mainly through exchange of correspondence (email, facsimile, tel, etc) between its Members; and

3) The convening of the Working Group meetings should be initiated by the Rapporteur in coordination with the Members of the Group and the ICAO MID Regional Office.

MIDANPIRG/12
Appendix 5.2G to the Report on Agenda Item 5.2

International Civil Aviation Organization
Baghdad FIR RVSM Implementation
Special Coordination Meeting (BFRI SCM)
(Bahrain, 29 - 30 September 2010)

SUMMARY OF DISCUSSION

1. INTRODUCTION

1.1 With the support of Bahrain Civil Aviation Affairs and the Middle East Regional Monitoring Agency (MIDRMA), the Baghdad FIR RVSM Implementation Special Coordination Meeting (BFRI SCM) was successfully held in Bahrain from 29 to 30 September 2010. Fourteen (14) participants from Iraq, the MIDRMA/Bahrain, IATA and ICAO attended the meeting. The list of participants is at **Attachment B.**

1.2 The meeting recalled that during the MIDRMA Board/10 meeting (Tehran, Iran, 3-5 May 2010), Iraq requested that a coordination meeting between Iraq (with the presence of CSSI), the ICAO MID Regional Office, the MIDRMA and IATA be held in September 2010, in order to follow-up the status of implementation of the action plan for RVSM implementation and take necessary action to pave the way for the BFRI WG/2 meeting scheduled to be held in Cairo, 13-15 December 2010, to take the Go-no-Go decision for RVSM implementation within Baghdad FIR on 10 March 2011.

2. SUMMARY OF DISCUSSIONS

2.1 The meeting recalled the actions agreed by MIDANPIRG/11, the ATM/SAR/AIS SG/11, the BFRI WG/1 and the MIDRMA Board/10 meetings related to the requirements for RVSM implementation within Baghdad FIR, in particular the 23 actions identified in the Action Plan for RVSM implementation within Baghdad FIR.

2.2 The meeting reviewed the progress achieved so far for the implementation of the different requirements.

Assessment of Operators Readiness for RVSM Implementation within Baghdad FIR

2.3 The meeting noted that Iraq CAA (ICAA) analyzed the February 2010 sample of traffic data from the Baghdad ACC along with current Regional Monitoring Agency (RMA) RVSM approvals data to provide a projection of operators readiness to conduct RVSM operations within Baghdad FIR. The data largely indicates that current operators within Baghdad FIR are already approved to conduct RVSM operations. This finding is also supported by the fact that RVSM is applied in the FIRs surrounding the Baghdad FIR. Accordingly, it was confirmed that Operators readiness for the March 2011 implementation of RVSM in the Baghdad FIR is projected to be roughly 100%.

Air Traffic Control Issues and Implementation Readiness Assessment

2.4 The meeting agreed that one of the major questions to be answered affirmatively in order to support implementation of RVSM in a portion of airspace is: *Is air traffic control ready*? Or: *Is it reasonable to expect that necessary documentation, controller training and automation system modifications will be completed*?

2.5 It was emphasized that the changes necessary to support the implementation of RVSM in the Baghdad FIR should be achievable without derogation of the safety performance within the airspace. Accordingly, the following ATC issues were highlighted:

a) ATCOs training;
b) Letters Of Agreement (LOAs) with adjacent ACCs;
c) Local operating procedures; and
d) ATC Automation Systems.

2.6 The meeting noted that work is ongoing with no problems or delays anticipated and the ICAA is on target to complete all identified requirements in time for implementation.

RVSM Pre-Implementation Safety Assessment

2.7 The meeting recalled that the BFRI WG/2 meeting (Cairo, 13-15 December 2010) will consider, among other things, whether the introduction of RVSM into the airspace of the Baghdad FIR will be safe. This consideration is equivalent to determining whether the implementation will satisfy the RVSM safety objectives adopted by MIDANPIRG.

2.8 The meeting was presented with a preview of the pre-implementation safety assessment, developed by ICAA, which will be further validated by the MIDRMA and presented to the BFRI WG/2 meeting.

2.9 Based on the analysis of the February 2010 sample of traffic data from the Baghdad ACC, the following was highlighted:

a) roughly 97% of operations in the sample operated on two unidirectional routes (UT888 and R784) with northern fixes of the routes at the boundary of the Ankara FIR and southern fixes at the boundary of the Kuwait FIR, and

b) the route and flight-level structure of the Baghdad FIR changed significantly in early March 2010; due to agreement between Iraq and Turkey, the northern and southern unidirectional flows now operate on routings which allow northbound aircraft to use even RVSM flight levels and southbound aircraft to use odd RVSM flight levels, with 2000-ft vertical separation still provided between aircraft at adjacent flight levels on each of the routings.

Preview of Technical Risk Assessment (Safety Objective 1)

2.10 The meeting recalled that there are two key model parameters which affect technical risk directly: (1) the probability that two aircraft will lose planned 1000-ft vertical separation due to aircraft height-keeping performance capability, termed the probability of vertical overlap, and (2) the relative density of aircraft at adjacent RVSM flight levels, represented by either same-direction and opposite-direction occupancies or the equivalent passing frequencies.

2.11 Considering that the overwhelming majority of flights operate on two unidirectional routings with usable flight levels on each routing separated by 2000 ft and that there are no plans to change this structure upon RVSM implementation; it was noted that the effective same-direction and opposite-direction occupancies or passing frequencies in the Baghdad FIR will be very close to zero (0). As a result, the technical risk should be well below the applicable TLS value of 2.5×10^{-9} fatal accidents per flight hour.

Preview of Operational Risk Assessment and Overall Risk (Safety Objective 2)

2.12 The meeting noted that considering the success of scrutiny groups in other ICAO Regions, the ICAA established the Baghdad FIR RVSM implementation Scrutiny Group (BF/RSG) as part of its preparations for RVSM implementation. It was noted that the BF/RSG was presented with information concerning significant numbers of control-transfer errors during its First Meeting held on 11 August 2010. The BF/RSG identified problems with CNS infrastructure as a major cause of these errors. In this regard, the meeting noted that the ICAA has undertaken a series of improvements designed to improve the CNS infrastructure. In particular:

- the recent integration of the Kirkuk radar into the surveillance suite of the Baghdad ACC;

- further enhancement of the radar coverage at the Baghdad ACC by the integration of the Basra radar (expected end of October 2010), which will complete the radar coverage of the north-south flows, accounting for about 97% of the Baghdad ACC operations;

- improvement of the communications infrastructure, in particular, the fiber-optic and VSAT-based systems, which when complete, will provide redundant communications networks throughout the Baghdad FIR and with adjacent FIRs.

2.13 The meeting noted that the predominant effect on operational risk is time spent at incorrect flight level. It was further noted that control-transfer errors are the principal potential contributors to time at incorrect flight level in the Baghdad FIR.

2.14 In connection with the above, it was noted that the BF/RSG has agreed that, although control-transfer errors are occurring currently at a high frequency, the existing LOA arrangements and Baghdad ACC procedures combined with imminent complete surveillance coverage of the high-traffic portion of the FIR mitigate their effect on operational risk. As a result, the BF/RSG agreed that their effect on risk should be discounted.

2.15 As a result, considering the assessment of the current ATC operations, combined with the planned improvements listed above; the meeting agreed that the sum of estimated operational and technical risk should allow satisfaction of the overall TLS value of 5×10^{-9} fatal accidents per flight hour when RVSM is implemented in the Baghdad FIR.

Assessment of Safety Objective 3

2.16 The meeting recalled that in accordance with MIDANPIRG/11 Conclusion 11/22, to meet safety objective 3, there's a need to 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.

2.17 The meeting noted the ICAA has formed the BF/RSG to assist in the satisfaction of Safety Objective 3 within the Baghdad FIR. The meeting agreed that the MIDRMA, in coordination with the ICAA and the BF/RSG would ascertain the satisfaction of this safety objective as part of the Pre-Implementation Safety Assessment taking into consideration the traffic forecasts, long term trends and potential future safety issues.

Update of the Action plan for RVSM implementation within Baghdad FIR

2.18 Based on the above, the meeting noted with appreciation the progress made towards the implementation of RVSM within Baghdad FIR and updated accordingly the Action Plan as at **Attachment A.** The meeting agreed that the ICAA and the MIDRMA would present all supporting documentation, which demonstrates the fulfillment of all requirements to the BFRI WG/2 meeting, which is delegated the authority to take the Go-No-Go decision for RVSM implementation in the Baghdad FIR on 10 March 2011.

ATTACHMENT A

ACTION PLAN FOR RVSM IMPLEMENTATION IN BAGHDAD FIR

ID	ACTION	TO BE DELIVERED BY	TARGET DATE	STATUS	COMMENTS (As of 30 September 2010)
1	Nomination of RVSM Focal Point	Iraq	19 Jan 2010	Closed	Ali Khalil Ibrahim is RVSM Focal Point
2	Nomination of Baghdad FIR RVSM Program Manager	Iraq	1 Mar 2010	Closed	Ali Khalil Ibrahim is Baghdad FIR RVSM Program Manager
3	Promulgation of national regulation to enable the implementation of RVSM	Iraq	13 Jan 2011	Open	Iraq Civil Aviation Law currently under review; RVSM amendments will be incorporated into Law after review completed. Until review is complete, AIP will serve as regulatory document. Initially, an AIC will be published as advance notification to airspace users. Enroute section of Iraq AIP will be amended on AIRAC date of 13 Jan 2011.
4	Provide the MIDRMA with traffic data for the month of February 2010 (including A/C REG)	Iraq	15 Mar 2010	Closed	Submitted as required.
5	Submission of the latest airways structure for Baghdad FIR to the MIDRMA	Iraq	15 Apr 2010	Closed	Latest Baghdad FIR airways structure published in AIP. There will be no airspace changes to the ATS route network within Baghdad FIR affecting the current prospects of meeting the Target Level of Safety on RVSM implementation date.
6	Calculating the passing frequency for all Bagdad FIR airways	Iraq and MIDRMA	15 Nov 2010	Open	Passing frequency associated with heavily used portion of current route structure is very close to 0 for same-direction traffic; there is little to no opposite direction opposite-direction traffic at adjacent flight levels in the heavily used portion of current FIR route structure.

ID	ACTION	TO BE DELIVERED BY	TARGET DATE	STATUS	COMMENTS (As of 30 September 2010)
7	Conclusions of the passing frequency results, evaluation of the need for ATS Route Network amendments related to RVSM and follow up implementation of the proposals with Iraq	Iraq and MIDRMA	30 Sep 2010	Done	Traffic on the predominant unidirectional north-south routings accounts for roughly 97 percent of operations in FIR; the current estimates of passing frequency on these routes, very close to 0, precludes need for changes to route structure in order to ensure satisfaction of TLS on implementation date. Passing frequencies to be estimated prior to start of BFRI WG/2.
8	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	Information submitted on regular basis as required.
9	Submit Coordination Failure Reports (CFR) and Altitude Deviation Reports (ADR) to the MIDRMA on a monthly basis	Iraq	On Monthly basis	Ongoing	Reports are being submitted as required
10	Develop ATC operational policy & procedures for normal RVSM operations	Iraq	1 Dec 2010	Open	Concept of Operation for Baghdad FIR RVSM completed in May 2010. Development of ATC operational policy and procedures initiated during first week in October. Policy and procedure development will proceed in accordance with plan to meet implementation date. Evidence of expected completion to be presented at BFRI WG/2.

ID	ACTION	TO BE DELIVERED BY	TARGET DATE	STATUS	COMMENTS (As of 30 September 2010)
11	Assess the impact of RVSM implementation on ATC automation systems, plan for upgrades/modifications and effectively implement necessary changes.	Iraq	31 Jan 2011	Ongoing	May 2010 Concept of Operation identified automation system upgrades required to support RVSM implementation. ICAA has confirmed that automation system upgrades are feasible within time period needed to support implementation. Evidence of expected completion to be presented at BFRI WG/2.
12	Develop ATC procedures for non-approved State aircraft to transit RVSM airspace	Iraq	1 Dec 2010	Open	Concept of Operation for Baghdad FIR RVSM, completed in May 2010, identified need to address non-approved State aircraft. See comments under Item 10 for current status. Evidence of expected completion to be presented at BFRI WG/2.
13	Develop procedures for handling non-compliant civil aircraft	Iraq	1 Dec 2010	Open	Concept of Operation for Baghdad FIR RVSM, completed in May 2010, identified need to address non-compliant civil aircraft. See comments under Item 10 for current status. Evidence of expected completion to be presented at BFRI WG/2.
14	Develop procedures for suspension of RVSM	Iraq	1 Dec 2010	Open	Concept of Operation for Baghdad FIR RVSM, completed in May 2010, identified need to address criteria and procedures for suspension of RVSM. See comments under Item 10 for current status. Evidence of expected completion to be presented at BFRI WG/2.
15	Development of Iraq national safety plan	Iraq	1 Dec 2010	Open	National Safety Plan drafting in progress. Several areas of plan complete in draft form; ATC portion of plan requires information from process to develop procedures and related items. Plan to be completed after conduct of early-October initial planning for ATC actions to support RVSM. Final draft to be presented to BFRI WG/2.

ID	ACTION	TO BE DELIVERED BY	TARGET DATE	STATUS	COMMENTS (As of 30 September 2010)
16	Simulations to support ATC training needs and assess ATC workload, identify eventual need for additional training and/or amendment of RVSM procedures	Iraq	Feb 2011	Open	Concept of Operation for Baghdad FIR RVSM, completed in May 2010, identified need to address simulation of RVSM procedures. See comments under Item 10 for current status. Evidence of expected completion to be presented at BFRI WG/2.
17	ATC training plan	Iraq	1 Dec 2010	Open	Concept of Operation for Baghdad FIR RVSM, completed in May 2010, identified need to address training. See comments under Item 10 for current status. Evidence of expected completion to be presented at BFRI WG/2.
18	Update of LOAs between Iraq and all adjacent FIRs	Iraq and neighboring States	15 Feb 2011	Open	Draft LOAs will be presented at BFRI WG/2. Signed LOAs required not later than 15 Feb, but preferably during BFRI WG/2.
19	ATCOs trained for RVSM operation	Iraq	15 Feb 2011	Open	Training to be completed near implementation date. Evidence of expected completion to be presented at BFRI WG/2.
20	Carry out pre-implementation safety analysis	Iraq and MIDRMA	1 Dec 2010	Open	The ICAA will conduct pre-implementation safety assessment in coordination with MIDRMA. Results will be presented to BFRI WG/2.
21	Carry out pre-implementation readiness assessment	Iraq	15 Feb 2011	Open	ICAA will conduct internal RVSM readiness assessment in accordance with established ICAO criteria and report results to MIDRMA and ICAO MID Office.
22	Prepare necessary proposal for amendment to Doc 7030 related to RVSM implementation within Baghdad FIR	ICAO MID Office	31 Dec 2010	Ongoing	Draft proposal to be presented to BFRI WG/2. Iraq to request that ICAO MID circulate Doc 7030 amendment after BFRI WG/2.

ID	ACTION	TO BE DELIVERED BY	TARGET DATE	STATUS	COMMENTS (As of 30 September 2010)
23	Go-No-Go Decision for RVSM Implementation effective 10 March 2011	BFRI WG	15 Dec 2010	Open	

RVSM IMPLEMENTATION-DEPENDENT CNS REQUIREMENTS (Note: CNS Requirements are not part of ACTION PLAN adopted at BFRI WG/1; added at BFRI SCM)					
	Integration of Basra and Kirkuk radars at Baghdad ACC	ICAA	Oct 2010	Ongoing	Kirkuk radar available at Baghdad ACC effective July 2010; Basra radar planned for integration by end of October 2010.
	Reliable ground-ground communications with adjacent FIRs	ICAA	1 Dec 2010	Open	Very Small Aperture Terminal (VSAT)-based satellite relay of communications exists in portions of FIR; funds have been allocated for expansion of VSAT system to meet minimum communications requirements. Funds have been allocated to connect Baghdad ACC to the existing fiber-optic backbone in Iraq; funds also have been allocated for connections of adjacent FIRs to this backbone.

MIDANPIRG/12
Appendix 5.2H to the Report on Agenda Item 5.2

MID STRATEGY FOR SSR CODE ALLOCATION ISSUES

1) Short Term

a) the MID Region fully implements the Originating Region Code Assignment Method (ORCAM);

b) the SSR code occupancy time be changed from three hours to a maximum of two hours where practicable;

c) States ensure adherence to ORCAM procedures and, where necessary, centralize code assignment;

d) transmission of EST and ABI be deferred until necessary – and no more than 30 minutes prior to ETO for the applicable COP;

e) "Super-domestic" code allocation be introduced through bilateral measures (LOAs) where necessary to make use of Domestic codes to supplement Transit codes;

f) codes be assigned in a manner ensuring earliest availability, hereunder direction-of-flight dependent assignment, rather than using cycling in numerical order; and

g) changes to code allotment in adjacent regions be carefully reviewed by the MID Region for possible operational impact; and

h) the MID Region adopt the approach of "code sharing" between FIRs that are geographically adequately disparate and where directional assignment of SSR codes makes "code sharing" practical.

2) Medium Term

a) the MID Region consider multiple ORCAM Participating Areas (PA); the number of PAs to be optimized based on studies of Regional traffic patterns and volume data, as well as coordination with adjacent ICAO Regions;

b) the ICAO MID Regional Office take action to obtain necessary data and documentation from States and other ICAO Regions for the Study Group to reach firm conclusions; and

c) in order to facilitate an effective analysis of the traffic statistics required for decision on PAs, MID FIRs provide traffic data in accordance with the format provided by the MID Regional Office.

3) Long Term

a) States implement Mode S surveillance systems making use of the 24-bit address code capability of aircraft transponders;

b) States consider implementation of ADS-B surveillance systems with 24-bit address code capability; and

c) the MID FASID be updated with a view to implement use of 24-bit address codes in ATC systems to the widest extent possible.

MIDANPIRG/12
Appendix 5.2I to the Report on Agenda Item 5.2

SURVEY ON THE PROVISION OF SAR IN THE MID REGION

QUESTION	YES	NO
1- 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? *(add details as appropriate)* …… …… …… ……..		
2- Does the SAR services system include a responsible authority, organized available resources and a workforce skilled in coordination and operational functions? *(add details as appropriate)* …… …… …… ……..		
3- Has your State designated a SAR point of contact for the receipt of COSPAS-SARSAT distress data? *(add details as appropriate)* …… …… …… ……..		
4- Has your State designated, as SAR units, elements of public or private services suitably located and equipped for SAR operations? *(add details as appropriate)* …… …… …… ……..		

QUESTION	YES	NO
5- Has your RCC prepared detailed plans of operation for the conduct of SAR operations within its 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 organisation to cooperate fully with the latter in SAR to extend any possible assistance to the survivors of aircraft accidents? *(add details as appropriate)* …… …… …… ……..		
6- Does your State coordinate its SAR organisation with those of neighbouring States? If Yes, what is the status of SAR agreements with your neighbouring States? *(add details as appropriate)* …… …… …… ……..		
7- Does your State ensure that SAR personnel are regularly trained and that appropriate SAR exercises are arranged? *(add details as appropriate)* …… …… …… ……..		

MIDANPIRG/12
Appendix 5.2J to the Report on Agenda Item 5.2

SAR AGREEMENT STATUS

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	LIM/MID/RANConcl. 3/7Cooperation between States in SAR		Lack of Search and Rescue Agreements between neighboring States	Nov, 1994	Work ongoing to sign agreements	S	A. States to commence negotiations with neighbors to establish SAR agreements B. Implement operational SAR agreements C. Implement entry agreements for SAR aircraft of other States			A

STATE	CORRESPONDING STATES	STATUS
BAHRAIN	IRAN KUWAIT OMAN QATAR SAUDI ARABIA UAE	
EGYPT	GREECE ISRAEL JORDAN LYBIA CYPRUS SAUDI ARABIA SUDAN	
IRAN	ARMENIA AZERBAIJAN TURKMANISTAN AFGHANISTAN BAHRAIN IRAQ KUWAIT OMAN PAKISTAN TURKEY UAE	
IRAQ	IRAN JORDAN KUWAIT SAUDI ARABIA SYRIA TURKEY	
ISRAEL	EGYPT JORDAN LEBANON CYPRUS	

STATE	CORRESPONDING STATES	STATUS
JORDAN	EGYPT IRAQ ISRAEL SAUDI ARABIA SYRIA	
KUWAIT	BAHRAIN IRAN IRAQ SAUDI ARABIA	
LEBANON	ISRAEL CYPRUS SYRIA	
OMAN	BAHRAIN INDIA IRAN PAKISTAN SAUDI ARABIA UAE YEMEN	
QATAR	BAHRAIN	
SAUDI ARABIA	BAHRAIN EGYPT ERITREA IRAQ JORDAN KUWAIT OMAN SUDAN YEMEN	
SYRIA	IRAQ JORDAN LEBANON CYPRUS TURKEY	 YES YES

STATE	CORRESPONDING STATES	STATUS
UAE	BAHRAIN IRAN OMAN SAUDI ARABIA	
YEMEN	DJIBOUTI ERITREA ETHIOPIA INDIA OMAN SAUDI ARABIA SOMALIA	

MIDANPIRG/12
Appendix 5.2K to the Report on Agenda Item 5.2

SAR AWG POINT OF CONTACT

STATE	NAME	TITLE	ADDRESS	EMAIL	FAX	TEL	MOBILE
Bahrain							
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							
Israel							
Jordan	Mr. Khalaf Al-Shawabka	Chief Amman TACC and SAR	Queen Alia Airport	kshowbki@yahoo.co.nz	+962 445132	+ 962 4451672	96) 77790 4724
Kuwait							
Lebanon							

STATE	NAME	TITLE	ADDRESS	EMAIL	FAX	TEL	MOBILE
Libya							
Oman							
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							
Yemen							

MIDANPIRG/12
Appendix 5.2L to the Report on Agenda Item 5.2

PROCEDURES FOR THE HANDLING OF UNCOORDINATED FLIGHTS CROSSING THE RED SEA AREA

Uncoordinated flights operating within the Red Sea area shall implement the following procedures:

1. All uncoordinated flights over the Red Sea area should squawk the Radar Code A2000. IATA is assigned the task of notifying concerned airlines operating in this region of the importance of such issue. States are also requested to report to IATA and the MID RMA any aircraft that do not use the Radar Code A2000.

2. Uncoordinated flights should maintain a single flight level (FL) while crossing the Red Sea from south to north, namely FL300.

3. Uncoordinated flights should maintain a single flight level (FL) while crossing the Red Sea from north to south, namely FL290.

4. Uncoordinated flights crossing the Red Sea should provide their flight details on the working frequencies of the concerned Air Traffic Control Centres (ACCs), namely Sana'a, Jeddah, Khartoum, and Cairo and notify these Centres of the following data: call sign, direction, altitude, time of crossing the reporting points along the boundaries of the FIR.

5. Uncoordinated flights crossing the Red Sea should transmit their flight details 10 minutes prior to crossing the boundaries of the concerned FIR and the compulsory reporting points; in addition to listen on to the appropriate frequencies in order to identify other civil aircraft that may conflict with them and represent risk of collision.

6. Civil Aviation Authorities of the concerned States should instruct their ACCs to develop procedures for the communication of appropriate information regarding uncoordinated flights; survey and register irregularities by these uncoordinated flights; and find a mechanism in coordination with Regional Offices and other international bodies to commit these flights to conformity with the agreed recommendations.

7. Increase the awareness of Air Traffic Controllers at ACCs in the concerned States of this situation and of the potential risks; in addition to benefit from radar facilities for the monitoring of non-conforming flights.

8. All flights flying in the center of the Red Sea and maintaining RVSM Flight levels (between FL290-FL410) should be RVSM approved in accordance with the MID Region requirements.

9. Unless otherwise coordinated, all the above mentioned flights, in case of non-compliance with the Region's requirements for flying in an RVSM area, should be allocated two Flight levels, namely FL250 and FL260.

10. All navigational information regarding aircraft on direct routes in the center of the Red Sea and considered unidentified by the Air Traffic Control Centres should be sent via either AFTN or any other means.

11. *IATA will assist in requesting civil flights operating within Sana'a FIR to operate on established ATS routes.

12. The agreement above should be added in the form of Letters of Agreement (LOAs) between the ACCs of the concerned Arab States.

Note:-

- ** Included in the agreement at the request on Yemen*

REPORT ON AGENDA ITEM 5: REGIONAL AIR NAVIGATION PLANNING AND IMPLEMENTATION ISSUES

5.3 AIS/MAP

5.3.1 The meeting was informed of the outcome of the ATM/SAR/AIS SG/11 meeting pertaining to AIS/MAP matters, pursuant to the review of the report of the AIS/MAP TF/5 meeting held in Tehran, I.R of Iran, 5-7 May 2009.

Status of Implementation of Required AIS/MAP Facilities and Services in the MID Region

5.3.2 The meeting noted that the status of implementation of required AIS/MAP facilities and services in the MID Region was reviewed and updated by the AIS/MAP TF/5 and ATM/SAR/AIS SG/11 meetings.

5.3.3 With respect to the status of implementation of AIRAC system, the meeting noted that the late receipt of aeronautical information continues to be a problem for the aviation community in the MID Region. It was also noted that the AIRAC procedures have not yet been fully adhered to by a number of MID States.

5.3.4 The meeting noted that the aeronautical information published by States needs to be compiled by the Commercial Data providers, such as Jeppesen, in order to be packed and loaded in the onboard Flight Management System (FMS) database.

5.3.5 The meeting highlighted that the lack of coordination between AIS and the technical Departments providing the raw data to AIS for promulgation represents the main reason for non-compliance with the AIRAC procedures. In this regard, it was reiterated that the signature of Service Level Agreements (SLA) between AIS and the data originators would, to a large extent, solve this deficiency.

5.3.6 The meeting recalled that IATA and IFALPA strongly supported MIDANPIRG/11 Conclusion 11/40 related the improvement of the adherence to the AIRAC System, emphasizing that there's an important room for improvement with regard to the compliance with the AIRAC procedures in the MID Region and urging States to accord high priority for the elimination of the identified deficiencies in the AIS/MAP field.

5.3.7 Based on the above, the meeting agreed to the following Conclusion, which replaces and supersedes MIDANPIRG/11 Conclusion 11/40:

CONCLUSION 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;

b) 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.

5.3.8 The meeting recalled that States were encouraged to use the public internet for the advance publication of those elements of the Integrated Aeronautical Information Package containing non-time critical aeronautical information. The meeting noted with appreciation that electronic copies of the majority of States' AIPs are available in an electronic format on CD-ROM and/or on the web. However, the remaining States were urged to make their AIPs available in digital format.

5.3.9 With regard to the provision of pre-flight information services, the meeting recognized that a number of Aerodrome AIS Units have not yet been established in accordance with the MID FASID Table AIS-1 and that the quality of the services provided by the States' AIS Briefing Offices is still far below user requirements. However, it was highlighted that with the use of AIS automation, pre-flight information service could be provided remotely using web-based applications, internet, etc, and that the physical establishment of an AIS Aerodrome Unit for each aerodrome used for international operations should not be a requirement. Accordingly, the meeting agreed that the AIS/MAP Task Force should look into this subject and carry out a review of the whole content of the MID Basic ANP and FASID related to AIS/MAP with a view to accommodate with the latest developments including the transition from AIS to AIM. Nevertheless, the meeting re-emphasized that the only way to improve the quality of the services provided by AIS Briefing Offices would be the implementation of AIS automation, QMS and the provision of tailored products meeting the user requirements.

5.3.10 The meeting reviewed and updated the status of implementation of WGS-84 in the MID Region as at **Appendix 5.3A** to the Report on Agenda Item 5.3. It was noted that:

a) seven (7) States have fully implemented WGS-84;

b) six (6) States have implemented the majority of WGS-84 requirements; however one or two elements (geoid undulation, quality system) are not yet implemented; and

c) one (1) State has partially implemented WGS-84.

5.3.11 The meeting recalled that, taking into consideration the status of implementation of WGS-84 in the MID Region, MIDANPIRG/11, through Conclusion 11/42, underlined that the implementation of WGS-84 is an important pre-requisite for the implementation of Performance Based Navigation (PBN) and urged those States that have not yet completed the implementation of WGS-84 to accord high priority to this project and to expedite the process of full implementation of WGS-84, with a view to achieve the total implementation of the System prior to 31 December 2010.

5.3.12 The meeting noted that, the ICAO MID Regional Office took the necessary follow-up action on MIDANPIRG/11 Conclusion 11/42, and a State Letter was sent to concerned States urging them to send their WGS-84 implementation plan and to take necessary measures to meet the deadline of 31 December 2010 for the achievement of a full implementation of the WGS-84 system in the MID Region. The meeting noted that Iraq, Israel, Saudi Arabia and Syria replied to the above-mentioned State Letter. The meeting 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 WGS-84, take all necessary measures to expedite the completion of WGS-84 implementation.

5.3.13 The meeting recalled that, as a follow up action to MIDANPIRG/11 Conclusion 11/13, and the ATM/SAR/AIS SG/11 Draft Conclusion 11/15, the ICAO MID Regional Office, on behalf of MIDANPIRG, initiated a proposal for amendment to the MID FASID, Part VIII (AIS), based on the information updated by the ATM/SAR/AIS SG/11 meeting and the updates received from States prior to 31 January 2010. Accordingly, the meeting noted that the proposal for amendment was processed in accordance with standard procedure, and approved on 29 June 2010.

Electronic Terrain and Obstacle Data (eTOD)

5.3.14 The meeting recalled that Amendment 33 to Annex 15 introduced the requirements for the provisions of electronic Terrain and Obstacle Data (eTOD). Amendment 33 became applicable on 20 November 2008 as far as Area 1 "the entire territory of a State" and Area 4 "Category II and III operations area" are concerned.

5.3.15 The meeting noted that Amendment 36 to Annex 15 adopted by the ICAO Council on 22 February 2010 introduced revised provisions and reduced the requirements related to eTOD.

5.3.16 The meeting was apprised of the outcome of the Second meeting of the eTOD Working Group held in Tehran, Iran, Islamic Republic of, 3 - 4 May 2009, as reviewed and endorsed by the AIS/MAP TF/5, and ATM/SAR/AIS SG/11 meetings.

5.3.17 The meeting recalled that the eTOD requirements have raised the concern of States from both technical and institutional perspectives. Although there are a number of reasons for these concerns, the primary issue was related to implementation and maintenance costs for the data sets, in particular, those relating to the provision of data for Area 2. States have indicated that the requirements related to Area 2 would be difficult and costly to implement and could therefore lead to a widespread non-compliance.

5.3.18 In connection with the above, the meeting noted that Amendment 36 to Annex 15 introduced important changes to Annex 15 Chapter 10 related to eTOD. The meeting particularly noted that Area 2 would be divided into four sub-areas as follows:

- Area 2a is described as a rectangular area around the runway extending to 255m each side of the runway centre line with the length of the runway strip plus any clearway(s) that exist;

- Area 2b is described as a surface with a 1.2% slope extending from the ends of Area 2a with a length of 10km and a splay of 15% to each side;

- Area 2c is described as an Area with a 1.2% slope extending outside Area 2a and Area 2b at a distance of not more than 10 km to the boundary of Area 2a; and

- Area 2d is described as the remainder of Area 2 outside the Areas 2a, 2b and 2c up to a distance of 45km from the ARP, or the TMA boundary, whichever is smaller.

5.3.19 The meeting further noted that the applicability date for Areas 2 and 3 has been changed from 15 November 2012 to 12 November 2015. Furthermore, with regard to Area 2, the provision of electronic terrain and obstacle data became a standard only for:

a) Area 2a;

b) penetrations of the take-off flight path area obstacle identification surfaces; and

c) penetrations of the aerodrome obstacle limitation surfaces.

5.3.20 It was also highlighted that the provision of electronic terrain and obstacle data has been changed to a Recommended Practice for Areas 2b, 2c and 2d. Nevertheless, electronic obstacle data shall be provided for all obstacles within Area 2 that are assessed as being a hazard to air navigation.

5.3.21 The meeting noted that some of the legal and institutional issues pertaining to eTOD are still not addressed. Accordingly, States were urged to look into these issues when developing their national regulations related to eTOD.

5.3.22 The meeting reviewed and endorsed the eTOD checklist as at **Appendix 5.3B** to the Report on Agenda Item 5.3, developed by the eTOD WG/2 meeting, in order to assist States in the process of planning and implementation of eTOD provisions and agreed accordingly to the following Conclusion:

CONCLUSION 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.*

5.3.23 The meeting recognized that the implementation of eTOD provisions is a challenge for all concerned. It was also highlighted that some of those involved in the implementation process were not aware of the responsibilities that they might have and that only a small cross section of those affected were fully aware of the implications and the new responsibilities arising. Furthermore, as a result of the nature of the task and the new technologies and standards that are involved, it was underlined that many stakeholders require training to enable them to perform the tasks for which they are responsible.

5.3.24 Based on the above the meeting agreed that States should organize awareness campaigns and training events (workshops) involving all concerned personnel from within and outside the Civil Aviation Authority in order to provide an overview of the technical, legal, institutional and financial issues related to eTOD as well as of the actions that need to be taken in implementing eTOD and to bring a high-level understanding of the associated topics. Accordingly, the meeting agreed to the following Conclusion:

CONCLUSION 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.

5.3.25 The meeting noted that the MID Region AIS/MAP implementation Timelines related to eTOD were reviewed and updated by the ATM/SAR/AIS SG/11 meeting. In this regard, it was noted that, although the majority of States have not yet complied with Annex 15 provisions related to Area 1 and Area 4 which have been applicable since 20 November 2008, no State from the MID Region has notified ICAO of a difference to these provisions.

5.3.26 The meeting recalled that the MID Region eTOD Implementation Strategy as at **Appendix 5.3C** to the Report on Agenda Item 5.3, was reviewed and endorsed by MIDANPIRG/11 through Conclusion 11/43. Accordingly, the meeting urged States to use the MID Region eTOD Implementation Strategy as a guide for a harmonized implementation of eTOD in the MID Region.

5.3.27 In connection with the above, the meeting noted that the ATM/SAR/AIS SG/11 meeting reviewed the draft proposal for amendment to the MID Basic ANP as at **Appendix 5.3D** to the Report on Agenda Item 5.3, with a view to introduce a new part related to eTOD based on the MID Region eTOD Implementation Strategy and through Draft Conclusion 11/21 agreed that the ICAO MID Regional Office, on behalf of MIDANPIRG, process the draft proposal for amendment to the MID Basic ANP (Part VIII), in accordance with standard procedure.

5.3.28 The meeting recalled also that MIDANPIRG/11, through Conclusion 11/44, invited ICAO to consider the inclusion of the Draft eTOD FASID Table at **Appendix 5.3E** to the Report on Agenda Item 5.3, into the MID FASID, Part VIII (AIS), with necessary amendments, as appropriate.

5.3.29 Taking into consideration the latest developments related to eTOD introduced by Amendment 36 to Annex 15, it became obvious that the Draft eTOD FASID Table is no longer suitable and needs adjustment.

5.3.30 Based on the above and taking into consideration the outcome of the CNS/ATM/IC SG/5 meeting related to the necessity to review the whole content and format of the MID Basic ANP and FASID, the meeting agreed to disregard the draft proposal for amendment to the MID Basic ANP as at **Appendix 5.3D** and the Draft eTOD FASID Table as at **Appendix 5.3E** and refer them back to the AIS/MAP Task Force and the ATM/SAR/AIS Sub Group for further consideration and amendment, as necessary.

5.3.31 The meeting recalled that MIDANPIRG/10, under Decision 10/58 established the eTOD Working Group, with a view to, inter-alia, harmonize, coordinate and support the eTOD implementation activities on a regional basis. Noting that the majority of the Tasks assigned to the eTOD Working Group have been completed, the meeting agreed to dissolve the eTOD Working Group and include the remaining eTOD tasks which have not yet been completed into the Work Programme of the AIS/MAP Task Force. Accordingly, the meeting agreed to the following Decision, which replaces and supersedes MIDANPIRG/11 Decision 11/45:

DECISION 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.

Status of Implementation of QMS in the MID Region

5.3.32 The meeting underlined the requirements for the implementation of QMS for AIS/MAP services and highlighted that the provision of quality assured and timely aeronautical information/data to the aviation community is a significant enabling activity for the globalization of ATM.

5.3.33 The meeting recognized that, while the importance and need for the provision of high quality aeronautical information is gaining momentum, the implementation of quality system appears to be a specific domain with low degree of implementation among MID States. The status of implementation of QMS in the MID Region is summarized as follows:

	Not started	Planning	Ongoing/ partially implemented	Implemented	Certified	Remarks
Bahrain					√	
Egypt					√	
Iran					√	
Iraq	√					
Israel		√				
Jordan					√	
Kuwait		√				
Lebanon		√				
Oman		√				
Qatar			√			ISO certification expected by Mar. 2011
Saudi Arabia			√			
Syria		√				
UAE					√	The QMS implemented is not fully compliant with Annex 15 requirements
Yemen		√				

5.3.34 The meeting recalled that MIDANPIRG/11 noted that EUROCONTROL, through the Controlled and Harmonized Aeronautical Information Network project "CHAIN", supported the European States in meeting ICAO requirements related to QMS (awareness campaigns, development of guidelines, development of Computer Based Training "CBT", etc).

5.3.35 In connection with the above, the meeting noted that MIDANPIRG/11, through Conclusion 11/46, urged those States that have not yet done so, to implement the required QMS before December 2010.

5.3.36 The meeting noted that necessary follow up action has been taken by the ICAO MID Regional Office and, through State Letter, concerned States were requested to send their updated action plan for the implementation of QMS showing clearly the implementation dates of the different phases of the project (as detailed in the methodology endorsed by MIDANPIRG) to the ICAO MID Regional Office, before 30 September 2009. It was noted with concern that only Jordan replied to the above-mentioned State Letter.

5.3.37 The meeting noted that Amendment 36 to Annex 15, which was adopted by the ICAO Council on 22 February 2010, introduced new and revised provisions related to QMS. These provisions become effective on 18 November 2010. 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 becomes also a standard.

5.3.38 Accordingly, the meeting re-iterated MIDANPIRG/11 Conclusion 11/46 and urged States that have not yet done so, to expedite the implementation of a QMS for their AIS, in accordance with ICAO Annex 15 requirements using the guidance provided by both the Methodology for the implementation of QMS as at **Appendix 5.3F** to the Report on Agenda Item 5.3 and the EUROCONTROL CHAIN deliverables.

5.3.39 The meeting reviewed the Terms of Reference (TOR) of the QMS Implementation Action Group (QMS AG) as at **Appendix 5.3G** to the Report on Agenda Item 5.3. In this regard, it was recalled that the QMS AG was established with a view to support the implementation of QMS in compliance with the ISO 9000 requirements within MID States' AISs. 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 urged States to provide more input and support to the Action Group and encouraged the Members of the Action Group to use the electronic means of communication, including the ICAO MID Forum, for the exchange of information related to QMS and the sharing of experiences. In this regard, the meeting noted with appreciation the experiences of Iran and Jordan for the implementation of QMS and encouraged the Members of the QMS AG to benefit from the experience of those States that have lately implemented a QMS for their AISs.

5.3.40 The importance of the commitment of the high level Management including the development of a quality policy as well as the convening of awareness campaigns and training programmes related to QMS were particularly highlighted. Accordingly, the meeting agreed to the following Conclusion and Decision:

CONCLUSION 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.

DECISION 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.*

AIS Automation

5.3.41 The meeting reviewed the requirements and pressing need for AIS automation, as an important pre-requisite for the transition from AIS to AIM.

5.3.42 The meeting noted that Amendment 36 to Annex 15 introduced a number of new provisions related to AIS automation. In this regard, it was highlighted that the provision of automated pre-flight information service was upgraded to a Standard. It was recognized that this represents a signal that the transition to AIM has begun and that the introduction of automation enabling digital data exchange needs to be started/expedited in States.

5.3.43 The meeting noted, in particular, that Amendment 36 to Annex 15 included a Recommendation for the provision of an eAIP, which is based on a format that allows for digital data exchange. It was highlighted that when the eAIP is provided, the information contained in the eAIP shall follow the content and structure of the paper AIP as specified in Annex 15, Appendix 1. It was also noted that, in this Appendix 1, the contact information in the AIP for designated authorities and responsible services has been updated to include e-mail and website addresses and discontinue the inclusion of telex numbers, as requested by MIDANPIRG, through Conclusion 10/50.

5.3.44 In connection with the above, the meeting recalled that MIDANPIRG/11, through Conclusion 11/48, encouraged States to publish their eAIP based on the EUROCONTROL eAIP specifications. It was further noted that these specifications would be included in Amendment 3 to the AIS Manual (Doc 8126).

5.3.45 The meeting recalled that MIDANPIRG/11, through Conclusion 11/49, encouraged the Europe Middle East ATM Coordination (EMAC) MID States (Egypt, Jordan, Lebanon and Syria) to initiate formal coordination with EUROCONTROL and take appropriate actions in order to be connected to the European AIS Database (EAD). In this regard, the meeting was informed about the actions carried out by Egypt and Jordan, in coordination with EUROCONTROL, in order to be connected to the EAD. The meeting noted also that Syria has also started to coordinate with EUROCONTROL with a view to be connected to the EAD.

5.3.46 The meeting recalled that MIDANPIRG/11, through Decision 11/50, agreed to the establishment of an AIS Automation Action Group (AISA AG). However, the meeting noted with concern that the activities of the Action Group were very limited and that the tasks assigned to it were not completed. It was highlighted that the AISA AG was established with a view to foster and harmonize the implementation of AIS Automation in the MID Region. The AISA AG should represent a forum for discussion, brainstorming, exchange of experience and sharing of information related to AIS Automation. The final objective of the AISA AG is to develop a cohesive and comprehensive AIS Automation Plan for the MID Region. To reach the above-mentioned goals, the meeting agreed that the Members of the AISA AG should be committed to contribute to the activities of the Action Group. Accordingly, the meeting urged States to provide more input and support to the Action Group and encouraged its Members to use all means of communications for the exchange of information and sharing of experiences related to AIS automation (e-mails, ICAO MID Forum, teleconferencing, etc). Accordingly, the meeting reviewed and updated the TOR of the AISA AG as at **Appendix 5.3H** to the Report on Agenda Item 5.3 and agreed to the following Decision, which replaces and supersedes MIDANPIRG/11 Decision 11/50:

DECISION 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.*

Aeronautical Information Management (AIM)

5.3.47 The meeting underlined the need for a strategic evolution towards AIM in a manner that will ensure the availability of aeronautical information to any ATM user in a globally interoperable and fully digital environment. It was highlighted that, as part of system-wide information management (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.

5.3.48 The meeting was apprised of the latest developments related to the transition from AIS to AIM. The meeting recalled that the ANC noted the Roadmap for the transition from AIS to AIM, which is available at: http://www.icao.int/anb/AIM/. It was highlighted that the Roadmap for the transition from AIS to AIM has been developed to address in greater detail the direction given for aeronautical information in the Global Air Navigation Plan (Doc 9750). It is intended as a high-level document to provide a framework for States in their evolution towards AIM, and to clarify the purpose and scope of the transition. The roadmap identifies the major milestones towards a uniform global evolution to AIM and indicates specific steps and timelines for implementation. The roadmap is intended to serve as a strategic positioning initiative to add impetus to the continuing improvement of aeronautical information services in terms of quality, integrity and definition of new services and products to better serve aeronautical users.

5.3.49 The meeting noted that three phases with 21 Steps are envisaged for States and ICAO to complete the transition to AIM:

Phase 1 — Consolidation (2009)
Phase 2 — Going digital (2009-2011)
Phase 3 — Information management (2011-2016)

5.3.50 It was highlighted that in the first phase, existing standards will need to be refined and strengthened and their implementation in all States ensured. This will concern mainly: quality requirements; AIRAC adherence; the implementation of WGS-84 and the provision of terrain and obstacle data. The projects in the first phase will be conducted to identify potential gaps in order to focus on near-term work programme activities.

5.3.51 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. States that have not yet done so will be encouraged "to go digital" by using computer technology or digital communications and 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. An aeronautical information conceptual model will provide guidance for States to implement such digital databases.

5.3.52 During Phase 3, steps will be taken 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.

5.3.53 The meeting recalled that a MID AIM Seminar was successfully held in Cairo from 21 to 23 October 2008. MIDANPIRG/11 noted that the Seminar addressed important subjects related to the transition from AIS to AIM and agreed that the AIS/MAP Task Force should review the Executive Summary of the MID AIM Seminar and take necessary follow up actions.

5.3.54 The meeting noted that the AIS/MAP TF/5 meeting agreed that a State Letter is to be issued by the ICAO MID Regional Office, requesting States to develop national plans to implement the transition from AIS to AIM and encouraging them to host the Global AIM Congress in 2012. The meeting noted that the State Letter has been issued as requested and few States sent their replies to the ICAO MID Regional Office. In particular, the meeting noted that Bahrain, Iran, Kuwait and Qatar provided their National AIM Plan/Roadmap and Egypt offered to host the Global AIM Congress in 2012. However, the meeting noted that during the Global AIM Congress held in Beijing, China, June 2010, it was officially mentioned that no more AIM Congresses will be organized during the coming years. Nevertheless, the meeting agreed that alternatively a MID AIM Seminar be organized in 2012. The meeting noted with appreciation the offer of Egypt to host this Seminar. The meeting also appreciated CANSO and Jeppesen support to the Seminar.

5.3.55 In connection with the above, the meeting noted that the Third CANSO Middle East ANSP Conference will be held, in Abu Dhabi, UAE, 17-19 January 2011. It was highlighted that the transition from AIS to AIM will be one of the subjects which will be addressed by the Conference.

5.3.56 Based on the above the meeting agreed to the following Conclusions and Decision which replace and supersede MIDANPIRG/11 Conclusion 11/51 and Decision 11/52:

CONCLUSION 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.

DECISION 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.

CONCLUSION 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.

AIS/MAP Task Force TOR and Future Work Programme

5.3.57 Taking into consideration the new requirements for the transition from AIS to AIM and the latest developments in the AIS/MAP field, the meeting reviewed and updated the Terms of Reference and Work Programme of the AIS/MAP Task Force as at **Appendix 5.3I** to the Report on Agenda Item 5.3 and agreed to the following Decision, which replaces and supersedes MIDANPIRG/11 Decision 11/54:

DECISION 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.*

MIDANPIRG/12
Appendix 5.3A to the Report on Agenda Item 5.3

STATUS OF IMPLEMENTATION OF WGS-84 IN THE MID REGION

	FIR	ENR	TMA/CTA/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	Implementation to be completed by 2011
ISRAEL	F	F	F	F	P	F	F	F	F	
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	N	F	
SAUDI ARABIA	F	F	F	F	F	N	N	N	F	
SYRIA	F	F	F	F	F	F	N	N	F	Implementation of GUND is expected for 2010
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 ELECTRONIC TERRAIN AND OBSTACLE DATA (eTOD) 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 parties/administrations involved in the implementation of eTOD, inter-alia:

    - Ministry responsible for Transportation/Civil Aviation;
    - Civil Aviation Authority;
    - Air Navigation Service Provider (ANSP);
    - Aerodrome Service Providers;
    - National Geographic, Geodetic, Topographic and/or Survey Administrations/Agencies;
    - Military;
    - Airlines;
    - Local Authorities or those responsible for aerodrome safeguarding/construction approval in the vicinity of aerodromes;
    - GSM antenna operators;
    - Administrations for radio and television broadcasts;

- ensure that a Focal Point has been nominated to coordinate all eTOD issues at both the national and international level;

- ensure that awareness campaigns and training programmes related to eTOD have been planned/organized for the benefit of all concerned staff from within and outside the CAA;

- 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 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 sources which should be regulated, the responsibility for the provision and process of data;
    - State's policy with regard to implementing the ICAO Annex 15 SARPs related to eTOD and eventually the notification of difference, 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; and
    - 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.

- ensure that necessary resources for the implementation 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;

- ensure that the candidate techniques that will be used for Terrain and Obstacle Data acquisition have been identified and determined;

- 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 a mechanism is established to ensure that the quality of eTOD is maintained from the survey up to the end user;

- ensure that cross-boarder 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.

MID REGION eTOD IMPLEMENTATION STRATEGY

Considering:

a) the new provisions introduced by Amendment 33 to Annex 15 related to eTOD; and

b) the guidance material contained in Doc 9881 (Guidelines for electronic Terrain, Obstacle and Aerodrome Mapping Information); and

Recognizing that:

i) significant safety benefits for international civil aviation will be provided by in-flight and ground-based applications that rely on quality electronic Terrain and Obstacle Data; and

ii) the implementation of eTOD requirements is a challenging costly and cumbersome task of cross-domain nature;

The MID Region eTOD implementation strategy is detailed below:

1) the eTOD implementation should be in compliance with ICAO provisions contained in Annex 15 and Doc 9881;

2) the eTOD implementation should be based on national plans/roadmaps;

3) eTOD implementation should be managed by each State as a national eTOD programme supported by necessary resources, a high level framework and a detailed planning including priorities and timelines for the implementation of the programme;

4) States should adopt/follow a collaborative approach involving all concerned parties in the implementation of eTOD provisions and establish a multi-disciplinary team defining clearly the responsibilities and roles of the different Administrations within and outside the Civil Aviation Authority in the implementation process (AIS, Aerodromes, Military, National Geographic and Topographic Administrations/ Agencies, etc);

5) eTOD requirements should be analyzed and a common understanding of these requirements should be developed;

6) States should make an inventory and evaluate the quality of existing terrain and obstacle data sources and in the case of data collection, consider carefully the required level of details of collected terrain and obstacle data with particular emphasis on obstacle data and associated cost;

7) States should carry out theoretical studies of candidate techniques for data acquisition (photogrammetry, LIDAR, etc) based on a Cost-Benefit Analysis and supported by case study for a representative aerodrome;

8) in the development of their eTOD programme, States should take into consideration the requirements for update/maintenance of data, especially the obstacle data;

9) States, while maintaining the responsibility for data quality and availability, should consider to which extent provision of electronic terrain and obstacle data could be delegated to national geodetic Institutes/Agencies, based on Service Level Agreement reflecting such delegation. Collaboration between States and data providers/integrators should also be considered;

10) ICAO and States should undertake awareness and training programmes to promote and expedite the eTOD implementation;

11) implementation of eTOD provisions should be considered as a global matter, which necessitates coordination and exchange of experience between States, ICAO and other national/international organizations involved;

12) to the extent possible, States should work co-operatively especially with regard to the cross-border issue, for the sake of harmonization and more efficient implementation of eTOD; and

13) States encountering difficulties for the implementation of eTOD may seek assistance from ICAO, through a TCB project, and/or from other States.

MIDANPIRG/12

Appendix 5.3D to the Report on Agenda Item 5.3

PROPOSAL FOR AMENDMENT TO THE MID BASIC ANP (DOC 9708)
FOR THE INTRODUCTION OF A NEW SECTION RELATED TO eTOD

World Geodetic System – 1984 (WGS-84)

…

5.9 In order to ensure that quality (accuracy, resolution and integrity) and traceability requirements for the WGS-84 related geographical coordinate data are met, States must take measures to develop and introduce a quality system programme. This programme containing procedures, processes and resources should be in conformity with the International Organization for Standardization (ISO) 9000 series of quality assurance standards.

(Insert the following new Text)

Electronic Terrain and Obstacle Data (eTOD) Requirements

(FASID Table AIS)

6.1 Recognizing that significant safety benefits for international civil aviation will be provided by in-flight and ground-based applications that rely on quality electronic Terrain and Obstacle Data (eTOD), States should make every effort to implement the eTOD provisions in accordance with Chapter 10 of Annex 15 and Doc 9881.

6.2 FASID Table AIS-X sets out the requirements for the provision of Electronic Terrain and Obstacle Data (eTOD) to be provided by States.

6.3 The implementation of eTOD should involve different Administrations within and outside the Civil Aviation Authority i.e.: AIS, Aerodromes, Military, National Geographic and Topographic Administrations/Agencies, procedure designers, etc.

6.4 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 national geodetic Institutes/Agencies, based on Service Level Agreement reflecting such delegation.

6.5 States should consider carefully the required level of details of collected terrain and obstacle data with particular emphasis on obstacle data and associated cost.

6.6 States should take into consideration the requirements for update/maintenance of data, especially related to obstacles.

6.7 States should work co-operatively with regard to the cross-border issue, for the sake of harmonization and more efficient implementation of eTOD.

(Renumber the following paragraphs)

Draft FASID TABLE AIS-X — eTOD REQUIREMENTS

EXPLANATION OF THE TABLE

Column

1 Name of the State, territory or aerodrome for which electronic Terrain and Obstacle Data (eTOD) are required with the designation of the aerodrome use:

RS — international scheduled air transport, regular use
RNS — international non-scheduled air transport, regular use
RG — international general aviation, regular use
AS — international scheduled air transport, alternate use

2 Runway designation numbers

3 Type of each of the runways to be provided. The types of runways, as defined in Annex 14, Volume 1, Chapter I, 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.

4 Requirement for the provision of Terrain data for Area 1, shown by an ‘‘X’’ against the State or territory to be covered.

5 Requirement for the provision of Terrain data for Area 2 (TMA), shown by an ‘‘X’’ against the aerodrome to be covered.

6 Requirement for the provision of Terrain data for Area 2 (45 Km radius from the ARP), shown by an ‘‘X’’ against the aerodrome to be covered.

7 Requirement for the provision of Terrain data for Area 3, shown by an ‘‘X’’ against the aerodrome to be covered.

8 Requirement for the provision of Terrain data for Area 4, shown by an ‘‘X’’ against the runway threshold to be covered.

9 Requirement for the provision of Obstacle data for Area 1, shown by an ‘‘X’’ against the State or territory to be covered.

10 Requirement for the provision of Obstacle data for Area 2 (TMA), shown by an ‘‘X’’ against the aerodrome to be covered.

11 Requirement for the provision of Obstacle data for Area 2 (45 Km radius from the ARP), shown by an ‘‘X’’ against the aerodrome to be covered.

12 Requirement for the provision of Obstacle data for Area 3, shown by an ‘‘X’’ against the aerodrome to be covered.

13 Remarks (timetable for implementation)

Note: For Columns 4 to 12 use the following symbols:

X- Required but not implemented
XI- Required and implemented

eTOD Requirements (MID FASID Table AIS-X)

STATE, TERRITORY OR AERODROME FOR WHICH eTOD IS REQUIRED			TERRAIN DATA REQUIRED					OBSTACLE DATA REQUIRED					REMARKS
CITY/AERODROME	RWY No	RWY TYPE	Area 1	Area 2		Area 3	Area 4	Area 1	Area 2		Area 3	Area 4	
				TMA	45 Km				TMA	45 Km			
1	2	3	4	5	6	7	8	9	10	11	12	13	14

METHODOLOGY FOR THE IMPLEMENTATION OF QMS WITHIN MID STATES' AISs

With a view to expedite and foster the implementation of Quality Management Systems (QMS) within MID States AISs, the following methodology is adopted. States are urged to:

a) Set up a project structure relative to the implementation of QMS (project team, managing Committee, etc) and appoint a quality manager.

b) Appoint quality representatives from various areas of activity.

c) Define the roles and responsibilities of the Project Team Members.

d) Secure a financial commitment for the project.

e) Increase the workforce awareness about quality management and the importance of customer satisfaction.

f) Allocate necessary resources in order to implement, maintain and improve the quality system taking into consideration the customer requirements.

g) Select a consultant to guide the process, assist in the correct interpretation of ISO 9000 requirements and ensure that the internal Team is kept on track for compliance.

h) Determine the quality system framework/scope and decide if there is any permissible exclusion.

i) Undertake quality system and English language proficiency training.

j) Train internal auditors with a view to carry out internal audits of the system and participate in the process of development, implementation and continual improvement of the QMS.

k) Motivate the AIS personnel, encourage the teamwork and get everybody involved in writing down how he carries out his parts of the AIS/MAP activities.

l) Establish a mechanism/procedure to ensure that the competence/skill of the AIS staff is regularly evaluated and meet the requirements. A licensing system could be envisaged for this purpose.

m) Establish a continuous dialogue with the end users and identify their requirements with a view to provide them with value-added, defect-free and high quality products that are timely and competitively priced.

MIDANPIRG/12
Appendix 5.3G to the Report on Agenda Item 5.3

MID REGION QUALITY MANAGEMENT SYSTEM IMPLEMENTATION ACTION GROUP (QMS AG)

1. TERMS OF REFERENCE

With a view to support the implementation of Quality Management System in compliance with the ISO 9000 requirements within MID States' AISs, the MID Region QMS Action Group shall:

1) identify the difficulties that MID States could have to comply with Annex 15 requirements pertaining to quality system;

2) develop a common understanding of ISO 9000 requirements and develop associated guidelines as required;

3) foster the implementation of the methodology adopted in the MID Region for the implementation of QMS within Aeronautical Information Services;

4) guide the development and support the roll-out of an awareness campaign for QMS implementation within MID States; and

5) monitor the implementation of QMS within MID States' AISs.

2. COMPOSITION

The QMS AG will be composed of the following Experts:

State	Member's Name and Title	Member's Contact Details
Bahrain * ***(Rapporteur of the AG)***	**Mr. Mohammed Al Hallaq** AIS Supervisor and Quality Coordinator	Fax: (973) 17 32 3 876 Tel: (973) 17 329 813 (973) 17 321 181 Mobile: (973) 3968 4688 Email: alhallaq@caa.gov.bh
	Mr. Ali Abdulla AlMutaie AIS data Supervisor	Fax: (973) 17323876 Tel: (973) 17321181 Mobile: (973) 39697374 Email: amutaie@caa.gov.bh
Egypt	**Mr. Mahfouz Mostafa Ahmed** General Manager of AIS Publications	Fax: (20) 2 2267 8882/5 Tel: (20) 2 2267 9009 Mobile: (20) 10 8555079 Email: mahfouz.moustafa@nansceg.org ais@nansceg.org
Iran	**Mr. Amir Ghahremani** **AIS Expert**	Fax: +9821 44649269 Tel: +9821 66025108 Mobile: +989124122230 Email: ghahremani2004@yahoo.com

State	Member's Name and Title	Member's Contact Details
	Mrs. Narges Assari **AIS Expert**	Tel : +9821 66025108 Fax : +9821 44649269 Mobile: +98910102005738 Email: n.assari@airport.ir ais_iran@airport.ir
Jordan	**Mrs. Hanan Qabartai** Chief AIS HQ	Tel: (962) 6 4892282 ext. 3525 Fax: (962) 6 4891266 Mobile: (962)796768012 Email: ais.hq@carc.gov.jo
Kuwait	**Mr. Salah Al Mushaiti** AIS Officer	Tel: (965-2) 473 7583 Fax: (965-2) 476 5512 Mobile: (965) 6668 1897 Email: smais@hotmail.com
Oman	**Mr. Jaffar Abdulamir** Assistant Chief AIS	Tel: +968 24518350 Fax: +968 24519850 Mobile: +968 99316040 Email: aisaip@yahoo.com
Saudi Arabia	**Mr. Gharman Abdel Aziz El Shahri** Chief of Charting Office	Fax: (966) 6405000 Ext. 2302 Tel: (966) 640 5000 Ext 2300 Mobile: (966) 504 700 111 Email: abu_bander1@yahoo.com
Yemen	**Mr. Hussein Al –Sureihi** Director of AIS-HQ	Fax: (967-1) 345 527 Tel: (967-1) 346652/3 Mobile: (967) 77777 6898 Email: jaber777768@yahoo.com

3. WORKING ARRANGEMENTS

The QMS AG shall report to the AIS/MAP Task Force.

The work of the QMS AG shall be carried out mainly through exchange of correspondence, between its Members using all means of communication (email, facsimile, Tel, Teleconferencing, ICAO MID Forum, etc).

MID REGION AIS AUTOMATION ACTION GROUP (AISA AG)

1. TERMS OF REFERENCE

With a view to foster and harmonize the implementation of AIS Automation in the MID Region, the AIS Automation Action Group shall:

1) ensure that AIS systems in the MID Region be automated along the same or similar lines in order to ensure compatibility and monitor the implementation process;

2) monitor technical and operational developments related to AIS automation in other regions, including AIXM, eAIP, EAD, etc, and consider how the MID Region could take benefit from these developments;

3) develop a common understanding of the aeronautical information conceptual and exchange models;

4) foster the development of eAIP by MID States;

5) develop a cohesive and comprehensive AIS Automation Plan for the MID Region, taking into consideration the communication infrastructure necessary for the exchange of aeronautical information; and

6) coordinate with the CNS Sub Group, as necessary, to identify the communications issues linked to the implementation of an AIS Automation system/database for the MID Region.

2. COMPOSITION

The composition of the AISA AG is as follows:

STATE	MEMBER'S NAME AND TITLE	MEMBER'S CONTACT DETAILS
Bahrain	**Mr. Salah Alhumood** Head of AIS and Airspace Planning	Email: shumood@caa.gov. bh Tel: (973) 17 321 180 Fax: (973) 17 321 992 Mobile: (971) 3640 0424
	Mr. Fathi Al-Thawadi Head Aeronautical Operation System	Email: fathi@caa.gov. bh Tel: 973) 1732 9153 Fax: (973) 19 321 992 Mobile: (971) 39676614
Egypt	**Mr. Moataz Abd El Aziz El Naggar** Director of AIS Publications	Email: mizo_air2000@yahoo.com Tel: +20 10 72 08 848 Fax: +20 2 22 67 88 82
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STATE	MEMBER'S NAME AND TITLE	MEMBER'S CONTACT DETAILS
Iran *(***Rapporteur of the Group***)	***Mr. Abbas Niknejad** Chief of Iran AIS (D.G. of ATM)	Email: abbas.niknejad@gmail.com Tel: +(9821) 66025108 Fax: +(9821) 44649269
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	Mrs. Mona An-naddaf Head AFTN/AIS Systems Engineer	Email: aftn_ais@carc.gov.jo Tel: (962) 6 4892282 ext. 3500 Fax: (962) 6 4891659
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	Mr. Yaqoub Mohamed Noor	Email: ymn312@gmail.com Tel: (966-2) 6405000 Fax: (966-2) 640 5622 Mob: (966) 50 46 30 310
	Mr. Walid Alfattani	

3. WORKING ARRANGEMENTS

The AISA AG shall report to the AIS/MAP Task Force.

The work of the AISA AG shall be carried out mainly through exchange of correspondence, between its Members using all means of communication (email, facsimile, Tel, Teleconferencing, ICAO MID Forum, etc).

MIDANPIRG/12
Appendix 5.3I to the Report on Agenda Item 5.3

MIDANPIRG
AERONAUTICAL INFORMATION SERVICES AND AERONAUTICAL CHARTS TASK FORCE (AIS/MAP/TF)

1. TERMS OF REFERENCE

The AIS/MAP Task Force shall:

1) examine the Status of implementation of the ICAO requirements in the field of AIS/MAP;

2) identify and review those specific deficiencies related to AIS/MAP and recommend action to be taken to eliminate them;

3) prepare proposals for amendment to relevant parts of the MID Basic ANP and FASID, as appropriate;

4) assist States in the implementation of required Quality Management System (QMS) for aeronautical information services and monitor the implementation process;

5) monitor and review latest developments in the AIS/MAP field;

6) foster the implementation of AIS automation in the MID Region;

7) foster the integrated improvement of aeronautical information services through proper training and qualification of the personnel performing technical duties in this aeronautical activity;

8) monitor the eTOD implementation activities in the MID Region;

9) monitor the transition from AIS to AIM in the MID Region and provide necessary assistance and guidelines to States, in this respect; and

10) follow up the implementation of PBN in the MID Region and address PBN-related issues pertaining to the AIS/MAP field, as appropriate.

The AIS/MAP Task Force shall report to the ATM/SAR/AIS Sub-Group at each Sub-Group meeting.

2. WORK PROGRAMME

Ref	Tasks	Priority	Target Completion Date
1	Identify reasons that hinder States from implementation and adherence to the AIRAC System and suggest ways and means, which would improve the adherence to the AIRAC System.	A	(1)
2	Monitor the implementation of WGS-84 in the MID Region until complete implementation of the system by all States and take remedial action, as appropriate.	A	(1)
3	Review the status of implementation of ICAO requirements pertaining to the Integrated Aeronautical Information Package and aeronautical charts in the MID Region.	A	(1)
4	Foster the standardized production of aeronautical charts in the MID Region, identifying the obstacles that some States could have in adjusting to the specifications of ICAO Annex 4 and recommend possible course of action to be taken by those States in order to comply with the requirements.	A	(1)
5	Foster the implementation of Quality Management System (QMS) within the Aeronautical Information Services in the MID Region, identifying the difficulties that States could have to comply with the specifications of ICAO Annex 15.	A	(1)
7	Monitor and review technical and operating developments in the area of automation and AIS databases.	A	(1)
8	Prepare proposals for amendment to relevant parts of the MID Basic ANP and FASID, as appropriate.	A	(1)
9	Highlight the importance of giving AIS its proper status in the Civil Aviation Administrations.	A	(1)
10	Adress the issue of training/licensing of the AIS/MAP personnel in the MID Region.	B	(1)
11	Harmonize, coordinate and support the eTOD implementation activities on a regional basis.	A	(1)
12	Ensure that the planning and implementation of AIM in the region, is coherent and compatible with the 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).	A	(1)
13	Establish and maintain AIM performance objectives for the MID Region.	A	(1)
14	Address those AIS/MAP issues related to the implementation of PBN in the MID Region.	A	2010

(1) Continuous Task

3. PRIORITIES

A High priority tasks, on which work should be speeded up.

B Medium priority tasks, on which work should begin as soon as possible, but without detriment to priority A tasks.

C Tasks of lesser priority, on which work should begin as time and resources allow, but without detriment to priority A and B tasks.

4. COMPOSITION

MIDANPIRG Provider States, IATA, IFALPA, and IFATCA

Other representatives from industry and user Organizations having a vested interest in Aeronautical Information Services could participate as observers in the work of the Task Force, as appropriate.

REPORT ON AGENDA ITEM 5: PERFORMANCE FRAMEWORK FOR REGIONAL AIR NAVIGATION PLANNING AND IMPLEMENTATION:

5.4 CNS

ATN/IPS

5.4.1 The meeting noted that the first and second IPS Working Group Meetings (IPS WG/1 & WG/2) were held at the ICAO MID Regional Office in Cairo in 12-14 May 2009 and 11-12 October 2009 respectively. The second meeting was held back-to-back with the MID ATS Messaging Management Centre (AMC) training which was held with the support of EUROCONTROL and inline with ICAO agreement for the use of the European AMC for the short to medium term for address management.

5.4.2 Furthermore, the meeting noted the developments within the global ICAO framework mainly Amendment 83, among other issues, introduced Internet Protocol Suite (IPS) technology to the Aeronautical Telecommunication Network (ATN), and the Manual for the ATN using IPS Standards Protocols (Doc 9896) had been approved, and the transfer of relevant material from Doc 9705 to Doc 9880 is in progress after which Doc 9705 will be withdrawn.

5.4.3 The meeting was apprised on the Internet Engineering Task Force (IETF) activities and noted that IETF, established 2 working groups: Address Lifetime Expectations (ALE) and IPng (IP next generation) to make recommendations for the IP Next Generation Protocol. The IETF produced specifications for Internet Protocol, Version 6 (IPv6) under RFC 2460. The specification has much larger address space (2128), and also supports additional features like mechanism for auto-configuration of network interfaces, encapsulation of itself and other protocols, built in authentication and encryption etc.

5.4.4 Based on the above new specifications, the meeting was in alignment with the global view, 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 .

5.4.5 The meeting supported the CNS SG and IPS WG agreement that careful attention is required to the current implementation of AFTN, CIDIN and ISO/OSI based ATN, and the Provisions for continuation of CIDIN, AFTN and ISO/OSI should continue to be developed to secure these implementations. 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 concept and any new developments.

5.4.6 The meeting noted 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 EURO 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.

5.4.7 The meeting was apprised on the transition from AFTN to AMHS and that the transition is progressing at a good pace globally and in the MID Region. The meeting noted that for the orderly operation of the AMHS on a global scale, it is necessary to coordinate and synchronize the allocation of AMHS addresses. In response to this requirement, ICAO is utilizing the European ATS Messaging Management Centre (AMC), in cooperation with the European Organization for the Safety of Air Navigation (EUROCONTROL), which established the procedures for coordination and synchronization of AMHS addresses in the short-to medium-term.

5.4.8 The meeting was informed that a State Letter AN 7/49.1-09/34 was sent to States indicating the above agreement with EUROCONTROL, also mentioning that in order to use the AMC it is necessary for the users to be trained before they are actually allowed to enter data in the AMC. In order to foster timely implementation of AMHS, ICAO MID Regional Office organized a three day training (13-15 October 2009), where the various functions available in the AMC were highlighted.

5.4.9 Based on the above the meeting agreed to the following Conclusion:

CONCLUSION 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).

5.4.10 The meeting noted that in Europe a Pan European Network (PEN) based on IPv6, has been initiated by EUROCONTROL. PEN will be implemented in Europe to meet the ATM requirements for a cost-effective, international communications network with the ability to support existing as well as future services. In its initial form, PEN is planned as a ground-ground IP network serving data communications between ANSPs and between ANSPs and EUROCONTROL.

5.4.11 The meeting agreed with the views of the concerned MIDANPIRG subsidiary bodies for the development of the MID IP Network that should benefit the MID Region. In this regard the meeting agreed that a survey be circulated to all MID States and urged all MID States to complete the survey and accordingly, agreed to the following Conclusion:

CONCLUSION 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.*

5.4.12 The meeting noted that the IPS Working Group (WG) developed a strategy for the public internet usage and agreed with the IPS WG views to have the inventory of public internet usage for aeronautical purposes in the MID Region.

5.4.13 Furthermore the meeting noted that IPS WG developed the public internet usage survey and accordingly, the meeting urged States to complete and send replies before the next IPS WG meeting scheduled for March 2011.

5.4.14 The meeting was of the view that the development of IP Networks and introduction of public internet requires special expertise. Accordingly, the meeting agreed to extend invitations to organizations that can support the work of the IPS WG, and encouraged MID States to carry out research for different IP applications. It was also brought to the attention of the meeting that IP VPN is a power full tool.

5.4.15 Based on the above the meeting agreed to the following Conclusion:

CONCLUSION 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, the inventory on the public internet usage ; as at **Appendix 5.4C** to the Report on Agenda Item 5.4 by 20 February 2010.*

5.4.16 The meeting agreed that the IPS WG is to be renamed as ATN/IPS Working Group and the Terms of Reference to be updated as at **Appendix 5.4D** to the Report on Agenda Item 5.4. Accordingly, the meeting agreed to the following Decision

DECISION 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.*

5.4.17 The meeting was apprised on Jordan proposal for the establishment and hosting of the MID AMC. In this regard the meeting recommended that Jordan should provide a complete project plan with details, on hardware, software and the daily operation of the AMC to the next ATN/IPS WG meeting. It was highlighted that ICAO will help and facilitate the transfer of the AMC software from EUROCONTROL to Jordan in the same way as it was handled for other ICAO Regions.

5.4.18 The meeting noted that Bahrain, Egypt, Jordan, Oman, Qatar, Saudi Arabia, and United Arab Emirates installed state of the art integrated AFTN/AMHS systems. Iran is in the process of procuring new AMHS system.

ICAO Position for the International Telecommunication Union (ITU) World Radiocommunication Conference 2012 (WRC – 12)

5.4.19 The meeting noted the ICAO policy and practices related to radio frequency spectrum matters as 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.

5.4.20 The meeting noted the ICAO position on the ITU WRC – 12 Agenda Items which are of critical interest to international civil aviation; have been circulated and comments received are incorporated in the position. The position has been approved by ICAO Council in June 2009 and States were informed accordingly of the ICAO Position.

5.4.21 The meeting noted the ICAO Position addresses all regulatory aspects on aeronautical matters in the agenda for WRC-12. Items of main concern to aviation include spectrum requirements for unmanned aircraft systems (UAS), regulatory measures to facilitate introduction of new aeronautical mobile (R) services in a number of frequency bands, long-term spectrum availability and access to spectrum to meet the requirements of the aeronautical mobile satellite (R) service, and review of footnotes to the table of frequency allocations.

5.4.22 Furthermore, two items address possible allocations for radiolocation and oceanographic radar in the high frequency (HF) and very high frequency (VHF) spectrum which includes a number of frequency bands for aeronautical safety communications. Early proposals for an agenda item addressing possible new allocations to the mobile satellite service (MSS) have identified aeronautical mobile and aeronautical radio navigation spectrum as being potential candidates for sharing with the MSS, which would ultimately reduce aviations access to this frequency band.

5.4.23 The meeting was apprised on the "Regional Planning Seminar" for World Radiocommunication Conference (WRC-12)" held in Cairo 19-20 September 2010, which was organized by ICAO MID Regional Office in coordination with ICAO HQ. The invitation to the seminar was extended to States and their Telecommunication Regulatory Authorities (TRA's). The seminar was attended by forty one (41) participants from eight (8) MID States and nine (9) States from outside of the MID Region and three (3) Organizations. The seminar provided understanding of the major spectrum issues facing aviation and recognized the importance of proper State aviation specialist support to ICAO position.

5.4.24 The seminar highlighted the requirement for an associated long-term CNS strategy within the aviation community. Such a strategy should gradually introduce more spectrum-efficient systems within the aviation frequency bands. This strategy will need to be requirement driven as well as technology driven. It will, from time to time, need to be backed up by a proactive phase out of older technology and this approach was also highlighted in the ICAO 37 General Assembly meeting.

5.4.25 The meeting noted that the MID Regional Planning Seminar for WRC 12 was followed by "Aeronautical Communications Panel (ACP) WG-F #23"meeting where ACP among other tasks develops ICAO position to the ITU WRC. The outcome of the seminar is as at **Appendix 5.4E** to the Report on Agenda Item 5.4 which requires to be followed up by the CNS SG.

5.4.26 The meeting noted that the following MID States (Egypt, Iraq, Israel, Jordan, Qatar, Sudan, Syrian Arab Republic, and Yemen), still maintain Footnote No. 5.362C, where as ICAO position supports the deletion of Foot note Nos. 5.362B and 5.362C, in order to remove harmful interference that can be caused by the fixed service to essential aeronautical radio navigation satellite functions in the band 1 559 - 1 610 MHz and to permit the full utilization of GNSS services to aircraft on a global basis.

5.4.27 The meeting recalled that in order to ensure MID States support to the ICAO position the Ad-Hoc Action Group was formed. However, since its creation the Ad-Hoc Action Group did not play any active role in developing an action plan to address threats to aviation spectrum nor in promoting ICAO positions. Therefore the meeting approved to dissolve this Group and add the tasks of the Ad Hoc Action Group to the CNS SG and agreed to the following Decision:

DECISION 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.

5.4.28 The meeting agreed that States consider incorporation of ICAO position into their State's position for the WRC-12 and that States delegation to the WRC 12 conference be prepared to support the ICAO Position on issues of concern to international civil aviation. In this regard a delegation from ICAO will participate in the work of the WRC 12 and will assist States by presenting the agreed aviation position and coordinating with aviation delegates as required in the course of the WRC-12 conference. Accordingly, the meeting agreed to the following Conclusion to replace and supersede MIDANPIRG/11 Conclusion11/56:

CONCLUSION 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

c) support Civil Aviation Authorities, aviation spectrum experts to participate in WRC-12 and coordinate with the ICAO delegation to the conference.

5.4.29 The meeting was apprised on the presentation by the Director Air Navigation Bureau (ANB) to the ICAO 37 General Assembly in September 2010, highlighting the importance of supporting the ICAO position to the WRC on an ongoing basis.

Routing Directory for AFTN/CIDIN

5.4.30 The meeting noted that the Routing Directory for AFTN/CIDIN Centers in the MID Region is being updated during CNS SG meetings. In this regard the meeting was of the view that the process of updating the AFTN/CIDIN directory during the CNS SG meetings is not practical.

5.4.31 The meeting noted that ICAO MID Regional Office with the support of EUROCONTROL conducted ATS messaging Management Centre (AMC) training in October 2009 at ICAO MID Regional Office, in order to support the AMHS implementation. It was learnt during training that AMC has the facility to store/update the full AFTN/CIDIN directory. The AMC system also suggests optimal routing; however this function is available only for the European Region and not available for other Regions as these Regions are considered to be external com centers.

5.4.32 The meeting was in agreement that with the introduction of AMHS and implementation of new circuits and routings, the manual maintenance of the Routing Directory is becoming difficult and complicated. In Europe this function is performed by the AMC operator with the aid of routing software where AMC operators have a complete view of the network. The AMC has a function to create an optimum Routing Table and this function can be used by the MID Region without additional development to AMC system but requires authorization from EUROCONTROL.

5.4.33 Based on the above, the meeting agreed that ICAO MID Regional Office request EUROCONTROL to extend the Routing Table function provided by the AMC system to the MID Region for updating and maintaining the MID AFTN/CIDIN directory and agreed to the following Conclusion:

CONCLUSION 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.

5.4.34 The meeting tasked the ICAO MID Regional Office, after agreement from EUROCONTROL for providing the additional functions to the MID region. ICAO MID Regional Office will submit the MID Routing Table to EUROCONTROL for population in the AMC system, as well as take necessary action required.

Surveillance in the MID Region

5.4.35 The meeting recalled that SSR Mode S interrogator Identifier Codes are used to reduce garble and to improve performance in the overlapping coverage of SSRs, each Mode S sensor or cluster of Mode S sensors requires a unique Interrogator Identifier (II) code and/or a Surveillance Identifier (SI) code, collectively referred to as Interrogator Codes (IC). Since there are only 15 II and 63 SI codes that can be operationally assigned (special use of II Code zero and SI Code zero is not used), IC assignment needs to be carefully organized to ensure that identical codes are not used in overlapping Mode S coverage areas.

5.4.36 The meeting recalled ICAO provision on the assignment of interrogation codes being subject to Regional Air Navigation Agreements. The meeting noted that ICAO MID Region is an interface with AFI, EUR and APAC Regions. Consequently, the allocation of IC codes requires coordination with these regions and also within the MID region.

5.4.37 The meeting noted that the acquisition of Mode S radar installations by Air Navigation Service Providers (ANSPs) and by Military Authorities in European Region has focused attention on the need to establish a single European interrogator code allocation mechanism. Consequently European Region through EUROCONTROL has created Mode S IC Co-ordination Group (MICoG) and Civil/Military SSR Environment Liaison Group (CIMSEL) also developed a software (MICA) application for this purpose.

5.4.38 The meeting further noted that the centralized Mode S IC Allocation mechanism in Europe is handled by MICoG, where the MICoG members act as the contact points between the Mode S IC Allocation Cell and the State Authority applying for interrogator codes. MICoG provide regular reports to EANPG.

5.4.39 The meeting noted that European region has a large number of operational mode S radars as a result some MID States experienced IC code conflicts. Furthermore the meeting noted that ICAO MID Regional Office carried out coordination processes with European Region through the MICoG and the MICA application for the allocation of the IC codes for MID States.

5.4.40 Based on the above the meeting agreed that ICAO MID Regional Office should continue the same process through MICoG, where ICAO MID Regional Office acts as the focal point. The meeting agreed that ICAO MID Regional Office formalize the process with EUROCONTROL. The current list of assigned IC for the MID States Mode S radars is at **Appendix 5.4F** to the Report on Agenda Item 5.4. Furthermore, the meetings agreed that the list of assignment should be updated every six months and incorporated in the MID FASID Doc 9708.

5.4.41 The meeting noted that many emerging surveillance technologies had been included in the ICAO provisions and are being implemented worldwide and in the Region, some of which are not a straight foreword implementation and require considerable knowledge on systems and procedures for their implementations. Accordingly, the meeting agreed to the following Conclusion:

CONCLUSION 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.

5.4.42 The meeting noted the benefits of exchanging surveillance data as this will enable greater efficiencies for airlines operating across boundaries by providing increased capacity, reduced workload, and enhance safety. In this regard the meetings recalled that, PANS ATM DOC 4444 para 8.1.5 indicates *States should, to the extent possible, facilitate the sharing of information derived from ATS surveillance systems in order to extend and improve surveillance coverage in adjacent control areas.*

5.4.43 The meeting also noted that gaps in surveillance coverage for individual States exist at present, causing aircraft to fade from surveillance coverage. In this regard, the meeting was of the view that a full programme on surveillance data information sharing be carried out by all MID States in order to significantly reduce surveillance gaps.

5.4.44 The meeting noted that Bahrain already exchanges ATS surveillance data with Kuwait, and Lebanon with Nicosia. Egypt and Saudi Arabia are in the process of Sharing ATS surveillance data. Accordingly, the meeting agreed to the revised Regional PFF for the ATS surveillance data exchange and agreed to the following Conclusion:

CONCLUSION 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.

5.4.45 The meeting recalled that MIDANPIRG/10 encouraged States, in collaboration with the airspace users to develop and implement an ADS-B trials programme and MIDANPIRG/11 under conclusion 11/69 agreed on a Regional Strategy for the implementation of ADS-B.

5.4.46 The meeting noted that UAE has already implemented ADS-B, and Saudi Arabia has an ADS-B project, where 20 ADS-B ground stations will be installed throughout Saudi Arabia.

5.4.47 Based on the above the meetings supported the development of a harmonized plan for the ADS-B implementation for the MID Region based on the strategy adopted by MIDANPIRG/11which could be an activity during the proposed MID surveillance workshop. The meetings reiterated MIDANPIRG/11 conclusion 11/69 and considered that the MID Region Strategy for the Implementation of ADS-B as at **Appendix 5.4G** to the Report on Agenda Item 5.4 is applicable.

5.4.48 The meeting was apprised on amendment 85 to annex 10. Accordingly, 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 (allocation of aircraft addresses to States). Furthermore, the meeting encouraged MID States to allocate the 24 bit address to all aircraft registered in their State with the principle that, at any one time, no address shall be assigned to more than one aircraft.

5.4.49 The meeting urged MID States to maintain databases for all the 24bit aircraft address allocation pertaining to their States and send the assigned allocations to ICAO MID Regional Office and MID RMA for inclusion in their databases as soon possible.

A Global CNS Technology Road Map – A Tool to Aid Investment Decision

5.4.50 The meeting recognized that existence of many CNS technologies with similar names yet very different capabilities cause confusion. In addition to this, the operational benefits that can be achieved with the various technologies are not clear. This makes it difficult for States and aircraft operators to make long-term investment decisions. Many roadmaps exist however, they are limited in scope.

5.4.51 The meeting noted that a global CNS roadmap applicable to international aviation as a whole, that informs all States of the prospective capabilities of aircraft and also the implementation programmes of progressive ATS providers is missing. Consequently, the meeting was informed that ICAO proposes the development of a global CNS technology roadmap that will assist States and other stakeholders with their implementation decisions. The benefits of this roadmap would include predictable implementation with early achievement of operational benefits, returns on investment and wide spread deployment, which will ease transition issues.

5.4.52 The web based global CNS roadmap will be an interactive, graphics-based, information tool. This interactive roadmap will address who it applies to, where it applies and what equipment and capability is required. The development of a global CNS roadmap will require the cooperation of all stakeholders and they will be consulted on a regular basis. It was noted that many ICAO CNS Panels and working groups now enjoy regular participation by industry stakeholders. As a result, updates to the CNS Technology Roadmap will be made a standing agenda item for these ICAO CNS Panels and working group meetings. In discussing this proposal for a CNS roadmap, the meeting emphasized that such a CNS roadmap will need to be driven by ATM requirements rather than technology. The meeting invited States to take this roadmap, scheduled to be available in 2012, into consideration for the regional and national planning and implementation of air navigation systems.

MIDANPIRG/12
Appendix 5.4A to the Report on Agenda Item 5.4

Introduction

This survey has been developed for the purpose of collecting information about the existing IP infrastructure between the states in-order to come with a unified IP scheme plan for the MID-Region ATN.

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	Manufacturer: ……..... Model: …….
9	Router Interfaces Supported*:	❑ Async Serial ❑ Sync Serial ❑ Ethernet ❑ Other: ……
10	Supported Routing Protocols*:	❑ RIP ❑ OSPF ❑ BGP ❑ IS-IS ❑ Other: ……..
11	Supported Voice Signaling on router*:	❑ SIP ❑ H.323 ❑ Other: …….
12	Data Applications in use*:	❑ AFTN ❑ AMHS ❑ OLDI ❑ 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 ❑ Other: ……..

* Choose all that apply

MIDANPIRG/12
Appendix 5.4B to the Report on Agenda Item 5.4

PUBLIC INTERNET USAGE STRATEGY AND GUIDANCE

Security and Implementation Guidelines:

- MID states implementing a service on the public internet must comply with ICAO document 9855.
- Internet based services must be used for low traffic, non-time critical applications where leased lines are not justifiable.
- The user of the application should expect service outages due to the nature and reliability of the public internet environment and should have a fallback procedure during the internet based service outage.
- Services to be provided via public internet can be categorized into two groups:

  - CAT1: View only service
  User can view only the data via internet such as AFTN messages or MET charts.
  - CAT2: View and modify service
  User can view and send data via the internet such as sending AFTN messages or uploading AIS documents.

- Authentication Requirements:

  - CAT1: A minimum authentication mechanism of username/password unique for each user must be provided for accessing the service over the public internet with strong password policy.
  - CAT2: A two-factor authentication must be implemented for services in this category, beside the username/password another mechanism must be used to verify the identity of the user such as certificates or smartcards.

- Authenticity and Privacy:

  - CAT1: The user must be able to verify the authenticity and integrity of the data received over the public internet by implementing industry standard protocols for message signing or secure transfer protocol (HTTPS). Encryption of the data is not mandatory.

  - CAT2: mutual authentication is required where both ends the user and the server must be able to authenticate each other using public key infrastructure (PKI) and the data must be encrypted using a minimum 128-bit.
  - Users upon registration with the internet based service must be verified by some mean.

- Network Security

  - All internal systems must be protected by a dual layer enterprise class firewalls from two different vendors from the external internet environment, no direct traffic allowed from the internet into the internal systems. All traffic must be forwarded via a proxy system placed in a DMZ with strong policy (such as system update and patching, minimum running services on systems ... etc)
  - Preferably systems exposed to the internet in the DMZ should have host-based intrusion prevention or a dedicated intrusion prevention system appliance.

- Logging and Auditing

  - Systems exposed to the internet must be keeping a log of all transactions with the user on the public internet side and the systems in the internal network.
  - Logs must be kept for a minimum period of 30 days.
  - The log must contain the original message received by the server with server time-stamp and user ID if available.

MIDANPIRG/12
Appendix 5.4C to the Report on Agenda Item 5.4

SURVEY ON PUBLIC INTERNET USAGE IN AVIATION

Introduction:

The purpose of this survey is documenting the internet use in the field of aviation in MID-Region. Accordingly new application could be added.

Please fill the following survey accordingly for each aviation application that is served over the public internet

General Information:

State:	……..		
Does IP network existing in place?			
❑ Yes ❑ No			
Is Aviation systems connected together over IP?			
❑ Yes ❑ No			
Is the Aviation systems connected on a separate network from other general systems (such as email, internet)?			
❑ Yes ❑ No			
Who to contact if more details or clarification is required?			
Name:	…….		
Title:	…….		
Email:	…….		
Telephone:	……	Fax:	……

Internet for Aviation Systems Information:

Aviation Application:	…….. (e.g. AFTN, MET messages, Flight plans)	
Type of Internet Protocol:	❑ HTTP ❑ FTP ❑ SMTP ❑ Other: …….	
Who is accessing the service over the internet?		
	(e.g. Remote airport, backup for conventional leased circuit) ……. …….	
Internet user privileges:	❑ Receive data only ❑ Send/Receive data	❑ Send data only ❑ Full control of service
How can you describe the class of service?		
	❑ Users and operation relay on the service ❑ Low traffic application with no high importance ❑ Backup method in case of main system failure ❑ Non-operation traffic and data only	
What types of network defense measure are in use?		
	❑ Single Firewall (Type: …….) ❑ IPS (Type: …….) ❑ Dual-layer firewall (Type: ……..……) ❑ Content-Inspection (Type:..……) ❑ Other ……	

Is anonymous access allowed?		❑ Yes ❑ No
What type of user authentication is used?		
	❑ Username/password ❑ Certificates ❑ Other: …….	
Is data integrity is verified?		❑ Yes ❑ No
If yes, what type of message digest used?		
	❑ MD5 ❑ SHA ❑ Other:……	
What data encryption is used if any?		
	❑ DES ❑ 3DES ❑ AES128 ❑ AES256 ❑ None ❑ Other: ……	
Are the Internet links redundant?		
	❑ Yes ❑ No	
Is the internet service provider accredited as mention in ICAO Doc 9855		
	❑ Yes ❑ No	
How the Internet users connect to the aviation systems?		
	❑ Traffic directly routed to the aviation system (via firewall or gateway) ❑ Traffic is sent to an intermediate proxy ❑ User has to go via VPN tunnel first to reach system	

ATN/IPS WORKING GROUP

1. Terms of Reference

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) Develop MID Region public Internet usage guidance 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 programee and provide updates to CNS SG; and

g) Provide the necessary support for the implementation of the IPS in the MID Region.

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/12
Appendix 5.4E to the Report on Agenda Item 5.4

OUTCOME OF MID REGIONAL PLANNING SEMINAR FOR WRC 12

(Cairo 19-20 September 2010)

- MID States are encouraged to participate on a regular basis in meetings of the ACP WG-F.
- Encourage active participation by MID States, along with members of TRAs in activities related to frequency spectrum for aviation.
- Encourage ASMG to support the ICAO position on all agenda items and ensure providing access to all ASMG reports by MID CAA's.
- MID States CAA's to participate in States delegations to CPM and other meetings in preparation for WRC-12.
- MID States to provide updates to the ICAO Regional Office on their national activities to support the ICAO Position.

MIDANPIRG/12
Appendix 5.4F to the Report on Agenda Item 5.4

Code Allocation Status for Bahrain

MODE S Interrogator Code Allocations as of 06 May 2010 (Cycle 10)

Mode S Station		ALLOCATED CODE			OPERATOR	REFERENCE/REMARKS
		II	SI	Effective Date		
BAHRAIN						

Code Allocation Status for Egypt

MODE S Interrogator Code Allocations as of 06 May 2010 (Cycle 10)

Mode S Station		ALLOCATED CODE			OPERATOR	REFERENCE/REMARKS
		II	SI	Effective Date		
EGYPT						
Aswan ERR		**02**		**ad hoc 17/03/2009**	**NANSC**	**MICA/ALLOC461**
Asyut ERR		**03**		**ad hoc 17/03/2009**	**NANSC**	**MICA/ALLOC462**
Cairo ERR		**04**		**ad hoc 17/03/2009**	**NANSC**	**MICA/ALLOC463**
Hurghada ERR		**05**		**ad hoc 17/03/2009**	**NANSC**	**MICA/ALLOC464**
Messa Matruh ERR		**06**		**ad hoc 17/03/2009**	**NANSC**	**MICA/ALLOC465**

Code Allocation Status for Iran

MODE S Interrogator Code Allocations as of 06 May 2010 (Cycle 10)

Mode S Station		ALLOCATED CODE			OPERATOR	REFERENCE/REMARKS
		II	SI	Effective Date		
IRAN						

Code Allocation Status for Iraq

MODE S Interrogator Code Allocations as of 06 May 2010 (Cycle 10)

Mode S Station		ALLOCATED CODE			OPERATOR	REFERENCE/REMARKS
		II	SI	Effective Date		
IRAQ						

Code Allocation Status for Israel

MODE S Interrogator Code Allocations as of 06 May 2010 (Cycle 10)

Mode S Station		ALLOCATED CODE			OPERATOR	REFERENCE/REMARKS
		II	SI	Effective Date		
ISRAEL						

Code Allocation Status for Jordan

MODE S Interrogator Code Allocations as of 06 May 2010 (Cycle 10)

Mode S Station		ALLOCATED CODE			OPERATOR	REFERENCE/REMARKS
		II	SI	Effective Date		
JORDAN						

Code Allocation Status for Kuwait

MODE S Interrogator Code Allocations as of 06 May 2010 (Cycle 10)

Mode S Station		ALLOCATED CODE			OPERATOR	REFERENCE/REMARKS
		II	SI	Effective Date		
KUWAIT						

Code Allocation Status for Lebanon

MODE S Interrogator Code Allocations as of 06 May 2010 (Cycle 10)

Mode S Station		ALLOCATED CODE			OPERATOR	REFERENCE/REMARKS
		II	SI	Effective Date		
LEBANON						
Baysour		02		23/04/2009	DGCA	MICA/ALLOC467

Code Allocation Status for Oman

MODE S Interrogator Code Allocations as of 06 May 2010 (Cycle 10)

Mode S Station		ALLOCATED CODE			OPERATOR	REFERENCE/REMARKS
		II	SI	Effective Date		
OMAN						
		11		Ad-hoc, 14/06/2010	DGMAN	

Code Allocation Status for Qatar

MODE S Interrogator Code Allocations as of 06 May 2010 (Cycle 10)

Mode S Station		ALLOCATED CODE			OPERATOR	REFERENCE/REMARKS
		II	SI	Effective Date		
QATAR						

Code Allocation Status for Saudi Arabia

MODE S Interrogator Code Allocations as of 06 May 2010 (Cycle 10)

Mode S Station		ALLOCATED CODE			OPERATOR	REFERENCE/REMARKS
		II	SI	Effective Date		
SAUDI-ARABIA						
Madinah		04		Ad-hoc, 06/05/2010	GACA	MICA/ALLOC529
Rafha		05		Ad-hoc, 06/05/2010	GACA	MICA/ALLOC530
Zamosc		10		Ad-hoc, 06/05/2010	GACA	MICA/ALLOC531

Code Allocation Status for Syria

MODE S Interrogator Code Allocations as of 06 May 2010 (Cycle 10)

Mode S Station		ALLOCATED CODE			OPERATOR	REFERENCE/REMARKS
		II	SI	Effective Date		
SYRIA						

Code Allocation Status for UAE

MODE S Interrogator Code Allocations as of 06 May 2010 (Cycle 10)

Mode S Station		ALLOCATED CODE			OPERATOR	REFERENCE/REMARKS
		II	SI	Effective Date		
EMIRATES						

Code Allocation Status for Yemen

MODE S Interrogator Code Allocations as of 06 May 2010 (Cycle 10)

Mode S Station		ALLOCATED CODE			OPERATOR	REFERENCE/REMARKS
		II	SI	Effective Date		
YEMEN						

MID REGION STRATEGY FOR THE IMPLEMENTATION OF AUTOMATIC DEPENDENT SURVEILLANCE-BROADCAST (ADS-B)

Considering:

a) the ICAO strategic objectives;
b) the ICAO Business Plan;
c) the Global Air Traffic Management Operational Concept;
d) the revised Global Air Navigation Plan and associated GPIs;
e) the outcome of the 11th Air Navigation Conference; and

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; and

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.

12) The implementation would be in conformity with the SARPs, ICAO guidelines and the MIDANPIRG conclusions.

B) The implementation would require aircraft equipped with avionics compliant with either:

i) Version OES 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 Node 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.

MIDANPIRG/12
Report on Agenda Item 5.5

REPORT ON AGENDA ITEM 5: REGIONAL AIR NAVIGATION PLANNING AND IMPLEMENTATION ISSUES

5.5 CNS/ATM

Performance-Based Global Air Navigation System – Developments in Implementation

5.5.1 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. As a follow-up, MIDANPIRG/11, while adopting a regional performance framework invited States to implement a national performance framework for air navigation systems on the basis of ICAO guidance material and aligned with the regional performance objectives, the regional air navigation plan and the Global ATM Operational Concept.

5.5.2 Following the adoption of performance-based approach to air navigation planning and implementation by MIDANPIRG, the next step entails performance monitoring through an established measurement strategy. This strategy should provide a set of measures in terms of performance indicators and performance metrics. While MIDANPIRG is progressively identifying a set of regional performance indicators and metrics, States in the meantime have recognized that data collection, processing, storage and reporting for the identified regional performance metrics are fundamental to the success of performance-based approach. The meeting was informed that in review of PIRG reports by the Air Navigation Commission, it was noted that it would be useful to have harmonized performance indicators and metrics among the ICAO regions so as to facilitate comparison and coordinated actions for improvements; but however, acknowledged that different levels of development in the regions may lead to different indicators and metrics.

5.5.3 In the current practice, all PIRGs review the status of implementation of various conclusions of earlier meetings so as to assess the regional performance in enhancing the air navigation infrastructure. In addition to this, and as a part of air navigation systems performance monitoring and measurement process, the meeting noted that it is proposed to introduce at every PIRG meeting a "regional performance review report (RPRR) for air navigation systems". In order to facilitate a uniform approach, ICAO HQ, in consultation with Regional Offices and PIRGs, will develop by 2011 a standardized format for this RPRR.

5.5.4 On the subject of new concepts, the meeting received information pertaining to the FF-ICE (flight and flow information- Information for a collaborative environment), which is being developed to achieve the vision as outlined in the *Global Air Traffic Management Operational Concept* (Doc 9854). The intent of FF-ICE is to define the information requirements for flow management, flight planning, and trajectory management associated with the operational concept components. Implementation of the FF-ICE concept is envisaged during the timeframe through 2025.

5.5.5 The meeting noting the developments in the implementation of performance-based global air navigation systems, requested those States, which have not done so, to establish a mechanism for data collection, processing and storage and provide the information to the regional office for the identified regional performance metrics.

MID Region Performance Metrics and Performance Framework Forms (PFFs)

5.5.6 The meeting recalled that the Performance-Based Approach (PBA) adheres to strong focus on results through adoption of performance objectives and targets; collaborative decision making driven by the results; and reliance on facts and data for decision making. The assessment of achievements is periodically checked through a performance review, which in turn requires adequate performance measurement and data collection capabilities. In this regard, it was highlighted that one of the key aspects of the performance based approach to air navigation planning is the development of performance objectives with related measurable indicators and metrics.

5.5.7 The meeting recalled that the CNS/ATM/IC SG/5 meeting (Cairo, 15-17 June 2010) was apprised of the outcome of the MSG/2 meeting (Amman, Jordan, 9-11 March 2010) related to performance of the air navigation systems in the MID Region. In this regard, it was recalled that performance monitoring and measurement of ATM systems calls for metrics in Key Performance Areas (KPAs) that envelopes access and equity, capacity, cost-effectiveness, efficiency, environment, flexibility, predictability, safety and security, which are subset of 11 KPAs listed in ICAO Document 9854. It was noted that on the basis of the Global ATM Operational Concept and the Manual on Performance of the Global Air Navigation System, a sample set of metrics, which is not exhaustive, has been derived as listed in **Appendix 5.5A** to the Report on Agenda Item 5.5. It was highlighted that each Region, on the basis of its experience, could determine the appropriate metrics applicable to its situation.

5.5.8 The meeting recalled that data collection, processing, storage and reporting are fundamental to the performance-based approach and forms part of performance monitoring and management.

5.5.9 Based on the above the meeting agreed to the following Conclusions:

CONCLUSION 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;

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.

CONCLUSION 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.

5.5.10 In accordance with MIDANPIRG/11 Conclusion 11/70 – "*Regional Performance Framework*", and taking into consideration the outcome of the different MIDANPIRG subsidiary bodies, the meeting reviewed the Regional PFFs related to AGA, AIM, ATM and CNS as at **Appendices 5.5B, 5.5C, 5.5D and 5.5E** to the Report on Agenda Item 5.5, respectively, as updated by the CNS/ATM/IC SG/5 meeting. It was recognized that the revised Regional PFFs, are much more mature than the previous version. However, it was underlined that the Regional PFFs could be further improved, giving that users provide their needs and expectations and States develop/update their National PFFs and report relevant data necessary for performance monitoring of the air navigation systems, as required.

5.5.11 The meeting further noted that Regional PFFs have not yet been developed for the MET field and agreed that this task has to be included in the work programme of the MET Sub Group.

MID BASIC ANP and FASID (DOC. 9708)

5.5.12 The meeting noted that as a follow up action to the MIDANPIRG/11 Conclusion 11/13, a number of proposals for amendment to the MID ANP have been processed for both the Basic ANP (AOP, ATS, SAR and MET Parts) and the FASID (GEN, AIS, CNS and MET Parts).

5.5.13 The meeting noted with appreciation that the MID Basic ANP and FASID (Doc 9708), Edition 2010, was made available on a CD-ROM distributed to all participants.

5.5.14 The meeting noted also that ICAO HQ is in the process of updating the Basic Operational Requirements and Planning Criteria (BORPC). The new version of BORPC is expected to be finalized by June 2011.

5.5.15 The meeting was apprised of the outcome of the CNS/ATM/IC SG/5 meeting on 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 the electronic versions (eANP) was underlined. In this respect, it was highlighted that for the development of the eANP, the following performance objectives are endorsed:

- Accurate: data must be accurate to a high degree(90% plus);
- Relevant: data must be linked to metric and performance objectives;
- Harmonized: data must be linked to GANP and must be collected and tracked in the same format between all Regions; and
- Transparent: data must be accessible to all States.

5.5.16 The meeting noted that ICAO HQ, in coordination with all Regional Offices, is planning to evolve the current ANPs to the electronic versions by taking the following steps:

- **Step 1 : Assessment and design**
  - ✓ for each Table in the ANP:
    - update the Table format;
    - map the Table to GANP, performance objective and metric; and
    - optimize the workflow
  - ✓ perform a GAP analysis to determine any missing Tables/Charts.
- **Step 2 : Migrate**
  - ✓ for each Table/Chart in the ANP:
    - implement the Table on the electronic environment;
    - automate the workflows;
    - connect to the metrics and performance objectives;
    - populate with existing data; and
    - replace paper version with link to online version.
- **Step 3 : Production**
  - ✓ for each Table/Chart in the ANP:
    - develop simple training for users; and
    - assign log-in and access rights.

5.5.17 In the same vein, the meeting recalled that in many occasions, the usefulness and effectiveness of the Air Navigation Plans were questioned, in particular, when it comes to duplication of some Annexes provisions in the Basic ANP or reproduction of the data published in the Aeronautical Information Publications in the FASID Tables. In this regard, it was highlighted that the ANPs should set forth in detail the facilities, services and procedures required for international air navigation within a specified area. Such plans contain recommendations that States can follow in programming the provision of their air navigation facilities and services, with the assurance that facilities and services furnished in accordance with the plan will form with those of other States an integrated system adequate for the foreseeable future. The meeting further noted that the ANP, does not list all facilities in the Region but only those required for international civil aviation operations; the aeronautical information publications, NOTAM and other State documents should be consulted for information on additional facilities and for operational information in general.

5.5.18 The meeting recognized that the current format and content of the regional ANPs as well as the amendment process do not meet the need of States and users and are inconsistent with the new requirements set-forth by the ATM Operational Concept, the Global ANP and the Performance Based Approach. Accordingly, it was agreed that a significant revision of the current regional ANPs, format and content is therefore required in order to meet the intended objectives and increase their effectiveness.

5.5.19 Based on the above, the meeting agreed to the following Decision:

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.

ICAO New Flight Plan Format (INFPL)

5.5.20 The meeting noted that ICAO MID Regional Office sent a State Letter, dated 4 August 2009 requesting all MID States to provide focal points of contact and an initial assessment of the expected impact on the procedure and systems in their State(s) as a result of the Implementation of Amendment 1 to the Procedures for Air Navigation Services-Air Traffic Management, (PANS-ATM, Doc 4444) provisions. Accordingly, the meeting reviewed and updated the Focal points as at **Appendix 5.5F** to the Report on Agenda Item 5.5.

5.5.21 The meeting was apprised on the outcome of the two ICAO New Flight Plan Format Study Group (INFPL SG) meetings which developed clear terms of reference for the Study Group to enable it to support and assist MID States. Accordingly, the meeting agreed to the following Decision:

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.*

5.5.22 The meeting noted that the Air Navigation Bureau (ANB) at ICAO HQ developed a web based tool called Flight Plan Implementation Tracking System (FITS). The FITS website provides information regarding the implementation status of the new flight plan provisions in each State along with guidance and harmonized solutions for any difficulties encountered in the implementation process. It can be accessed at http://www2.icao.int/en/FITS/Pages/home.aspx.

5.5.23 The meeting noted that INFPL SG meetings reviewed the progress achieved and difficulties faced by other ICAO regions during the implementation of INFPL provisions, which were posted on the FITS. In this regard, the meeting urged MID States to use this system and to post any issue encountered in the implementation of INFPL in FITS. Accordingly, the meeting agreed to the following Conclusion:

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.

5.5.24 The meeting noted that the INFPL SG updated the Regional Performance Framework Form (PFF), related to the Implementation of the ICAO new FPL, clearly establishing performance objectives and timelines. The meeting urged MID States to develop their own National PFF.

5.5.25 The meeting noted that the INFPL SG meetings developed a table reflecting the status of implementation in each MID State which gives details on the appointment of focal points, the budget allocation, milestone and the implementation date, as at **Appendix 5.5H** to the Report on Agenda Item 5.5

5.5.26 The meeting also noted that ICAO MID Regional Office organized a workshop from 4-6 July 2010 as part of the SIP for the Region, which led to an agreement on transition strategy. The recommendations developed by the workshop are as at **Appendix 5.5I** to the Report on Agenda Item 5.5.

5.5.27 In reference to above, the meeting recognised that the implementation of ICAO new FPL format is a substantial and requires from States to secure a budget for the implementation of the new FPL Format Project. In addition States were urged to develop the technical requirements related to the upgrade of their ATC systems to comply with the new FPL format provisions and to initiate necessary negotiations with vendors as soon as possible. Accordingly the meeting agreed to the following Conclusion:

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.

5.5.28 The meeting noted that a Questionnaire on the Status of INFPL Implementation was distributed during the workshop which was held back-to-back with INFPL SG/2 meeting. Accordingly, the meeting urged MID States to reply to the questionnaire and tasked the INFPL SG to analyse the replies to the questionnaire and agreed to the following Conclusion:

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.*

5.5.29 The meeting encouraged MID States to procure the necessary software and hardware needed for the implementation of the ICAO New Flight Plan Format, and to conduct internal and external testing in close coordination with users.

5.5.30 The meeting agreed to the MID Region Strategy for Implementation of the ICAO New Flight Plan Format and associated ATS messages as indicated in the Amendment 1 to PANS-ATM, as at **Appendix 5.5K** to the Report on Agenda Item 5.5. Accordingly, the meeting agreed to the following Conclusion:

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.*

5.5.31 The meeting noted the discussions on the development of a regional INFPL contingency plan. In this regard the meeting was not in favour of developing such a regional plan, since users will not submit any flight plan in PRESENT format after 15 November 2012. However, the meeting agreed that each State to develop their own national contingency plan to be incorporated as part of their INFPL implementation plan as applicable, and to submit the plan to the ICAO MID Regional Office.

5.5.32 The meeting was of the opinion that the MID Region Strategy for Implementation of INFPL, States Implementation Plan, implementation guidance material, and other references to be compiled in one reference document and published electronically, to assist States in the implementation of the INFPL. The proposed table of contents is at **Appendix 5.5L** to the Report on Agenda Item 5.5. The meeting urged all MID States to actively contribute to the development of this important reference document and to also regularly to provide progress report. Accordingly, agreed to the following Conclusion:

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.

5.5.33 The meeting noted the consequences of none compliance with the implementation of INFPL on the Target date 15 November 2012 where a major impact on the whole aviation community, would be observed where examples are provided at **Appendix 5.5M**. Furthermore, the meeting noted that more attention to ATC, airline operators end users trainings need to be carefully addressed. The meeting urged all stakeholders to report any activities and provide the necessary support to the work of INFPL SG.

Strategy for the Implementation of GNSS in MID Region

5.5.34 The meeting noted that frequency Interference-free operation of GNSS is essential for the GNSS operation; in this regard the meeting recalled MIDANPIRG/11 *Conclusion 11/65: PROTECTION OF GNSS SIGNAL* and urged MID States to take the necessary actions to delete their States name from the footnotes 5.362B and 5.362C.

5.5.35 The meeting was apprised of the Studies undertaken in preparation for WRC-2000 indicate that a geographical separation distance exceeding line-of-sight (in the order of 400 km) between aircraft using GNSS and stations of the fixed service is required to ensure safe operation of GNSS. This is a very severe restriction, which can prohibit the safe use of GNSS over wide areas around any fixed service installation. Were a fixed service to be introduced into this band could raise a harmful interference situations leading to disruption to GNSS, affecting the safety of aircraft in flight. Thus, the WRC-2000 agreement to terminate all use by the fixed service in this band in 2015 still constitutes a severe and unacceptable constraint on the safe and effective use of GNSS in some areas of the world. It is, therefore, recommended that deletion of these allocations be effective from 2011.

5.5.36 The meeting was apprised on the Strategy for the implementation of GNSS in the MID Region and noted that with the transition to performance based planning. ICAO will no longer specify the GNSS systems (or combination of systems) that should be used to support PBN requirements which is left to the State or groups of States. Accordingly the meeting agreed to the following Conclusion:

CONCLUSION 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.*

5.5.37 The meeting noted that PBN/GNSS TF/ 2 while reviewing MIDANPIRG/11 Conclusion 11/68 *GNSS Studies in MID Region*, was informed that European Space Agency and GNSS Supervisory Authority already completed their study. In this regard Saudi Arabia informed the meeting on the institutional issues that need to be tackled. Furthermore, it was brought to the attention of the meeting that SBAS Implementation in Regions ACAC and ASECNA (SIRAJ) project is being pursued by Arab Civil Aviation Commission (ACAC).

5.5.38 The meeting noted that IATA does not support Satellite Base Augmentation Systems (SBAS) as IATA users already invested in Aircraft Based Augmentation Systems (ABAS) Avionics.

5.5.39 The meeting was updated by Egypt and Jordan on the installation of Ranging Integrity Monitoring Stations (RIMS) for EGNOS extension, in the MID area.

5.5.40 The meeting was informed on the approval of Ground Based Augmentation System (GBAS) by Federal Aviation Administration (FAA). This marks the successful completion of a partnership between the FAA and Air Services Australia to build and certify GBAS. This is expected to become an asset to airports around the world, clearing the way for increased safety and efficiency at airports by providing precise navigation service based on the Global Positioning System (GPS). Furthermore, the meeting was informed of Australia's decision to discontinue the Ground-Based Regional Augmentation System (GRAS) project.

5.5.41 The meeting noted that the Secretary of the Navigation Systems Panel (NSP) is coordinating a revision of the GNSS Manual (Doc 9849) before end of year 2010, to ensure that the revised manual meets the goal of supporting GNSS implementation at national level. The Secretary of NSP, requires information from Regional Offices and States on current hurdles to the implementation of GNSS due to the lack or inadequacy of available ICAO guidance, or to any other factors.

5.5.42 The meeting reviewed the list of hurdles as at **Appendix 5.5O** to the Report on Agenda Item 5.5, which was developed by NSP Working Group of the Whole Meeting in Montreal 17-28 May 2010. In this regard the meeting supported the initiative and urged MID State to provide inputs for the revision of the GNSS manual if any.

Regional and States PBN Implementation Plans

5.5.43 The meeting recalled that ICAO 36th General Assembly Resolution A36-23: *Performance based navigation global goals*, urges 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 first version of the MID Regional PBN Implementation Strategy and Plan were developed in October 2008 and were adopted by MIDANPIRG/11 in February 2009 in order to allow sufficient time for the MID States to complete development of their national PBN plans by December 2009.

5.5.44 The meeting also recalled that RNAV and RNP were implemented in the MID Region before the current PBN Concept in which there are no provisions for RNP 5. Accordingly MIDANPIRG/11 and subsequent PBN meetings requested that, in order to align with the harmonized PBN terminology, the term RNP 5 needs to be replaced by RNAV 5, and States to take the necessary actions to update their AIPs.

5.5.45 The meeting noted that RNAV 5 cannot be used for oceanic/remote airspace and that in principle RNAV 10 should be used for that particular airspace. It was recognized also, that presently some of the airspace in the MID Region that had previously been classified as remote continental/oceanic, now have the required infrastructure capability to support RNAV 5. Nevertheless, there remains other airspace in the MID Region that still can be classified as oceanic and therefore, RNAV 10 would be appropriate as the navigation specification, at least for the short term (2008-2012).

5.5.46 The meeting was updated on Continuous Decent Operations (CDO) Manual (Doc 9931) has been developed and is available on ICAONET which needs to be incorporated in the MID Regional PBN Implementation Strategy and Plan.

5.5.47 The meeting noted that the PBN/GNSS TF/2 had reviewed the MID Regional PBN Implementation plan, discussed various implementation issues and the recent developments in the PBN, and developed a revised version 2 of the MID Regional PBN Implementation Strategy and Plan which was further reviewed by the CNS/ATM/IC SG/5 meeting. Accordingly, the meeting agreed to the following Conclusion which will replace and supersede MIDANPIRG/11 Conclusion 11/73:

CONCLUSION 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.*

5.5.48 The meeting recalled that several PBN implementation challenges need, to be met in order to progressively implement PBN and get the desired benefits, the list of challenges faced among others are:

- Airspace concept development
- WGS-84 surveys
- Electronic Terrain and Obstacle Data
- Procedure design
- Ground and Flight Validation
- Operational approval
- Safety assessment
- Awareness and training for pilots and ATC.

5.5.49 The meeting urged States, ANSP's, aircraft operators, user communities, etc. to continue providing support to States and ICAO PBN programme, for meeting the above and any other challenges for PBN implementation in the MID Region.

5.5.50 The meeting was updated on the Global PBN Task Force activities include the formation of the GO-Team that would assist in developing knowledge and expertise in various States in the Regions. Accordingly, the meeting encouraged MID States willing to take advantage of the services offered by the GO-Team to communicate with the ICAO MID Regional Office in order to coordinate with ICAO HQ, and facilitate the visit of the GO-Team. In this regard the meeting noted that UAE is in advance stage of availing this service.

5.5.51 Furthermore, the meeting noted that in order to support PBN implementation activities in the MID Region a workshop on PBN Airspace Planning will be organized by ICAO in collaboration with FAA and EUROCONTROL and hosted by Syria from 25 to 28 October 2010.

5.5.52 The objective of the above workshop is to provide an insight and basic understanding of the development of a PBN Airspace Concept. It will address the methodology to be used in developing such concepts, apply this methodology through group work by providing unique hands on experience in the actual development of an Airspace Concept based on generic scenarios.

5.5.53 The meeting recalled that in order to assist States in developing their National PBN Implementation plan a common template with the list of content of the National PBN implementation plan was developed and made available on the ICAO PBN web site: http://www2.icao.int/en/pbn/Pages/Documentation.aspx which was also endorsed by MIDANPIRG/11 in February 2009.

5.5.54 The meeting noted that Bahrain, Oman and UAE, implemented RNAV1 routes. Furthermore, the meeting noted that the following States: Bahrain, Egypt, Jordan, Kuwait, Qatar, Syria and Yemen had officially submitted their States PBN implementation plans some of which are still in draft version. The meeting urged MID States to complete their States PBN Implementation plans and report the progress of PBN implementation to ICAO MID Regional Office using the spreadsheet and the progress report. Accordingly, the meeting agreed the following Conclusion:

CONCLUSION 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.

5.5.55 The meeting noted that PBN/GNSS TF/2 and CNS/ATM/IC SG/5 updated performance framework forms (PFF) related to PBN implementation in the MID Region as at **Appendix 5.5D** to the Report on Agenda Item 5.5 and urged MID States to develop their States National PFF.

5.5.56 The meeting noted that the ICAO 37th General Assembly updated Resolution A36-23 with A37-11 as at **Appendix 5.5S** to the Report on Agenda Item 5.5 which request State to develop National Plan as a matter of urgency. Furthermore, the 37th General Assembly resolution request (PIRGs) to include in their work programme the review of status of implementation of PBN by States according to the defined implementation plans and report annually to ICAO any deficiencies that may occur.

PBN/GNSS Task Force TOR and Future Work Programme

5.5.57 The meeting noted that, taking into consideration the PBN implementation in the region and the latest development in PBN and GNSS fields, the PBN/GNSS Task Force meeting reviewed and updated the Terms of Reference and Work Programme as at **Appendix 5.5T** to the Report on Agenda Item 5.5. Accordingly the meeting agreed to the following Decision, which is proposed to replace and supersede MIDANPIRG/11 Decision 11/66:

DECISION 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.*

5.5.58 The meeting noted that the second PBN/GNSS Task Force meeting recalled that the task list which was prepared for the development of the first PBN Regional Plan proved to be a good tool to keep track on all tasks that needs to be undertaken by the Task Force. Consequently, the PBN/GNSS Task Force updated that task list, which was further reviewed and updated by the CNS/ATM/IC SG/5 meeting as at **Appendix 5.5U** to the Report on Agenda Item 5.5. Accordingly, the meeting agreed to the following Decision:

DECISION 12/60: LIST OF TASKS 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.*

Continuous Descent Operations (CDO)

5.5.59 The meeting noted that ICAO Continuous Descent Operations Manual (Doc 9931) that provides guidance on the development and implementation is now available on ICAONET. The Manual contains guidance material on the airspace design, instrument flight procedures, ATC facilitation and flight techniques necessary to enable Continuous Descent (CD) profiles. It therefore provides background and implementation guidance for:

- Airspace and procedure designers.
- Air traffic managers and controllers.
- Service providers (Airports and Air Navigation Service Providers (ANSP).
- Pilots.

Key objectives of the manual are to improve the:

- Overall management of traffic and airspace in order to enable uninterrupted continuous descents, without disrupting departures.
- Understanding of continuous descent procedures and profiles.
- Harmonization and standardization of associated terminology

5.5.60 The meeting noted that Continuous Descent Operations is one of several tools available to aircraft operators and ANSPs to increase safety, flight predictability, and airspace capacity, while reducing noise, ATC/Pilot communications, fuel burn and the emission of greenhouse gases. Over the years, different route models have been developed to facilitate CDs and several attempts have been made to strike a balance between the ideal of environmentally friendly procedures and the requirements of a specific airport or airspace.

5.5.61 Continuous Descent Operations are enabled by airspace design, procedure design and ATC facilitation, in which an arriving aircraft descends continuously, to the greatest possible extent, by employing minimum engine thrust, ideally in a low drag configuration, prior to the Final Approach Fix (FAF)/Final Approach Point (FAP). An optimum CD starts from the Top of Descent and uses descent profiles that reduce ATC/Pilot Communication, segments of level flight, noise, fuel burn and emissions, while increasing predictability to ATC/Pilots and flight stability.

5.5.62 Maintenance of safety during all phases of flight is paramount - nothing in the guidance shall take precedence over the requirement for a safe operation and control of aircraft at all times. For the avoidance of doubt, all recommendations are to be read as "subject to the requirements of safety". Before any CD trials or operations commence, the proposed implementation should be the subject of a local safety assessment.

5.5.63 The meeting was in line with the views that Terminology and procedural standardization are important for flight safety; hence standardization and harmonization are important. From the pilots' and air traffic controllers' perspective, flight procedures and pilot communications should be unambiguous.

5.5.64 To standardize and harmonize the development and implementation of CD operations, the airspace and instrument flight procedure design and ATC techniques should all be employed in a cohesive manner. This will then facilitate the ability of flight crews to use in-flight techniques to reduce the overall environmental footprint and increase the efficiency of commercial aviation. The implementation guidance in the Manual is intended to support collaboration among the different stakeholders involved in implementing these Continuous Descents.

5.5.65 Based on the above and in light of the completion of the ICAO CDO Manual which will standardize and harmonize the development and implementation of CD operations, States are encouraged to consult the CDO Manual during their STAR implementations. Recognizing the efficiency, environmental and other benefits of Continuous Descent Operations, and the need to harmonize these operations in the interest of safety, accordingly the meeting agreed to the following Conclusion:

CONCLUSION 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.

The Dissolution of MID FANS Implementation Team and Adoption of GOLD

5.5.66 The meeting recalled MIDANPIRG/11 agreement for the establishment of MID Regional FANS Implementation Team (MID-FIT) under Decision 11/62, and under Decision 11/64 assigned the task to be performed in coordination with ACAC Fan Implementation Group.

5.5.67 The meeting noted that ICAO MID Regional Office communicated with BOB-CRA (Boeing), who confirmed their readiness to support MID Region provided that firm commitment is received from MID States. Boeing advised that their previous experience with the MID Region had shown that despite considerable effort no concrete results were achieved.

5.5.68 The meeting further noted that the ICAO MID Regional Office sent State Letter on 02 August 2009, requesting commitment from States. The State Letter mentioned that MID FIT meeting would only be convened when a sufficient number of members from States and organizations were nominated to the team. The number of replies to the State letter was low and as a result the MID Regional Office did not convene the MID-FIT meeting.

5.5.69 The meeting noted that during the CNS SG/3 meeting, it was agreed that MID States were to advise their final position and support for the MID-FIT before the CNS/ATM/IC SG/5 meeting. The CNS/ATM/IC SG/5 is responsible for analyzing the FITS activities and achievements in FANS implementation. In this regard the meeting noted that instead of the FANS Implementation Team, a Data Links Implementation Group be established in which Bahrain, Egypt and Saudi Arabia would be the nucleus of a working group for the MID Data Link and present the outcome of their work in first available opportunity.

5.5.70 The meeting noted that during CNS/ATM/IC SG/5 meeting no additional replies were received by the ICAO MID Regional Office to support conducting MID-FIT. Accordingly, CNS/ATM/IC SG/5 recommended the dissolution of the MID-FIT and FANS activities to be incorporated within the CNS/ATM/IC SG work programme.

5.5.71 Based on the above the meeting agreed to the following Decision which would replace and supersede MIDANPIRG/11 Decisions 11/62 and 11/64:

DECISION 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.

5.5.72 The meeting noted that the Global Operational Data Link Document (GOLD) aims to facilitate global harmonization of existing data link operations and resolve regional and/or State differences impacting seamless operations. The GOLD includes required communication performance (RCP) and surveillance specifications, based on RTCA DO-306/EUROCAE ED-122, and guidelines on post-implementation monitoring and corrective action to address issues with satellite data communication services.

5.5.73 The meeting noted that GOLD will effectively replace the Guidance Material for ATS Data Link Services in North Atlantic Airspace (NAT Data Link GM) and the FANS-1/A Operations Manual (FOM) for the Asia-Pacific, South American and African-Indian Ocean Regions.

5.5.74 Based on the above meeting agreed that GOLD is to be adopted for the MID Region as guidance material for States and airspace users in conjunction with the provisions contained in ICAO Annex 10, Volume II and PANS–ATM (Doc 4444). Accordingly, the meeting agreed to the following Conclusion:

CONCLUSION 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.

VIRTUAL UIR for the Gulf Cooperation Council (GCC) States

5.5.75 The meeting noted that the CNS/ATM/IC SG/5 was provided with information on the GCC Virtual Upper Information Region (UIR) project, which aimed at creation of an integrated system to manage Air Traffic Services (ATS) in the GCC and was of the opinion that this matter be further pursued by the GCC States and MIDANPIRG is to be updated on the progress of the project.

MIDANPIRG/12
Appendix 5.5A to the Report on Agenda Item 5.5

A SAMPLE LIST OF METRICS
FOR PERFORMANCE MONITORING OF AIR NAVIGATION SYSTEMS

Key Performance Area	Corresponding metrics
1. Access and equity	Civil flights using fixed airspace; Unusable airspace due to navigation restriction; Number of access denials; Number of airports with published approaches.
2. Capacity	Average daily airport capacity for a group of 35 airports measured as a 5 year moving average; Hourly number of IFR movements (departure + arrivals) during IMC; Total number of operations per day; Number of aircraft in a specified volume of airspace; Airspace throughput/TMA-number of aircraft per 100nmi3; Traffic density i.e. number of aircraft per 100 nmi3; Enroute utilization i.e. number of aircraft per 100nmi3; Airside Capacity i.e. number of operations per hour; Airborne delay i.e. minutes per flight; Arrival/departure delay i.e. minutes per flight.
3. Cost effectiveness	Total operating cost plus cost of capital divided by IFR flights; Average cost per flight at a system wide annual level;. Investment cost; Cost per retrofit; Out of service cost; Operating and Maintenance cost.
4. Efficiency	Estimated fuel savings (year 2000 as baseline); Percent of flights departing on-time; Percentage of instrument runway ends with an approach procedure with vertical guidance (APV), (BARO-VNAV and/or augmented GNSS) either as the primary approach or as a back-up for precision approaches; PBN Routes implemented and published in enroute; Number of certified aircrafts and pilots for PBN operations for enroute and TMA; Percent of flights with normal flight duration; Traffic movements i.e. # of movements;

Key Performance Area	Corresponding metrics
	Unused capacity i.e. # of movements; Number of ATC automated systems that are interconnected; Number of terminal areas with SID/STAR implemented.
5. Environment	Amount of emissions which are attributable to inefficiencies in ATM service provision; Pounds of fuel burn per operation; Local noise foot print; Number of noise complaints.
6. Flexibility	Proportion of rejected changes for which an alternative was offered and taken; Enroute flight distance Percentage of flights off-on ATC preferred routes; Number of backups available for emergency; Flexibility in sequencing; Number of restrictions.
7. Predictability	Variability in delay for arrival time./departure time/enroute and Taxi time i.e. Minutes /flight; Number of aircraft held i.e. # Aircraft /hr; Number of cancellations/diversions/misconnections i.e. #of flights ;
8. Safety	Number of runway incursions per year; Number of operational errors per year; Number of accidents per 100,000 departures; Number of fatalities per 100,000 departures; Number of LHD reports.

MIDANPIRG/12
Appendix 5.5B to the Report on Agenda Item 5.5

MID REGIONAL PERFORMANCE OBJECTIVES
AERODROMES PERFORMANCE OBJECTIVES

IMPLEMENTATION OF CERTIFICATION OF AERODROMES	
Benefits	
Environment	• enhanced Land-use management around aerodromes • reduction in aircraft noise and emission impact
Efficiency	• enhance safety, access, efficiency and capacity of aerodrome operations in the States • uniform implementation of ICAO SARPS in the MID States • efficient use of aerodrome resources • reduction in delays • maximize aerodrome capacity in all weather conditions
Safety	• safely manoeuvre in all weather conditions • reduced wild life/bird strikes hazards • reduced incident/accident factors • reduced number of deficiencies • increased runway usability factors • improved safety of aerodromes operations • decreased number of accidents & serious incidents occurred during aircraft movements to/from aerodromes
KPI	• status of implementation of certification of aerodromes • status of implementation of SSP & SMS for aerodrome • status of planning for aerodrome emergencies and testing their effectiveness • status of readiness to accommodate NLs operations at aerodromes
Proposed Metrics:	• number of certified aerodromes used for international operations • number of resolved Air Navigation deficiencies identified in the area of aerodrome operations • number of accidents & serious incidents per 100000 aircraft movements to/from aerodromes • number of adequate aerodromes for NLAs operations • number of peoples in and around aerodromes affected by aircraft operations

Strategy
Short term (2010-2012)
Medium term (2013 - 2016)

ATM OC COMPONENTS	**TASKS (As part of Certification of Aerodrome process and implementation of Safety Management for aerodrome operations)**	**TIMEFRAME START-END**	**RESPONSIBILITY**	**STATUS**
AO, CM, DCB, ATM SDM	**Certification of aerodromes**			
	• establish collaborative bodies with ATM, aircraft operators and aerodrome operators for developing national plans to increase aerodrome capacity aimed at meeting actual air traffic and/or forecast demand	2010 - 2012	States & AOP SG	valid

Strategy ***Short term (2010-2012)*** ***Medium term (2013 - 2016)***				
ATM OC COMPONENTS	**TASKS (As part of Certification of Aerodrome process and implementation of Safety Management for aerodrome operations)**	**TIMEFRAME START-END**	**RESPONSIBILITY**	**STATUS**
	• implement aerodrome ground infrastructure commensurate with operational expectations including operations of new larger aircrafts at existing aerodromes	2010 - 2015	States & AOP SG	valid
	• implement collaborative aerodrome operational procedures with ATM, ground services providers and associated operations support services	2010 - 2013	States & AOP SG	valid
	• monitor and ensure promulgation of national standards for aerodromes including certification of aerodromes requirement in accordance with established criteria and certification process	2010-2011	ICAO, States & AOP SG	valid
	• ensure that national requirements for aerodrome includes enforcement provisions for unresolved non-compliances in a timely manner	2010-2013	ICAO, States & AOP SG	valid
	• monitor and ensure clear separation of authority between the aerodrome operation service providers (aerodrome Operators) and the State regulatory agency	2010-2011	ICAO ., States & AOP SG	valid
	• monitor and ensure establishment of an organizational structure of a separate entity within CAA with clearly defined duties and responsibilities relevant to airport certification and continuous surveillance activities, appropriate to the size and scope of aerodromes in the State and ensure having sufficient qualified human resources to carry out its functions and mandate	2008-2013	ICAO, States & AOP SG	valid
	• monitor and ensure that the certification process explicitly include coordination with elements of air traffic service (ATS) for the local airspace of an aerodrome	2010-2012	ICAO, States & AOP SG	valid
	• monitor and ensure that aerodrome certification process include procedures for dealing with a non-compliance with the established requirements, including aeronautical studies and risk assessment mechanism and notification procedure	2010-2012	ICAO, States & AOP SG	valid

Strategy ***Short term (2010-2012)*** ***Medium term (2013 - 2016)***				
ATM OC COMPONENTS	**TASKS (As part of Certification of Aerodrome process and implementation of Safety Management for aerodrome operations)**	**TIMEFRAME START-END**	**RESPONSIBILITY**	**STATUS**
	• develop, review, approve and verify the content of an Aerodrome Manual for each aerodrome used for international operations	2009-2012	States	valid
	• issue/grant certification of aerodromes as required	2009-2012	States	valid
	• establish an aerodrome surveillance and safety oversight programme and develop associated implementation plans, monitor and insure that aerodromes continuo meeting certification obligations and application of enforcement provisions for non compliance in a timely manner	2009-2016	States and AOP SG	valid
	• ensure promulgation of information on status of certification of aerodromes in the State AIP	2010-2016	ICAO, States and AOP SG	valid
	• monitor and follow-up alleviating of identified aerodrome deficiencies and ensure application of enforcement provisions for unresolved non-compliances in a timely manner	2010-2016	ICAO, States and AOP SG	valid
AO, CM, AUO	**Safety Management of Aerodromes**			
	• monitor and ensure promulgation of national harmonized requirement for aerodrome safety management	2010-2016	ICAO, States and AOP SG	valid
	• establish and implement an aerodrome safety programme and define acceptable level of safety and ensure it includes a requirement for certified aerodrome operators to implement a Safety Management System (SMS) acceptable to the State	2011-2016	ICAO, States and AOP SG	valid
	• Monitor, develop and implement an SMS with agreed performance objectives for aerodrome operations and ensure it clearly define lines of safety accountability throughout a certified aerodrome including a direct accountability for safety on the part of senior management	2011-2016	ICAO, States and AOP SG	valid

Strategy ***Short term (2010-2012)*** ***Medium term (2013 - 2016)***				
ATM OC COMPONENTS	**TASKS (As part of Certification of Aerodrome process and implementation of Safety Management for aerodrome operations)**	**TIMEFRAME START-END**	**RESPONSIBILITY**	**STATUS**
	• implement remedial action necessary to maintain agreed safety performance and ensure the continuous monitoring and regular assessment of the safety performance that aims at a continuous improvement of the overall performance of the safety management system. Review and assess effectiveness of mitigation measures in regular bases	2011-2016	States and AOP SG	valid
	• Implement, where warranted, precise surface movement guidance and control system integrated with the runway incursion prevention programme to improve safety, increase capacity and efficiency of runway operations	2009-2012	States & AOP SG	valid
	• Develop, Implement and make available to ATM at aerodromes a positioning system for all vehicles and aircrafts operating on the movement area on a cost-benefit basis.	2013 - 2016	States & AOP SG	valid
AO, CM	**Aerodrome Emergency Planning**			
	• Establish collaborative bodies with ATS, aircraft operators, aerodrome operators, aerodrome security agency and other agencies that might be involved in different aerodrome emergencies to develop emergency plans for each aerodrome	2010 - 2012	States & AOP SG	valid
	• Coordinate and conduct different exercises as required to assess, review and ensure proper coordination between different agencies involved in an emergency and the effectiveness of the aerodrome emergency plan observing Human Factors principles aimed at ensuring optimum response by all existing agencies participating in emergency operations	2010 - 2012	States & AOP SG	valid
	• Arrange and test where warranted, precise measures for aircraft emergencies in difficult environment in and around aerodromes	2009-2012	States & AOP SG	valid
Linkage to GPIs	GPI/13: Aerodrome design and management GPI/14: Runway operations GPI/21: Navigation Systems			

IMPLEMENTATION OF RUNWAY SAFETY PROGRAMME	
Benefits	
Environment	• Contribution to efficient environmental control
Efficiency	• efficient use of Runways • increased runway usability factors • reduced incident/accident factors • reduced number of deficiencies • minimize the effects of weather on capacity
Safety	• improve situational awareness • enhance precise surface guidance to and from a runway • improve safety of runway operations • improve safety of aerodrome operations in general
KPI	• status of implementation of Runway Safety programmes in the MID Region
Proposed Metrics:	• number of Runway incursions per year • number of Runway excursions per year • number of aircraft accidents& serious incidents per 100,000 movements

Strategy
Short term (2010-2012)
Medium term (2013 - 2016)

ATM OC COMPONENTS	**TASKS**	**TIMEFRAME START-END**	**RESPONSIBILITY**	**STATUS**
AO, CM, , DCB, ATM SDM	**Runway Incursion Prevention**			
	• establish collaborative bodies with ATM, aircraft operators and aerodrome operators for implementing plans and measures aimed at prevention of runway incursion	2010 - 2015	States & AOP SG	valid
	• establish Runway Incursion Prevention programme, identify its goals as part of the national Runway Safety programme and monitor implementation plan	2009-2010	States & AOP SG	valid
	• implement, where warranted, precise surface movement guidance to and from a runway to improve capacity, safety and efficiency	2009-2012	States & AOP SG	valid
	• develop, Implement and make available to ATM at aerodromes a positioning system for all vehicles and aircrafts operating on the movement area on a cost-benefit basis	2013 - 2016	States & AOP SG	valid
	• implement procedures and technologies to enhance the performance of runway operations and optimize runway capacity	2013 - 2016	States & AOP SG	valid

Strategy ***Short term (2010-2012)*** ***Medium term (2013 - 2016)***				
ATM OC COMPONENTS	**TASKS**	**TIMEFRAME START-END**	**RESPONSIBILITY**	**STATUS**
AO, CM, , AUO, ATM SDM	• **Runway Excursion Prevention**			
	• establish collaborative bodies with ATM, aircraft operators and aerodrome operators for measures and implementing plans aimed at prevention of runway excursions	2010 - 2015	States & AOP SG	valid
	• harmonize, coordinate and support the Runway Excursion Prevention measures and implementation activities on a regional basis	2010 - 2016	ICAO, States & AOP SG	valid
	• develop and implement an integrated maintenance programme at aerodromes that includes pavement and visual aids	2009-2016	States & AOP SG	valid
	• establish collaborative bodies with AIM and ATM to ensure meeting quality requirements for runway declared distances	2010 - 2012	ICAO, States & AOP SG	valid
	• monitor and implement Runway End Safety Area (RESA) requirements at aerodromes	2010 - 2012	ICAO, States & AOP SG	valid
	• monitor and ensure meeting Runway strip characteristics and frangibility requirements	2010 - 2016	ICAO, States & AOP SG	valid
	• monitor, develop measures and ensure inspection of the movement area including control of Foreign Object Damage (FOD)	2009-2016	States & AOP SG	valid
AO	**Runway Pavement Maintenance**			
	• promote the awareness about the requirements for the provision of Pavement Maintenance in the movement area	ongoing	ICAO & AOP SG	valid
	• develop and implement a runway maintenance programme	2009-2012	States & AOP SG	valid
	• harmonize, coordinate and support the Runway pavement maintenance guidance for implementation activities on a regional basis	2009-2011	ICAO & AOP SG	valid
	• defined maintenance performance level objectives in order to maintain good friction characteristics and low rolling resistance on runways	2010-2011	States & AOP SG	valid

Strategy ***Short term (2010-2012)*** ***Medium term (2013 - 2016)***				
ATM OC COMPONENTS	**TASKS**	**TIMEFRAME START-END**	**RESPONSIBILITY**	**STATUS**
	• identify minimum friction level below which information that a runway may be slippery when wet should be made available, and develop coordination between AIM, ATM and aerodrome operators to monitor effective implementation in a timely manner	2009-2012	States & AOP SG	valid
	• monitor the removal of runway contaminants in particular; rubber deposits and accumulated sand	2010-2016	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 objectives and pavement maintenance programme	2010-2016	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
AIM PERFORMANCE OBJECTIVES

IMPLEMENTATION OF WGS-84 AND eTOD	
Benefits	
Environment	• Supporting benefits described in performance objectives for PBN
Efficiency	• benefits described in performance objectives for PBN • efficient use of airspace
Safety	• improve situational awareness • support determination of emergency contingency procedures • improve safety in general
KPI	• status of implementation of WGS-84 in the MID Region • status of implementation of eTOD in the MID Region (for Areas 1 & 4)
Proposed Metrics:	• number of States having implemented WGS 84 • number of States having organised eTOD awareness campaigns and training programmes • number of States having implemented eTOD for Areas 1 & 4

Strategy
Short term (2010-2012)
Medium term (2013 - 2016)

ATM OC COMPONENTS	TASKS	TIMEFRAME START-END	RESPONSIBILITY	STATUS
ATM AUO	**WGS-84**			
	• establish WGS-84 implementation goals in coordination with the national PBN implementation plan	2009-2010	States	valid
	• monitor the implementation of WGS-84 until complete implementation of the system by all States and take remedial action, as appropriate	ongoing	ICAO & AIS/MAP TF	valid
ATM CM, ATM SDM	**eTOD**			
	• promote the awareness about the requirements for the provision of electronic Terrain and Obstacle Data (eTOD)	ongoing	ICAO & AIS/MAP TF & States	valid
	• harmonize, coordinate and support the eTOD implementation activities on a regional basis	ongoing	ICAO & AIS/MAP TF	valid

Strategy ***Short term (2010-2012)*** ***Medium term (2013 - 2016)***				
ATM OC COMPONENTS	**TASKS**	**TIMEFRAME START-END**	**RESPONSIBILITY**	**STATUS**
	• provide Terrain and Obstacle data for area 1	2008-2010	States	valid
	• provide Terrain and Obstacle data for area 4	2008-2010	States	valid
	• assessment of Annex 15 requirements related to the provision of eTOD for area 2 and area 3	2010-2012	States	valid
	• development of an action plan for the provision of eTOD for area 2 and area 3	2013	States	valid
	• provide necessary Terrain and Obstacle data for area 2	2015	States	valid
	• provide necessary Terrain and Obstacle data for area 3	2015	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			

AIM PERFORMANCE OBJECTIVES

REGIONAL PERFORMANCE OBJECTIVES TRANSITION FROM AIS TO AIM	
Benefits	
Environment	• reductions in fuel consumption
Efficiency	• improved planning and management of flights • efficient use of airspace
Safety	• improved safety
KPI	• Status of implementation of the AIRAC system in the MID Region • Status of implementation of QMS in the MID Region • Status of implementation of AIS Automation in the MID Region
Proposed Metrics:	• 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

Strategy
Short term (2010-2012)
Medium term (2013 - 2016)

ATM OC COMPONENTS	**TASKS**	**TIMEFRAME START-END**	**RESPONSIBILITY**	**STATUS**
AUO, ATM SDM	• improve the compliance with the AIRAC system	Ongoing	States & AIS/MAP TF	valid
	• use of the internet, including the ICAO MID Forum, for the advance posting of the aeronautical information considered of importance to users	2009-2011	States & ICAO	valid
	• signature of Service Level Agreements between AIS and data originators	2009-2011	States	valid
	• foster the implementation of QMS based on the MID Region Methodology for the implementation of QMS and the Eurocontrol CHAIN deliverables	2009-2011	ICAO & AIS/MAP TF & States	valid
	• monitor the implementation of QMS until complete implementation of the requirements by all MID States	2008-2013	ICAO & AIS/MAP TF	valid
	• review and update the deficiencies in the AIS/MAP field and provide necessary guidance for their elimination	Ongoing	ICAO & AIS/MAP TF	valid
	• foster the development of eAIPs by MID States	2009-2013	States & AIS/MAP TF	valid

Strategy ***Short term (2010-2012)*** ***Medium term (2013 - 2016)***				
ATM OC COMPONENTS	**TASKS**	**TIMEFRAME START-END**	**RESPONSIBILITY**	**STATUS**
AUO, ATM SDM	• monitor the implementation of AIS automation in the MID Region in order to ensure availability, sharing and management of electronic aeronautical information;	2008-2013	ICAO & AIS/MAP TF	valid
	• foster the development of national/regional AIS databases.	2010-2015	ICAO & AIS/MAP TF & States	valid
Linkage to GPIs	GPI-5: Performance-based navigation GPI-11: RNP and RNAV SIDs and STARs GPI/18: Aeronautical Information			

MIDANPIRG/12
Appendix 5.5D to the Report on Agenda Item 5.5

MID REGIONAL PERFORMANCE OBJECTIVES
ATM PERFORMANCE OBJECTIVES

OPTIMIZATION OF THE ATS ROUTE STRUCTURE EN-ROUTE AIRSPACE	
Benefits	
Environment	reductions in fuel consumption and CO_2 emission
Safety	Improved safety of ATS routes
Efficiency	• ability of aircraft to conduct flight more closely to preferred trajectories • increase in airspace capacity
KPI	• status of implementation of RNAV 1 in the MID Region • status of implementation of the ATS Routes listed in the MID ATS Route Catalogue • status of implementation of RNAV 5 area in the level band FL160-FL460, in the MID Region • status of Duplicated 5LNCs in the MID Region • status of deficiencies related to non-implementation of ATS Routes • status of implementation of 20NM longitudinal separation
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 longitudinal separation

Strategy
Short term (2010-2012)
Medium term (2013-2016)

ATM OC COMPONENTS	TASKS	TIMEFRAME START-END	RESPONSIBILITY	STATUS
AOM	***En-route airspace***			
	• 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	ongoing	ATM/SAR/AIS SG (ARN TF)	valid
	• develop State PBN implementation plans related to ATS Route development	2008-2012	States	valid
	• monitor user requirements for the establishment of ATS routes in the MID Region	Ongoing	ATM/SAR/AIS SG ARN TF	valid
	• provide status of PBN	2010-2011	States	valid

Strategy ***Short term (2010-2012)*** ***Medium term (2013-2016)***				
ATM OC COMPONENTS	**TASKS**	**TIMEFRAME START-END**	**RESPONSIBILITY**	**STATUS**
	implementation			
	• monitor the implementation of pending ATS Routes and update the MID Basic ANP and the MID ATS Route catalogue	Ongoing	ATM/SAR/AIS SG ARN TF	valid
	• follow–up with States on the implementation of pending ATS Routes and update the list of air navigation deficiencies, accordingly	Ongoing	ATM/SAR/AIS SG ARN TF	valid
	• monitor the implementation of RNAV 5 area in the level band FL160 - FL460 (inclusive)	2008-2012	ATM/SAR/AIS SG ARN TF	valid
	• monitor the implementation of RNAV 1 routes in the MID Region	Ongoing	ATM/SAR/AIS SG ARN TF	valid
	• implementation of 20NM longitudinal separation between States	2010-2011	Bahrain; Iraq; Jordan; Kuwait; Saudi Arabia; Syria and UAE	
	• monitor the process of allocation of 5LNCs	Ongoing	ICAO	valid
	• elimination/Reduction of the use of duplicate 5LNCs	2010-2011	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	
Environment **Safety**	• reductions in fuel consumption and CO_2 emission • enhance safety in terminal air space
Efficiency	• ability of aircraft to conduct flight more closely to preferred trajectories • increase in airspace capacity • facilitate utilization of advanced technologies (e.g., FMS based arrivals) and ATC decision support tools (e.g., metering and sequencing), thereby increasing efficiency
KPI	• status of implementation of PBN routes in terminal airspace • status of implementation of SID and STARS
Proposed 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

Strategy
Short term (2010-2012)
Medium term (2013-2016)

ATM OC COMPONENTS	TASKS	TIMEFRAME START-END	RESPONSIBILITY	STATUS
AOM, AO	***In terminal airspace***			
	• develop Airspace Concept based on the MID PBN implementation plan, in order to design and implement optimized standard instrument departures (SIDs), standard instrument arrivals (STARs), instrument flight procedures, holding, approach and associated procedures (particular RNAV 1 and Basic RNP1) in accordance with Regional Plan	Ongoing	States	valid
	• develop State PBN implementation plans related to terminal Airspace	Ongoing	(ATM/SAR/AIS SG), States	valid
	• formulate safety plan (assessment and monitoring)	2009-2012	States	valid

Strategy ***Short term (2010-2012)*** ***Medium term (2013-2016)***				
ATM OC COMPONENTS	**TASKS**	**TIMEFRAME START-END**	**RESPONSIBILITY**	**STATUS**
	• publish national regulations for aircraft and operators approval using PBN manual as guidance and considering available foreign approval material	2008-2010	States	valid
	• training	2008-2012	States	valid
	• system performance measuring (measurement and monitoring plan	2009-2012	States, ATM/SAR/AIS SG	valid
	• implement SIDs and STARs	2009-2012	States	valid
	• monitor implementation progress in accordance with MID PBN implementation roadmap and States implementation plan	2009-2012	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.			

IMPLEMENTATION OF RNAV AND RNP APPROACHES	
Benefits	
Environment **Efficiency** **Safety**	• Reduce CO2 emission • reductions in fuel consumption and emissions; • improvements in capacity and efficiency at aerodromes • improvements in safety at aerodromes
KPI	• status of implementation of RNAV/ RNP Approaches in the MID Region • status of implementation of PBN approaches
Proposed Metrics:	• number of States having implemented PBN approaches • number of RNAV/RNP APP in each States

Strategy
Short term (2010-2012)
Medium term (2013-2016)

ATM OC COMPONENTS	TASKS	TIMEFRAME START-END	RESPONSIBILITY	STATUS
AOM, AO	***At airports***			
	• develop Airspace Concept based on the MID PBN Implementation Plan, in order to design and implement RNP APCH APV in most possible airports; RNP AR APCH at airports where there are obvious operational needs	2009-2012	States	valid
	• develop State PBN implementation plans regarding Guided RNP Approaches	Ongoing	MIDANPIRG/12 (ATM/SAR/AIS SG) States	valid
	• formulate safety plan (assessment and monitoring)	2009-2012	States	valid
	• publish national regulations for aircraft and operators approval using PBN manual as guidance and considering available foreign approval material	2008-2012	States	valid
	• system performance measuring (measurement and monitoring plan	2009-2012	States, ATM/SAR/AIS SG	valid
	• implement APV procedures	2009-2012	States	valid
	• monitor implementation progress in accordance with MID PBN implementation roadmap and States implementation plan	2009-2012	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,			

Strategy *Short term (2010-2012)* *Medium term (2013-2016)*				
ATM OC COMPONENTS	**TASKS**	**TIMEFRAME START-END**	**RESPONSIBILITY**	**STATUS**
	GPI/11: RNP and RNAV SIDs and STARs and GPI/12: FMS-based arrival procedures			

ENHANCE CIVIL/MILTARY COORDINATION AND CO-OPERATION	
Benefits	
Environment	• reductions in fuel consumption and CO_2 emission
Efficiency	• allow a more efficient ATS route structure; and • increase airspace capacity
Safety	• ensure safe and efficient action in the event of unlawful interference
KPI	• 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
Proposed 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

Strategy *Short term (2010-2012)* *Medium term (2013-2016)*				
ATM OC COMPONENTS	**TASKS**	**TIMEFRAME START-END**	**RESPONSIBILITY**	**STATUS**
AOM, AUO	• establish civil/military coordination bodies at national level	2008-2011	States	
	• arrange for permanent liaison and close cooperation between civil ATS units and appropriate air defence units	2008-2011	States	
	• implement collaborative civil/military airspace planning at national level	2008-2012	States	
	• 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	2009-2013	ATM/SAR/AIS SG ARN TF	

	• implement FUA	2009- 2016	States	
	• monitor FUA implementation progress	Ongoing	ATM/SAR/AIS SG	
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	
Environment	• reductions in fuel consumption and emissions;
Efficiency	• increase airspace capacity
Safety	• meet the agreed Target Level of Safety (TLS)
KPI	• Status of States listed in the MANDD for non-reporting necessary data to the MIDRMA on regular basis and in a timely manner • Overall Target Level of Safety (TLS): 5 x 10^{-9} fatal accident per flight hour
Proposed Metrics:	• number of States reporting necessary data to the MIDRMA on regular basis and in a timely manner • number of Overall vertical-collision risk in MID RVSM airspace

Strategy
Short term (2010-2012)
Medium term (2013 - 2016)

ATM OC COMPONENTS	**TASKS**	**TIMEFRAME START-END**	**RESPONSIBILITY**	**STATUS**
AUO, ATM SDM				
	• develop an Action Plan for the implementation of RVSM within Baghdad FIR	2009-2010	BFRI WG	valid
	• develop necessary planning material related to RVSM implementation in Baghdad FIR	2009-2011	BFRI WG MIDRMA ICAO	valid
	• ensure that Iraq met all RVSM implementation requirements	2010-2011	BFRI WG MIDRMA ICAO	valid
	• implement RVSM within Baghdad FIR	2011	Iraq ICAO MIDRMA	valid
	• monitor RVSM operations in the MID Region	Ongoing	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	
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 • status of updates in the FITS
Proposed Metrics:	• 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
Short term (2010-2012)
Medium term (2013 - 2016)

ATM OC COMPONENTS	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

Strategy ***Short term (2010-2012)*** ***Medium term (2013 - 2016)***				
ATM OC COMPONENTS	**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 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	2009 – June 2012	States	valid
	• external testing	1 April to 30 June 2012	States	valid
	• airspace users testing	1 July to 14 November 2012	States and users	valid
	• 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 - 2010	INFPL SG	valid

Strategy ***Short term (2010-2012)*** ***Medium term (2013 - 2016)***				
ATM OC COMPONENTS	**TASKS**	**TIMEFRAME START-END**	**RESPONSIBILITY**	**STATUS**
	establish 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/18 Aeronautical Information			

MIDANPIRG/12
Appendix 5.5E to the Report on Agenda Item 5.5

CNS PERFORMANCE OBJECTIVES

REGIONAL PERFORMANCE OBJECTIVES RADIO SPECTRUM MANAGEMENT AND PROCESSES TO PROTECT THE AERONAUTICAL SPECTRUM	
Benefits	
Environment	• Supports ATM for the optimized use of technologies to reduce effect on environmnet
Efficiency	• proper administration the allocated aviation spectrum • resolve air Space communications
Safety	• availability of spectrum for safety systems and communication
KPI	• satisfactory results of the WRC-12 • current Aviation Frequency spectrum is protected to extent possible • availability Frequency Spectrum for Future Aeronautical utilization • status of deletion of footnotes affecting aviation spectrum
Proposed Metrics:	• number of aviation experts participate in WRC-12 • number of States deleted their State name from the foot notes affecting aviation spectrum • number of States coordinated with TRA to support the ICAO position

Strategy
Short term (2010-2012)
Medium term (2013 - 2016)

ATM OC COMPONENTS	TASKS	TIMEFRAME START-END	RESPONSIBILITY	STATUS
AOM, AUO, ATMSDM	• implement frequency spectrum management tool	2008-2011	ICAO States	valid
	• harmonize Regional coordination for the protection of the aviation spectrum at WRC-12, and beyond	2008-2012	ICAO, CNS SG States	valid
	• promote the awareness of Participation of Civil Aviation Experts in State's delegation to ITU WRC Meetings	2007-2012	ICAO CNS SG	valid
	• Civil Aviation Spectrum experts attend WRC-12 and be part of their National delegation and inform ICAO MID Office	Feb 2012	States	valid
	• disseminate ICAO policy statements of requirements for aeronautical radio frequency spectrum for WRC-12	2009-2011	ICAO	valid
	• deletion of MID States name from footnote affecting Aviation spectrum and inform ICAO Mid Regional Office	2007- 2012	States	valid

Strategy ***Short term (2010-2012)*** ***Medium term (2013 - 2016)***				
ATM OC COMPONENTS	**TASKS**	**TIMEFRAME START-END**	**RESPONSIBILITY**	**STATUS**
	• coordinating National TRA for the support of the ICAO position and inclusion in State position to the extent possible and inform ICAO MID regional office	2007- 2012	States	valid
	• ICAO attend WRC-12 to provide necessary support to the delegation for the support of the aviation spectrum	Feb 2012	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	Ongoing	ICAO/States	valid
Linkage to GPIs	GPI-23: Aeronautical radio spectrum			

REGIONAL PERFORMANCE OBJECTIVE IMPROVEMENT OF COMMUNICATION INFRASTRUCTURE RELATED TO ATN IMPLEMENTATION	
Benefits	
Environment	• Air Ground ATN communication improve air space usage thus benefiting the environment
Efficiency	• improvement in operational efficiency • better coordination using more reliable networks
Safety	• improved safety by having related information on time
KPI	• status of the development of the Regional Plan • status of the development of the test procedures for the
Proposed Metrics:	• number of States participate in the development of the plan • number of States follow the implementation Plan

Strategy Short term (2010-2012) Medium term (2013-2016)				
ATM OC COMPONENTS	**TASKS**	**TIMEFRAME START-END**	**RESPONSIBILITY**	**STATUS**
AO, TS, CM, AUO	• develop Regional ATN Planning document	2008-2012	ATN/IPS WG	valid
	• review of ATN implementation issues and develop coordinated solutions	2009-2012	ATN/IPS WG and CNS SG	valid
	• develop conformance procedures and check list for AMHS	2009-2011	ATN/IPS WG and CNS SG	Completed
	• develop information Security policy and Guidance	2009-2011	ATN/IPS WG and CNS SG	valid
	• coordinate and monitor implementation to be harmonized and interoperable globally	On going	ATN/ IPS WG and CNS SG	valid
	• implement agreed G-G ATN application and report to ICAO MID Regional Office	On going	States	valid
	• monitor and report deficiencies to support the agreed MID METRICS	2011-2012	ATN/IPS WG and CNS SG	Valid
	• support other MIDANPIRG Subsidiary bodies for CNS infrastructure requirement	2008-2016	ATN/IPS WG and CNS SG	Valid

REGIONAL PERFORMANCE OBJECTIVES IMPLEMENTING ADVANCED TECHNOLOGIES TO SUPPORT DATA LINK SERVICES	
Benefits	
Efficiency	• improvement in operational efficiency • better coordination • efficient use of frequency spectrum
Safety	• improved safety
KPI	• status of infrastructure survey • status of data links implementation
Proposed Metric	• number of States reply to infrastructure survey • number of States Implemented data links

Strategy
Short term (2010-2012)
Medium term (2013-2016)

ATM OC COMPONENTS	**TASKS**	**TIMEFRAME START-END**	**RESPONSIBILITY**	**STATUS**
AO, TS, CM, AUO DCB, ATMSDM	• identify requirement and harmonize implementation plan to ensure interoperability between States and Regions	2010-2011	CNS/ATM/IC SG CNS SG	valid
	• technical audit of available supporting infrastructure	2010-2011	CNSATM/IC SG	valid
	• implement available technologies that bring immediate benefits (D-ATIS, CPDLC, ADS-C, ADS-B) and inform ICAO MID Regional Office	2011-2012	States , user	valid
	• monitor and report deficiencies to support agreed MID Metrics	2010-2011	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	
Environment	• supports the implementation of PBN which in turn bring benefits to environment
Efficiency	• optimal use of advanced technologies • optimization of infrastructure • operational efficiency
Safety	• reduced navigational errors • additional navigational capabilities brings more safety
KPI	• alignment of GNSS Implementation strategy with PBN • status of Implementation of GNSS
Proposed Metrics:	• number of States Implemented GNSS • number of report on trails and demo on GNSS

Strategy
Short term (2010-2012)
Medium term (2013-2016)

ATM OC COMPONENTS	**TASKS**	**TIMEFRAME START-END**	**RESPONSIBILITY**	**STATUS**
AO, TS, CM, AUO AOM,	• carry out GNSS trials, demonstrations and test beds; inform ICAO MID Regional Office	2008-2012	States, ICAO	valid
	• determine the most appropriate augmentation system for the MID Region	2009-2012	PBN/GNSS TF CNS/ATM/IC CNS SG	valid
	• define required infrastructure according to regional PBN implementation plan	2010-2011	PBN/GNSS TF CNS/ATM/IC CNS SG	valid
	• implement required infrastructure and/or procedures and inform ICAO MID Regional Office	2009-2011	States	valid
	• monitor implementation progress	2009-2011	PBN/GNSS TF	valid
	• monitor and report deficiencies to support agreed MID METRICS	2010-2011	All MIDANPIRG Subsidiary bodies	valid
Linkage to GPIs	GPI-21: Navigation Systems GPI-9: Situational Awareness			

REGIONAL PERFORMANCE OBJECTIVES IMPROVE SURVEILLANCE INFRASTRUCTURE/ EXCHANGE OF SURVEILLANCE DATA	
Benefits	
Environment	• Sharing surveillance data will benefit the user for optimum flight routes bringing reductions in fuel consumption and CO_2 emission
Efficiency	• optimal use of advanced technologies • optimization of infrastructure • operational Efficiency • ability of aircraft to conduct flight more closely to preferred trajectories • increase in airspace capacity
Safety	• reduced separation • reduce controller work load
KPI	• status of the surveillance roadmap • status of surveillance data sharing
Proposed Metrics:	• number of States Participate in the development of MID Surveillance Road map • number of States sharing Radar

Strategy Short term (2010-2012) Medium term (2013 - 2016)				
ATM OC COMPONENTS	**TASKS**	**TIMEFRAME START-END**	**RESPONSIBILITY**	**STATUS**
AOM, AUO, ATMSDM	• prepare Plan for introduction of new surveillance systems	2011-2012	States, ICAO PBN/GNSS TF CNS/ATM/IC CNS SG	valid
	• determine the most appropriate surveillance for each States supporting the PBN regional Plan	2009-2011	States CNS/ATM/IC	valid
	• organize workshop for developing MID surveillance roadmap	2009-2011	ICAO	valid
	• MID States participate actively in the workshop to reach its objective	2011	States	valid
	• follow up on the Regional Surveillance systems in MID Regional ANP and FASID	2008-2011	CNS SG	valid
	• monitor and report deficiencies In order to support agreed MID Metrics	2010-2011	ATN/IPS WG and CNS SG	valid

Strategy ***Short term (2010-2012)*** ***Medium term (2013 - 2016)***				
ATM OC COMPONENTS	**TASKS**	**TIMEFRAME START-END**	**RESPONSIBILITY**	**STATUS**
	• No objection letter between states concerned for sharing Surveillance data	2010-2012	States	valid
	• identify format of RDPS Data	2010-2012	States / CNS SG and CNS/ATM/IC	Valid
	• follow up on the Regional Surveillance systems in MID Regional ANP and FASID	2008-2011	CNS SG	valid
	• monitor and report deficiencies In order to support agreed MID Metrics	2010-2011	ATN/IPS WG and CNS SG	valid
Linkage to GPIs	GPI-9: Situational Awareness			

MIDANPIRG/12
Appendix 5.5F to the Report on Agenda Item 5.5

NEW FLIGHT PLAN IMPLEMENTATION STUDY GROUP FOCAL POINT

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ICAO NEW FLIGHT PLAN FORMAT STUDY GROUP (INFPL SG)

REVISED TERMS OF REFERENCE AND WORK PROGRAMME

1. TERMS OF REFERENCE

1.1 In support for the implementation of Amendment No. 1 to the Fifteenth Edition of the Procedures for Air Navigation Services — Air Traffic Management (PANS-ATM, Doc 4444) that was approved, on May 2008 and will become applicable on 15 November 2012, MIDANPIRG/11 established ICAO New FPL Study Group (INFPL SG), which will:

- conduct a comprehensive review of Amendment 1 to the Fifteenth Edition of the PANS ATM (Doc 4444, effective 15 November 2012;
- identify, study and address implementation complexities arising from the adoption of amended PANS ATM Chapter 4, Chapter 11, Appendix 2 and Appendix 3 provisions relating to the ICAO New Flight Plan (INFPL) and associated ATS Message formats;
- prepare implementation plan for the MID Region;
- the INFPL address contingency arrangements for States that cannot comply by the due date; and
- the INFPL SG will Report its progress to CNS/ATM/IC SG also to closely inform the ATM/SAR/AIS SG and the CNS SG.

1.2 In order to meet the Terms of Reference, the INFPL SG shall:

a) Compile the impact Studies and submitted to ICAO MID Regional Office for local systems and external system;

b) assess the Impact on inter-system co-ordination messaging (e.g. AIDC and OLDI);

c) Urge States to accord high priority to allocate necessary budget for the implementation of the new FPL Model Project;

d) develop Strategy for the implementation of INFPL and Associated ATS Messages;

e) prepare and promulgate coordinated MID Region transition strategies and plans with associated timelines to enable the streamlined implementation;

f) update the Information Management system to track implementation timelines for various States/systems (FITS);

g) study the Implications for presentation formats, including paper & electronic flight progress strips;

h) coordinate studies for Impacts with users;

i) appropriately coordinate the timed withdrawal of existing State or Regional specific requirements to ensure consistency with new Flight Plan format;

j) prepare and maintain a Regional Performance Framework form (PFF) and assist States to prepare national PFF;

k) assist States to Implement ICAO New Flight Plan Format on target date; and

l) assess Post Implementation issues.

COMPOSITION

MIDANPIRG Provider States, IATA, IFALPA, EUROCONTROL and IFATCA

Other representatives from industry and user Organizations having experience in the Flight Planning systems and procedures could participate as observers in the work of the INFPL SG, as appropriate.

MIDANPIRG/12
Appendix 5.5H to the Report on Agenda Item 5.5

STATUS OF IMPLEMENTATION OF INFPL IN THE MID REGION

	Focal point	Manf. cont / Budget	Milestone	Date of Acceptance of new format	Date of Submission of Implem. Plan	Vendors involved	Remarks
Bahrain	√	√ / √	**4**	**1july2012**	1 Mar 2010	Avitech	
Egypt	√	√ / √	**3**			Comsoft Thales	
Iran	√	√ / √	**3**				
Iraq	√		**2**				
Jordan	√	√ / √	**3**	**1 June 2012**		Avitech	
Kuwait	√	√ / √	**3**				
Lebanon	√		**2**				
Libya	√		**3**			INDRA	
Oman	√	√/√	**3**			Comsoft INDRA	
Qatar	√	√/√	**5**	**1 July 2012**	21Mar 2010	Comsoft Selex	
Saudi Arabia	√	√/√	**4**	**1 July 2012**		Thales Comsoft	
Sudan	√	√/√	**3**			Thales	
Syria	√		**2**				
UAE	√	√/√	**5**	**Feb 2011**	TBD	Thales Comsoft	ACC
Yemen							

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

MIDANPIRG/12
Appendix 5.5I to the Report on Agenda Item 5.5

OUTCOME OF INFPL WORKSHOP

(Cairo, 4-6 July 2010)

- Close coordination with users and neighbouring Regions is essential
- Global Forum on INFPL to be Organized in 2011
- IATA users to support the testing phase
- MID Region agreed transition Strategy should be aligned with the ICAO Recommended Strategy
- No deviation from ICAO Guidance
- Recognized that change is massive and needs immediate action by States
- States to develop procedure for acknowledgment of FPL (accept or reject of FPL)
- States to send their Impact studies and Implementation Plans to MID Regional Office before MIDANPIRG/12 (17 – 21 October 2010)

MIDANPIRG/12
Appendix 5.5J to the Report on Agenda Item 5.5

QUESTIONNAIRE ON STATUS OF INFPL IMPLEMENTATION

Questionnaire on Status of Implementation INFPL {Amendment 1 of the Procedures for Air Navigation Services-Air Traffic Management, Fifteenth Edition (PANS-ATM, Doc 4444)}

State: ---------- Date: 06 July 2010

Please review each question carefully. The participants are expected to reply and present necessary information during the Workshop in presentation on the last day.

Q1. Has your State designated a Point of Contact to coordinate the activities of this implementation?

_____

_____

Q2. Do you fully understand the details of the changes to the Filed Flight Plan (FPL) and associated messages in Amendment 1 of the PANS-ATM Doc 4444, 15th edition (Ref. ICAO State letter AN13/2.1-08/50 of 25 June 2008)?

a) In your compliance to the changes in Amendment 1, is there any part of Amendment 1 in which your State identifies any major problem to comply?

_____

_____

b) Has your State considered the accommodation of the 120 hour filing provision outlined in Amendment 1?

_____

_____

Q3. Do you understand the Guidelines for Implementation of Amendment 1 published by ICAO (Ref. ICAO State letter AN 13/2.1-09/9 of 6 February 2009)?

a) Have you considered a strategy for transitioning NEW FPL and related messages to the PRESENT/EXISTING format?

_____

_____

Q4. Do you know about the regional actions defined in draft MID Regional Strategy for implementation of this amendment?

a) Do you understand the phased transition approach?

_____

_____

b) Do you intend to comply with the dates contained in Phase 2 (transition) of the approach (i.e., you plan to be ready to begin accepting NEW format FPLs and related messages between 1 April and 30 June 2012)?

_____

_____

Q5. Have your State formed a team to oversee the implementation of Amendment 1?

a) Have you identified the parties within your State that are involved in this implementation and that are affected by this amendment?

_____

_____

b) Have you considered the automation and/or procedural impacts involved in the implementation of Amendment 1?

_____

_____

c) Have you established a delivery date for software changes that will allow for sufficient internal and external testing prior to regional implementation of the NEW format between 1 April 2012 and 30 June 2012?

_____

_____

d) Has your States fully considered the training implications of Amendment 1?

_____

_____

e) Has your State defined an action plan for carrying out the different aspects of this implementation?

_____

_____

MIDANPIRG/12
Appendix 5.5K to the Report on Agenda Item 5.5

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

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) Ensure that the INFPL SG undertakes coordination to facilitate harmonization with implementations in neighboring regions;

3) Eliminate or minimize State specific constraints and, if constraints are identified as necessary, implement such constraints on a regional or sub regional basis in preference to an individual State basis;

4) 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
- 1 July to 14 November 2012 – airspace users testing

5) 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;

6) 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;

7) States Implementing NEW before 15 November 2012 should have the possibility to process both PRESENT and NEW

8) MID States shall not support PRESENT format after 15 November 2012

9) That Regional Contingency plan to be discussed and agreed by the INFPL SG.

MIDANPIRG/12
Appendix 5.5L to the Report on Agenda Item 5.5

TABLE OF CONTENT

1. Objective

2. General considerations

3. Principles

4. Scope

5. Reference documents

6. Analysis

   6.1 Amendment 1 to the 15th edition of Doc 4444
   6.2 Implementation Guidelines
   6.3 Current situation in MID

7. Implementation strategy

   7.1 Critical criteria
   7.2 Preparation
   7.3 Transition
   7.4 Contingency plan
   7.5 Post-transition

8. Administrative aspects

9. Financial aspects

10. Regional PFF for INFPL

11. National PFF for INFPL

12. List of Focal Points

ICAO Flight Plan changes by 15 November 2012

The consequences of States not meeting the deadline

There will be confusion in the aviation sector in those States which are not ready to accept the NEW Flight Plan format on 15 November 2012.

1 To FPL filers and Agencies

1.1 Aircraft will miss slot times

1.2 Airspace User dispatch staff or agencies will be overwhelmed with rejected flight plans

1.3 Airspace User dispatch staff or agencies will be overwhelmed with re-submitting acceptably modified flight plans

2 To Airspace Users

2.1 Airspace users may choose to take an alternate route via an ANSP which can make use of their aircraft capabilities and so deliver efficiencies expected by that Airspace User

2.2 Aircraft will be denied the most efficient flight profiles associated with their performance based navigation.

3 To Air Traffic Controllers

3.1 Controllers may be presented with a flight at a boundary for which there is no flight plan

3.2 Controllers may feel pressured to manually submit a limited flight plan online in order to accept a flight

3.3 Increased coordination of aircraft from one FIR to another

3.4 Controllers may have to maintain control of an aircraft in their airspace if an adjacent FIR refuses to accept a flight.

3.5 Increased workload due to communications and excessive coordination requirements

4 To Aircrew

4.1 Aircrew may be overloaded by having to file Flight Plan modifications en route.

4.2 Aircraft will be delayed

4.3 Aircraft likely to be subject to holding if airport gates have not been vacated due to departing aircraft missing their slots

5 To ANSPs

5.1 ANSP staff may be overloaded by having to manually enter flight Plans which have been rejected by the automated system.

5.2 ANSPs may lose revenue from aircraft not using their FIR facilities.

6 Safety

6.1 Manual modifications to flight plan data either by filers, ATC staff or aircrew could lead to incorrect data being transmitted or detail lost altogether.

6.2 Credible corruption of flight plan data could occur due to a mix of NEW and Present flight plan content after the 15th November deadline.

6.3 Pilots may have to enter flight Plan data manually into the FMS if Flight Plan is rejected by ATC thus introducing a greater risk of error.

MIDANPIRG/12
Appendix 5.5N to the Report on Agenda Item 5

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).

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 A 36-23 (APV), 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.

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 concept, PBN, GNSS theory 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/12
Appendix 5.5O to the Report on Agenda Item 5

REVIEW OF GNSS MANUAL (ICAO DOC 9849)
CURRENT HURDLES TO THE IMPLEMENTATION OF GNSS OPERATIONS

Preliminary list of hurdles

- There is uncertainty about NOTAM requirements. The meeting agreed that it was feasible to provide NOTAMs about potential service outages for Basic GNSS Receivers (GPS RAIM) and for SBAS and GBAS to be used as a tool by operators to make operational decisions. The meeting also agreed that the wide variety of avionics implementations that support RNP dictated that aircraft operators should use aircraft-specific tools to predict service outages for their fleets. To do this, operators need basic information about GNSS component planned and actual outages. The meeting went on to discuss ways to address this hurdle in the manual revision. The manual needs to demonstrate the link between NOTAM provision and safety.

- The meeting noted that the GNSS Manual was developed before PBN Manual development started, and that having these two manuals creates confusion. This can be resolved by ensuring compatibility between the two manuals.

- Documentation does not support the requirement of some States to develop a safety assessment. The meeting recommended that the manual describe safety assessments that were used by States to support current operations and to encourage the acceptance of these assessments by other States, while noting any geographical or traffic-related issues that could dictate a differences analysis.

- Some States feel that there is an institutional problem because the current core satellite constellations are operated by the military. The manual needs to stress the commitments to civil aviation by Russia and the United States of America.

- Some States are worried about vulnerability. The current manual addresses this issue and includes mitigation techniques, but this material needs to be emphasized. The manual needs to stress that availability is the issue, spoofing is not an issue for aviation.

- The meeting noted that States do not always use the GNSS Manual as a reference to support implementation.

- States require a business case analysis to support implementation, and the manual does not provide enough information to support identication and quantification of benefits. The meeting agreed that examples would be useful and might obviate the necessity for States to complete their own business cases for simple applications like Basic GNSS non-precision approach operations.

- The implementation of GNSS-based terminal area operations in some States faces the requirement for an environmental assessment including extensive public consultation, all at great cost. This is a difficult institutional issue that has no easy solution.

- Some States do not know how to address aircraft certification, in part because there are currently different standards applied globally.

- Some States perceive there is a barrier to APV implementation because of the lack of currency and consistency among ICAO publications. The meeting agreed that the manual should clearly show that APV is possible despite these issues, perhaps including a documentation map and that the NSP should work within ICAO to resolve inconsistencies.

- The meeting noted that there is a lack of GNSS knowledge within some regulatory agencies, and that this is exacerbated by inconsistencies in ICAO documentation. The meeting agreed that the manual should be revised to support the education of regulators. Once the manual is revised there should be a program to provide material and support to regional offices to allow them to provide pertinent information to States.

- Some States have difficulties meeting survey requirements because responsibilities are split between ANS providers and airport operators.

- A major hurdle to full implementation in most States is avionics equipage. Aircraft operators face major costs to equip their fleets, and to equip a large fleet can take five years or more. At the same time, different mandates, different airspace requirements and diffent mandate deadlines in different areas make it difficult to decide when to equip. As an example, in Europe there is a mandate for ADS-B that can be supported by C129 avionics and a mandate for APV that requires more advanced avionics. There is a requirement for a vision developed among ANSPs and aircraft operators.

MIDANPIRG/12
Appendix 5.5P to the Report on Agenda Item 5

MID PERFORMANCE-BASED NAVIGATION IMPLEMENTATION REGIONAL PLAN

1. EXECUTIVE SUMMARY

1.1 This Middle East PBN Implementation Regional Plan has been produced in line with Resolution A 36/23 adopted by ICAO Assembly in its 36th Session held in September 2007. 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.

1.2 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 **Middle East PBN Implementation 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
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
GRAS	Ground-based Regional Augmentation System
IATA	International Air Transport Association
IFALPA	International Federation of Air Line Pilots' Associations
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
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 performance based navigation (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, 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 cock-pit 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 the MID States together with the international and Regional organizations concerned (AACO, ACAC, IATA, IFALPA, IFATCA), 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

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.

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 neighboring 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 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 non-precision approach procedures at a certain point when deemed operational suitable and taking in consideration GNSS integrity requirements, also plans for Continuous Decent Operations (CDO) to be planned according to ICAO manual.

Implementation Strategy

5.9 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 operation requirements for continental en-route and local/domestic en-route applications at least until 2016.

Note: All current RNP-5 applications shall be redefined as RNAV-5 or RNAV-1 depending on operational needs.

c) Implementation of RNAV1/Basic-RNP-1 depending on operation requirements for terminal applications at least until 2016.

d) Implementation of RNAV-10 for oceanic/remote continental until at least 2016.

e) Replacement 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) The target date for the completion of implementation for the Approach procedures with vertical guidance (APV) (RNP APPCH) for all instrument runway ends is 2016: The development of new conventional non-precision approach procedures should be discouraged. Existing conventional non-precision approach procedures should be phased not later than 2016, pending readiness of stand-alone GNSS.

g) The use of NDB for approach operations shall be terminated not later than 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

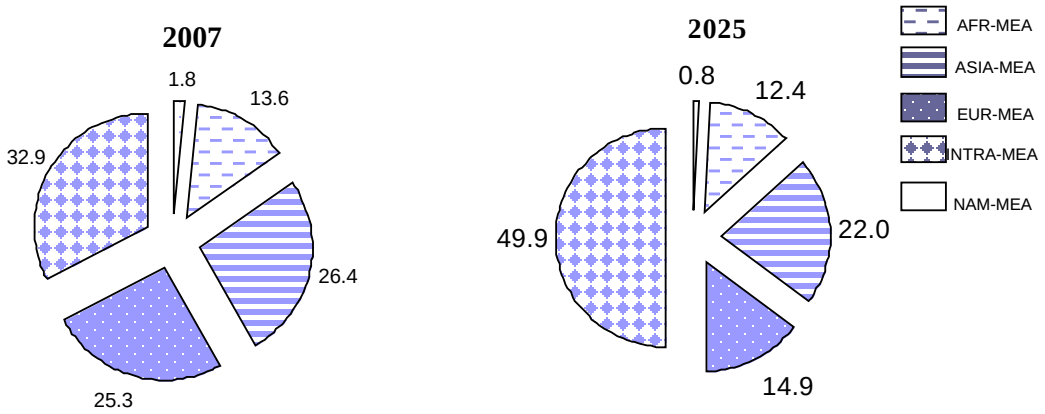
AIRCRAFT MOVEMENTS FORECAST TO THE YEAR 2025

	Actual	Forecast	Average Annual Growths (per cent)
	2007	2025	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).

Other PBN Infrastructure

6.14 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.

6.15 INS may be used to support PBN en-route operations with RNAV-10 and RNAV-5 navigation specifications.

6.16 VOR/DME may be used to support PBN en-route and STAR operations based on RNAV-5 navigation specification.

6.17 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

6.18 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

6.19 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

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 States should promote the use of APV operations (Baro-VNAV or SBAS) to enhance safety of RNP approaches and accessibility of runways.

7.14 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.

7.15 **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)	
Airspace	***Navigation Specification***
En-route – Oceanic	RNAV-10
En-route - Remote continental	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 most possible airports; RNP AR APCH in airport where there are obvious operational benefits.

Implementation Targets

- RNP APCH (with Baro-VNAV) in 30% of instrument runways 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
- RNP-5 and B-RNAV which is implemented in MID Region to be redefined as per ICAO PBN terminology by 2009 (MIDANPIRG/11), full implementation of PBN by 2012 for continental en-route.

Medium Term (2013-2016)

En-route

7.16 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.

7.17 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.

7.18 **Operational approval**. Operators are required to have operational approval for RNAV-5 and RNAV-1.

Terminal

7.19 RNAV-1 or Basic RNP-1 will be fully implemented in all TMAs by the end of this term.

7.20 **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

7.21 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.

7.22 The extended application of RNP AR Approaches should continue for airports where there are operational benefits.

7.23 The introduction of application of landing capability using GNSS is expected to guarantee a smooth transition toward high-performance approach and landing capability.

7.24 **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.

7.25 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.

Note: CDO plans to be incorporated by PBN/GNSS TF/3.

SUMMARY TABLE AND IMPLEMENTATION TARGETS

MEDIUM TERM (2013-2016)	
Airspace	***Navigation Specification (preferred/acceptable)***
En-route – Oceanic	Nil
En-route - Remote continental	Nil
En-route – Continental	RNAV-1, RNAV-5
En-route - Local / Domestic	RNAV-1 , RNAV-5
TMA – (Arrival, Departure)	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
Implementation Targets ▪ RNP APCH with Baro-VNAV or APV 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	

Long Term (2016 and Beyond)

7.26 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.

7.27 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.

7.28 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.

7.29 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.

7.30 During this term the use of Advanced RNP-1 for terminal and en-route will be mandated by a date to be determined.

Note: the CDO will be implemented after gaining experience.

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.

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 (to be developed) 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)

(To be Developed)

Appendix B – Reference documentation for developing operational and airworthiness approval regulations/procedures

(To be Developed)

MIDANPIRG/12
Appendix 5.5Q to the Report on Agenda Item 5.5

NO	ICAO REGION	ICAO DESIG	AIRPORT NAME[5]	COUNTRY	INTL (Y/N)[1]	RUNWAY	INST RWY Y/N	RESTRICTIONS	APPROACH TYPE[2, 7]	APPR EFF DATE[6]	RNAV/RNP SID[3]	SID EFF DATE[6]	RNAV/RNP STAR[4]	STAR EFF DATE[6]	COMMENTS[7]
1	MID												RNAV-1		
2							Y						RNAV		

ABOVE IS ONLY AN EXAMPLE. IT IS NOT MEANT TO SHOW THE ACTUAL RUNWAY CONFIGURATION OR PBN 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 RNP APCH only, enter RNP APCH. If RNP APCH with Baro-VNAV only, enter RNP APCH-VNAV. If both enter BOTH. If RNP AR APCH, enter RNP AR APCH. If there is an RNP AR to the same runway that also has an RNP APCH and/or RNP APCH-VNAV then enter the RNP AR on a separate line for that runway. If this block is filled out "RNP APCH", then provide some explanation in the comment block, e.g. either, "planning to upgrade to RNP APCH-VNAV by [date] or APV not feasible for [reason].
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 J-O as appropriate, if PBN or RNAV approaches, SIDs or STARs are not implemented or planned to be implemented yet for that runway as part of the State PBN Implementation Plan.
6. Enter actual effective date or proposed future effective date as 3-letter month-2-digit year: Oct-07
7. Provide any relevant comments

ISLAMIC REPUBLIC OF **IRAN** PBN APPROACH and TERMINAL IMPLEMENTATION STATUSLNAV

NO	ICAO REGION	ICAO DESIG	AIRPORT NAMES	C O U N T R Y	INTL (Y/N)	RUNWAY	INST RWY Y/N	RESTRICTIONS	APPROACH LNAV/VNAV	APP R EFF DATE	RNAV/RNP SID`	S I D EFF DATE	RNAV /RNP STAR	STAR EFF DATE	MMENTS
1	MID	OIIE	IMAM KHOMAINI	ISLAMIC REPUBLIC OF IRAN	Y	29 11	Y Y		LNAV	OCT-09	RNAV-1	OCT-09	RNAV	OCT-09	
2	MID	OIII	MEHRABAD	ISLAMIC REPUBLIC OF IRAN	Y	29L 29R 11L 11R	Y Y Y Y		LNAV	OCT-10	RNAV-1	OCT- 10	RNAV	OCT-10	
3	MID	OIMM	MASHHAD (SHAHID HASHEMI NEJAD)	ISLAMIC REPUBLIC OF IRAN	Y	31L 31R 13L 13R	Y Y Y Y		LNAV	OCT-10	RNAV-1	OCT- 10	RNAV	OCT-10	
4	MID	OISS	SHIRAZ (SHAHID DASTGHAIB)	ISLAMIC REPUBLIC OF IRAN	Y	29L 29R 11L 11R	Y Y Y Y		LNAV	OCT-10	RNAV-1	OCT- 10	RNAV	OCT-10	
5	MID	OIFM	ESFAHAN (SHAHID BEHESHTI)	ISLAMIC REPUBLIC OF IRAN	Y	26L 26R 08L 08R	Y Y Y Y		LNAV	OCT-10	RNAV-1	OCT- 10	RNAV	OCT-10	

LEBANON PBN APPROACH &TERMINAL IMPLMENTATION STATUS

NO	ICAO REGION	ICAO DESIG	AIRPORT NAME[5]	COUNTRY	INTL (Y/N)[1]	RUNWA	INST RWY Y/N	RESTRICTIONS IF ANY	APPROACH TYPE[2,7]	APPR EFF DATE[6]	RNAV/ RNP SID[3]	SID EFF DATE[6]	RNAV/RNP STAR[4]	STAR EFF DATE[6]	COMMENTS[7]
1	MID	OLBA	BEIRUT INTL AIRPORT	LEBANON	Y	16	Y	LANDING ONLY	RNAV(GNSS)	11APR08	NIL	NIL	RNAV	11APR08	
2	MID	OLBA	BEIRUT INTL AIRPORT	LEBANON	Y	34	Y	TAKEOFF ONLY	NIL	NIL	NIL	NIL	NIL	NIL	
3	MID	OLBA	BEIRUT INTL AIRPORT	LEBANON	Y	03	Y	NIL.	RNAV(GNSS)	11APR08	NIL	NIL	RNAV	11APR08	
4	MID	OLBA	BEIRUT INTL AIRPORT	LEBANON	Y	21	Y	NOT USED FOR LANDING DURING NIGHT	RNAV(GNSS)	11APR08	NIL	NIL	RNAV	11APR08	
5	MID	OLBA	BEIRUT INTL AIRPORT	LEBANON	Y	17	Y	SECODARY RWY	RNAV(GNSS)	11APR08	NIL	NIL	RNAV	11APR08	
5	MID	OLBA	BEIRUT INTL AIRPORT	LEBANON	Y	35	Y	NOT USED FOR LANDING	NIL	NIL	NIL	NIL	NIL	NIL	
7															
17															
18															
19															
20															
21															

1. If the aerodrome is used for international operations, including as an alternate, enter 'Y', if not, enter 'N' **2.** If RNP APCH only, enter RNP APCH. If RNP APCH with Baro-VNAV only, enter RNP APCH-VNAV. If both enter BOTH. If RNP AR, enter RNP AR AP

Appendix 1

Jordan

PBN implementation time schedule

Navigation Specification	Airspace Application	Short Term				Medium Term				Long Term	
		2009	2010	2011	2012	2013	2014	2015	2016	2017….	2025
RNAV10	NA	Will not be used									
RNP4	NA	Will not be used									
RNAV2	NA	Will not be used									
RNP5 into RNAV5	Enroute										
RNAV1	Enrout										
RNAV1	TMA Dep. and Arr. Sur										
Basic RNP1	TMA Dep. and Arr. Non sur										
RNP APCH	Approach										
RNP AR APCH	Approach KHIA										
RNAV1	SIDs / STARs										
Basic RNP1	Enrout										
advanced-RNP-1	en-route										
advanced-RNP-1	terminal airspace										
Use of NDB	Approach operations					Stop using the NDB for approach operations					
Conventional NPA procedures										Stop the conventional NPA procedures	

MIDANPIRG/12
Appendix 5.5R to the Report on Agenda Item 5

PBN IMPLEMENTATION PROGRESS REPORT

State: (Name of State) Date: (DD/MM/YY)

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: MIDANPIRG Conclusion 11/74 – PBN State implementation Plan
"That, That, in order to give effect to Assembly Resolution A36-23: Performance based navigation global goals, MID States are urged to complete development of their individual State Implementation plans based on the regional PBN implementation plan by 30 September 2009 so that it may be reviewed by the ATM/SAR/AIS SG as part of the Regional agreement process.

Status: (Adopted / To be adopted) by (name of a national body) and (Reviewed / To be reviewed) by ICAO *PBN/GNSS* TF
Note(s): (States may include information on publication date and location for State PBN Implementation Plan and other relevant information.)

Approach Operations
Reference: ICAO Assembly Resolution A36-23
"*States and planning and implementation regional groups (PIRGs) complete a PBN implementation plan by 2009 to achieve: implementation of approach procedures with vertical guidance (APV) (Baro-VNAV and/or augmented GNSS) for all instrument runway ends, either as the primary approach or as back up for precision approaches by 2016 with intermediate milestones as follows: 30 percent by 2010, 70 percent by 2014."*
Status:

Implementation Targets (# of RWY Ends)			**Completed** (# of RWY Ends)		**On Progress** (# of RWY Ends)	
Y2010	Y2014	Y2016	LNAV	LNAV/VNAV	LNAV	LNAV/VNAV

Note(s): (States may include information on recent publications of new PBN approach procedures.)

Arrival and Departure Operations
Reference: 1) ICAO Assembly Resolution A36-23
"*States and planning and implementation regional groups (PIRGs) complete a PBN implementation plan by 2009 to achieve: implementation of RNAV and RNP operations (where required) for en route and terminal areas according to established timelines and intermediate milestones."*
2) MID PBN Regional Implementation Plan and Strategy
"*Short-term Implementation Targets: ☐ RNP APCH (with Baro-VNAV) in 30% of instrument runways 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 RNP-5 and B-RNAV which is implemented in MID Region to be redefined as per ICAO PBN terminology by 2009 (MIDANPIRG/11), full implementation of PBN by 2012 for continental en-route.."*

- "*Medium-term Implementation Targets: RNP APCH with Baro-VNAV or APV in 100% of instrument runways by 2016. RNAV-1 or RNP-1 SID/STAR for 100% of international airports by 2016 and RNAV-1 or Basic RNP-1 SID/STAR at busy domestic airports where there are operational benefits*

Implementation Targets (# of Int'l Airports)			**Completed** (# of Int'l Airports)		**On Progress** (# of Int'l Airports)	
Y2010	Y2014	Y2016	Arrival	Departure	Arrival	Departure

Note(s): (States may include information on recent publications with new PBN arrival/departure procedures.)

ASSEMBLY RESOLUTIONS IN FORCE

Resolution 37/11: Performance-based navigation global goals

Whereas a primary objective of ICAO is that of ensuring the safe and efficient performance of the global Air Navigation System;

Whereas the improvement of the performance of the air navigation system on a harmonized, worldwide basis requires the active collaboration of all stakeholders;

Whereas the Eleventh Air Navigation Conference recommended that ICAO, as a matter of urgency, address and *progress* the issues associated with the introduction of area navigation (RNAV) and required navigation performance (RNP);

Whereas the Eleventh Air Navigation Conference recommended that ICAO develop RNAV procedures supported by global navigation satellite system (GNSS) for fixed wing aircraft, providing high track and velocity-keeping accuracy to maintain separation through curves and enable flexible approach line-ups;

Whereas the Eleventh Air Navigation Conference recommended that ICAO develop RNAV procedures supported by GNSS for both fixed and rotary wing aircraft, enabling lower operating minima in obstacle-rich or otherwise constrained environments;

Whereas Resolution A33-16 requested the Council to develop a programme to encourage States to implement approach procedures with vertical guidance (APV) utilizing such inputs as GNSS or distance measuring equipment (DME)/DME, in accordance with ICAO provisions;

Recognizing that not all airports have the infrastructure to support APV operations and not all aircraft are currently capable of APV;

Recognizing that many States already have the requisite infrastructure and aircraft capable of performing straight-*in* approaches with lateral guidance (LNAV approaches) based on the RNP specifications and that straight in approaches provide demonstrated and significant safety enhancements over circling approaches;

Recognizing that the Global Aviation Safety Plan has identified Global Safety Initiatives (GSIs) to concentrate on developing a safety strategy for the future that includes the effective use of technology to enhance safety, consistent adoption of industry best practices, alignment of global industry safety strategies and consistent regulatory oversight;

Recognizing that the Global Air Navigation Plan has identified Global Plan Initiatives (GPIs) to concentrate on the incorporation of advanced aircraft navigation capabilities into the air navigation system infrastructure, the optimization of the terminal control area through improved design and management techniques, the optimization of the terminal control area through implementation of RNP and RNAV SIDs and STARs and the optimization of terminal control area to provide for more fuel efficient aircraft operations through FMS-based arrival procedures; and

Recognizing that the continuing development of diverging navigation specifications would result in safety and efficiency impacts and penalties to States and industry;

Noting with satisfaction that planning and implementation regional groups (PIRGs) have completed regional PBN implementation plans;

Recognizing that not all States have developed a PBN implementation plan by the target date of 2009;

The Assembly:

1. *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);

2. *Resolves* that:

a) States complete a PBN implementation plan as a matter of urgency to achieve:

1) implementation of RNAV and RNP operations (where required) for en route and terminal areas according to established timelines and intermediate milestones; and

2) 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

3) implementation of straight-in LNAV only procedures, as an exception to 2) 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;

b) ICAO develop a coordinated action plan to assist States in the implementation of PBN and to ensure development and/or maintenance of globally harmonized SARPs, Procedures for Air Navigation Services (PANS) and guidance material including a global harmonized safety assessment methodology to keep pace with operational demands;

3. *Urges* that States include in their PBN implementation plan provisions for implementation of approach procedures with vertical guidance (APV) to all runway end serving aircraft with a maximum certificated take-off mass of 5 700 kg or more, according to established timelines and intermediate milestones;

4. *Instructs* the Council to provide a progress report on PBN implementation to the next ordinary session of the Assembly, as necessary;

5. *Requests* the Planning and Implementation Regional Groups (PIRGs) to include in their work programme the review of status of implementation of PBN by States according to the defined implementation plans and report annually to ICAO any deficiencies that may occur; and

6. *Declares* that this resolution supersedes Resolution A36-23.

MIDANPIRG/12
Appendix 5.5T to the Report on Agenda Item 5

PROPOSED TERMS OF REFERENCE FOR PBN/GNSS TASK FORCE

1. TERMS OF REFERENCE

a) Carry out specific studies to support the implementation of Performance Based Navigation (PBN) in the MID, in accordance with the ICAO Strategic Objectives and Global Plan;

b) Identify issues/actions arising from the work of ICAO or for consideration by ICAO in order to facilitate regional and global harmonization of existing applications as well as future implementation of Performance Based Navigation operations.

c) Determine and recommend, on the basis of the study, the PBN strategy and Implementation Plan for the MID Region, based on the ICAO PBN Implementation goals as reflected in assembly resolution 36-23.

d) Assist States that may require support in the implementation of PBN.

e) Monitor the progress of studies, projects, trials and demonstrations by the MID Region States, and other ICAO Regions.

f) Provide a forum for active exchange of information between States related to the implementation of GNSS.

g) Identify deficiencies and constraints that would impede implementation of GNSS, and propose solutions that would facilitate the rectification of such problems.

h) Identify and address, to the extent possible, institutional, financial and legal matters related to the GNSS implementation in the MID Region.

i) Develop a system of post-implementation reviews to ensure the effective and safe introduction of PBN and non-PBN GNSS operation.

2. WORK PROGRAMME

a) Study and assess the Regional RNAV and RNP (PBN) requirements.

b) Initially focus assistance to States that may require support on development of the State PBN implementation plans.

c) Identify priority routes and terminal areas where RNAV and RNP should be implemented.

d) Identify priority runways for Approach Procedures with Vertical Guidance (APV) to be implemented based on the ICAO RNP APCH navigation specification (APV/Baro-VNAV).

e) Develop amendment proposal to the Regional Supplementary Procedures concerning the implementation of PBN in the MID Region.

f) Identify guidance material and training needs.

g) Follow up on the global developments in ICAO in order to update the Regional PBN plans and prepare the necessary proposal for amendment

h) Coordinate with other ICAO Regions as necessary to address implementation interface issues.

i) Undertake other functions relevant to implementation of PBN as assigned by the ATM/SAR/AIS SG or MIDANPIRG.

j) Report to CNS/ATM/IC SG and keep ATM/SAR/AIS SG and CNS SG closely briefed.

k) Monitor and follow-up the studies pertaining to the possible use of GNSS, and different augmentation systems in the MID Region.

l) Monitor the progress of the NAVISAT study.

m) Review and identify intra and inter regional co-ordination issues related to the implementation of GNSS and where appropriate recommend actions to address those issues.

n) Examine to what extent the GNSS system accessible in the Region can meet the navigational requirements of ATM service providers and aircraft operators in the Region.

o) Identify and co-ordinate GNSS implementation priorities in the MID Region.

p) Provide assistance to MID States in planning and implementation of GNSS, including the development of GNSS procedures.

q) Suggest ways and means for rectifying the problems as they arise related to the implementation of GNSS.

r) Provide necessary knowledge in GNSS operational application.

3. THE TASK FORCE SHALL IN ITS WORK BE GUIDED BY THE FOLLOWING PRINCIPLES

a) Implementation of PBN shall follow the ICAO PBN goals and milestones.

b) Avoid undue equipage of multiple on board equipment and/or ground-based systems.

c) Avoid the need for multiple airworthiness and operational approvals for intra- and inter-regional operations.

d) Continue application of conventional air navigation procedures during the transition period, to guarantee the operations by users that are not RNAV- and/or RNP-equipped.

e) The first regional PBN Implementation Strategy and Plan should address the short term (2008-2012), medium term (2013-2016) and take into account long term global planning issues.

f) Cognizance that the primary objective of ICAO is that of ensuring the safe and efficient performance of the global Air Navigation System, ensure that pre- and post-implementation safety assessments will be conducted to ensure the application and maintenance of the established target levels of safety.

g) Take into account the introduction of new technologies, encourage implementation and development in GNSS.

h) Apply ICAO guidance material and information as may be applicable to the Region to facilitate the implementation of PBN.

4. COMPOSITION OF THE TASK FORCE

STATES

MID Region States

ORGANIZATIONS *(AS OBSERVERS)*

IATA, IFALPA, IFATCA, EUROCONTROL, ACAC and additional representative from Industry, International/Regional Organizations may be invited when required.

MIDANPIRG/12
Appendix 5.5U to the Report on Agenda Item 5.5

No.	Associated GPI	**Tasks** PBN/GNSS/2	Objective	Deliverables	Target Date	To be delivered by	Supporting Parties	Status
1	GPI-5, GPI- 7, GPI-10, GPI-11, GPI-12, GPI-20, GPI-21	Draft Current Status & Forecast: Aircraft fleet readiness status Section of PBN Regional Plan	To facilitate update of the of the Regional Plan	Draft document	PBN/GNSS/3	IATA	States, States	Ongoing
2	GPI-5, GPI- 7, GPI-10, GPI-11, GPI-12, GPI-20, GPI-21	Draft Appendix A – Practical Example of tangible benefits Section of PBN Regional Plan	To facilitate the update of the Regional Plan	Draft document	PBN/GNSS/3	MID Office	–	Ongoing
3	GPI-5, GPI- 7, GPI-10, GPI-11, GPI-12, GPI-20, GPI-21	Study and assess the Region RNAV and RNP requirements using PBN methodology	To facilitate the update of the Regional Plan	Draft document	PBN/GNSS/3	ARN TF	–	Reassigned
4	GPI-5, GPI- 7, GPI-10, GPI-11, GPI-12, GPI-20, GPI-21	Initially focus assistance on States that may require support on development of State PBN implementation plans	To facilitate timely harmonized implementation	Draft provided	PBN/GNSS/3	PBN/GNSS Task Force GO team	States	Done during TF/2 Ongoing
5	GPI-5, GPI- 7, GPI-10, GPI-11, GPI-12, GPI-20, GPI-21	Identify priority runways for Approach Procedures with Vertical Guidance (APV) to be implemented based on the ICAO RNP APCH navigation specification (APV/Baro-VNAV)	To facilitate implementation efficiency and early operational benefits	Draft document	PBN/GNSS/3	States	IATA	Ongoing
6	GPI-5, GPI- 7, GPI-10, GPI-11, GPI-12, GPI-20, GPI-21	Develop an amendment proposal to the MID Regional Supplementary Procedures concerning the implementation of PBN in the Region	To facilitate harmonized implementation	Doc 7030 amendment proposal	Dec 2010	ARN TF and MID Regional Office	–	Ongoing
7	GPI-5, GPI- 7, GPI-10, GPI-11, GPI-12, GPI-20, GPI-21	Follow up on the developments in ICAO affecting the Global Plan and PBN in particular, in order to update the Regional plans accordingly	To facilitate planning updates and global harmonization	Information and action items for PBN/GNSS Task Force	Ongoing	MID Regional Office PBN/GNSS TF	-	Ongoing

No.	Associated GPI	**Tasks** PBN/GNSS/2	Objective	Deliverables	Target Date	To be delivered by	Supporting Parties	Status
8	GPI-5, GPI- 7, GPI-10, GPI-11, GPI-12, GPI-20, GPI-21	Coordinate with other ICAO Regions as necessary to address implementation interface issues	To facilitate harmonized implementation	Information and action items for PBN/ GNSS Task Force	Ongoing	MID Regional Office PBN/GNSS TF	States	Ongoing
9	GPI-5, GPI- 7, GPI-10, GPI-11, GPI-12, GPI-20, GPI-21	Undertake other functions relevant to implementation of PBN as assigned by the ATM/SAR/AIS SG , CNS/ATM/IC SG or MIDANPIRG	To facilitate implementation of PBN	As per assignments	Ongoing	PBN/ GNSS Task Force	-	Ongoing
10	GPI-5, GPI- 7, GPI-10, GPI-11, GPI-12, GPI-20, GPI-21	Report to the CNS/ATM/IC SG and keep ATM/SAR/AIS SG and CNS SG closely briefed	To facilitate efficiency and effectiveness	Task Force reports	Ongoing	PBN/GNSS Task Force	–	Ongoing
11	GPI-5, GPI- 7, GPI-10, GPI-11, GPI-12, GPI-20, GPI-21	Identify guidance material and training needs/gap	To determine required complementary guidance material	Draft document	PBN/GNSS/3	PBN/GNSS Task Force	–	Ongoing
12	GPI-5, GPI- 7, GPI-10, GPI-11, GPI-12, GPI-20, GPI-21	Review of Operational Approval Guidance from other Regions for use in the MID Region	To support States' development of harmonized approvals	Draft document	PBN/GNSS/3	IATA		ongoing
13	GPI-5, GPI- 7, GPI-10, GPI-11, GPI-12, GPI-20, GPI-21	Assess possibilities of future PBN Seminar	To assist States in their planning and implementation	Working Papers, Information Papers	On-going	PBN/GNSS TF	States IATA	On going
14	GPI-5	Keep track on the States PBN implementation status	Updated Status of implementation	Status of implementation report	On-going	CNS/ATM/IC SG/5	States/ IATA	On going

No.	Associated GPI	**Tasks** PBN/GNSS/2	Objective	Deliverables	Target Date	To be delivered by	Supporting Parties	Status
15	GPI-5	Prepare progress report on the PBN implementation plan	Updated Status of implementation	Status of implementation report	On going	PBN/GNSS TF/3	States /IATA	On going

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REPORT ON AGENDA ITEM 5: PERFORMANCE FRAMEWORK FOR REGIONAL AIR NAVIGATION PLANNING AND IMPLEMENTATION ISSUES

5.6 MET

5.6.1 The meeting noted that the Second Meeting of the Meteorology Sub-Group of the MIDANPIRG (MET SG/2) was held at the ICAO MID Regional Office from 15 to 17 December 2009. The MET SG/2 was attended by a total of twenty participants from six States in the MID Region, one State in the EUR Region providing international meteorological facilities, and two International Organizations (IATA and WMO). The MET SG/2 had formulated twelve Draft Conclusions and two Draft Decisions for endorsement by MIDANPIRG/12, and developed a follow-up action plan including expected deliverables and target dates.

5.6.2 The MIDANPIRG noted with some concern that no States in the MID Region, with the exception of Jordan, had MET representation at MIDANPIRG/12. The meeting encouraged participant States to ensure that suitable internal coordination and communication was undertaken following the meeting to facilitate awareness of the MET-related matters discussed.

Implementation of the WAFS and SADIS in the MID Region

5.6.3 The meeting noted that MET SG/2 had been presented a summary of recent developments to the World Area Forecasts System (WAFS) and Satellite Distribution System for information relating to air navigation (SADIS) since MET SG/1, and forthcoming developments of relevance to the MET SG to assist in future regional planning. In view of fostering the future implementation of gridded WAFS forecasts for icing, turbulence and convective clouds, the meeting recalled that MIDANPIRG/11 had formulated Conclusion 11/76, inviting the WAFC Provider States to organize regional training in 2010. The meeting acknowledged that in view of the outcome of the Fifth Meeting of the World Area Forecast System Operations Group (WAFSOPSG/5 held 16 to 18 September 2009), such training would be delayed until 2011 at the earliest, and noted that MET SG/2 had proposed Draft Conclusion 2/1 (Training for the New WAFS Forecasts) to replace and supersede MIDANPIRG/11 Conclusion 11/76.

5.6.4 The meeting noted that in order to ensure the timely forwarding of the information, MET SG/2 Draft Conclusion 2/1 had been initially forwarded to Headquarters. In view of the working arrangements between ICAO and the World Meteorological Organization (WMO) (ICAO Doc 7475), the meeting noted that the training should be organized by the WAFC Provider States *in coordination with* the World Meteorological Organization (WMO). Accordingly, the meeting agreed to the following Conclusion to replace and supersede MIDANPIRG/11 Conclusion 11/76:

CONCLUSION 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.

SADIS Strategic Assessment Tables

5.6.5 The meeting noted that MET SG/2 had reviewed and updated SADIS Strategic Assessment Tables for the MID Region for the period 2009-2013, and was informed that the MET SG had proposed Draft Conclusion 2/2 (SADIS Strategic Assessment Tables) accordingly. In accordance with procedures established at MIDANPIRG/5 (Decision 5/15), and in order to ensure the timely forwarding of the information, the meeting noted that MET SG Draft Conclusion 2/2 had been forwarded to Headquarters. Consequently, the meeting agreed that no further action was required with regards to MET SG Draft Conclusion 2/2.

Implementation of MET Advisories and Warnings

5.6.6 The meeting noted that MIDANPIRG/11 Decision 11/78 (Finalizing the MID SIGMET Test Procedures) had remained ongoing prior to MET SG/2, since an ad-hoc group responsible for finalizing the test procedures had not undertaken the expected follow-up. To correct the situation, the Secretariat had prepared initial MID SIGMET Test Procedures for the consideration of MET SG/2. Having conducted a review of the MID SIGMET Test Procedures, MET SG/2 had agreed they would be considered final in respect of WS- and WV-SIGMET tests, whilst procedures concerning WC-SIGMET tests would require coordination with TCAC New Delhi and the APAC Regional Office. Moreover, the meeting acknowledged that there was a need to undertake follow-up with regards to MIDANPIRG/11 Conclusion 11/79 a) to d) inclusive (Conducting regular SIGMET tests in the MID Region). To expedite the collection of SIGMET Test Focal Points, as called for by MIDANPIRG/11 Conclusion 11/79 c), a provisional list was prepared at MET SG/2, however, it contained information for just two States in the MID Region (namely Oman and Syria).

5.6.7 In considering the outstanding parts of MIDANPIRG/11 Decision 11/78 and Conclusion 11/79, the meeting noted that MET SG/2 had proposed Draft Conclusion 2/3 (Finalized SIGMET Test Procedures and conducting of regular SIGMET tests in the MID Region) to replace and supersede MIDANPIRG/11 Decision 11/78 and Conclusion 11/79 accordingly. In order to ensure the timely follow-up of action with regards to MET SG Draft Conclusion 2/3, a State Letter had been issued. Regrettably, with the exception of Oman and Syria outlined above, no other States in the MID Region had provided SIGMET Test Focal Point nominations to the MID Office in response to the State Letter. Consequently, in view of the foregoing, it had been impossible to initiate WS- and WV-SIGMET tests in the MID Region in September 2010. Accordingly, the meeting agreed to the following Conclusion to replace and supersede MIDANPIRG/11 Decision 11/78 and Conclusion 11/79:

CONCLUSION 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.

5.6.8 Acknowledging the need to develop MID SIGMET Test Procedures related to tropical cyclone SIGMET tests (WC-SIGMET), and recognizing a need to coordinate with TCAC New Delhi, the MET SG/2 had accordingly proposed Draft Conclusion 2/4 (Initiating Tropical Cyclone SIGMET Tests in the MID Region). The meeting noted that as a follow-up to MET SG Draft Conclusion 2/4, the Secretariat had secured the assistance of TCAC New Delhi during tropical cyclone SIGMET tests initiated in the MID Region. Consequently, an inaugural WC-SIGMET test for the MID Region was scheduled for 10 November 2010. States in the MID Region with Meteorological Watch Office (MWO) responsibility in the context of tropical cyclone SIGMET messages (Bahrain, Iran, Kuwait, Oman, Saudi Arabia, United Arab Emirates and Yemen) were expected to issue a WC-SIGMET test message during the test. Consequently, the MIDANPIRG agreed that no further action was required with regards to MET SG Draft Conclusion 2/4 and noted that findings from the inaugural WC-SIGMET test would be reviewed at MET SG/3.

5.6.9 The meeting noted that at MET SG/2, MIDANPIRG/11 Conclusion 11/80 (Improving the tropical cyclone advisories and warnings for aviation) had been ongoing. The meeting noted that MET SG/2 had proposed Draft Conclusion 2/5 to replace and supersede MIDANPIRG Conclusion 11/80 accordingly. In order to ensure the timely follow-up of MET SG Draft Conclusion 2/5, the meeting noted that State Letter had been issued encouraging States to establish close collaboration with TCAC New Delhi. Consequently, the MIDANPIRG agreed that no further action was required with regards to MET SG Draft Conclusion 2/5.

5.6.10 The meeting recognized that the MID SIGMET Test Procedures, outlined above, did not go into specific detail regarding the content and format of *routine* SIGMET messages – i.e. those SIGMET messages which should be issued as part of a MWOs overall continuous weather watch. To offer such detail, it was noted with appreciation that the Secretariat had prepared a *working draft* SIGMET Guide for the MID Region, with the main purpose to provide guidance for standardization and harmonization of the procedures and formats related to the aeronautical meteorological warnings for hazardous en-route meteorological phenomena (SIGMET), including volcanic ash and tropical cyclone. The guidance complemented provisions in Annex 3 – *Meteorological Service for International Air Navigation* and the MID ANP regarding SIGMET. The meeting noted that MET SG/2 had reviewed the *working draft* of the MID SIGMET Guide and proposed Draft Conclusion 2/6 (SIGMET Guide for the MID Region) accordingly.

5.6.11 In order to ensure the timely follow-up with regards to MET SG Draft Conclusion 2/6, the meeting noted that State Letter had been issued comprising the *working draft* of the MID SIGMET Guide. Regrettably, with the exception of Kuwait, no States in the MID Region had provided the necessary WS-, WV- and, in some cases, WC-SIGMET header information as called for by MET SG Draft Conclusion 2/6 a). Consequently, until such a time that the information was provided, the SIGMET Guide could not be finalized. Noting that the Fifth Meeting of the 189th Session of the Council had adopted Amendment 75 to ICAO Annex 3 (applicable 18 November 2010 except for the provision concerning quality

management system), the meeting was informed that Amendment 75 included a number of improvements concerning SIGMET provision which would have a direct bearing on the content of the MID SIGMET Guide. The MIDANPIRG was apprised of the resultant changes to the *working draft* of the MID SIGMET Guide, and, in view of the foregoing, the meeting agreed to the following Conclusion:

CONCLUSION 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.

Note: The working draft of the SIGMET Guide reflects new or revised Standards and Recommended Practices adopted as part of Amendment 75 to Annex 3 — Meteorological Service for International Air Navigation.

5.6.12 IATA strongly supported the efforts of the MET SG to improve the level of implementation of MET advisories and warnings in the MID Region, through the development of a regional SIGMET Guide and the initiation of SIGMET tests, since such messages were essential to flight safety.

Requirements for OPMET Data and Status of OPMET Data Exchange

5.6.13 The meeting was informed that MET SG/2 had reviewed the requirements for OPMET data and the status of OPMET data exchange in the MID Region. Noting that IATA had expressed a requirement for 30-hour aerodrome forecasts (TAF) for three AOP aerodromes in the Islamic Republic of Iran (namely OIFM, OISS and OITT), but that latest OPMET monitoring indicated that only 24-hour TAF were being provided, Iran agreed to consult with the meteorological service provider and local users and officially report findings of the consultation to the MID Regional Office accordingly. The meeting agreed that an MIDANPIRG Air Navigation Deficiency in this regard would remain until the matter had been resolved to the satisfaction of all concerned.

5.6.14 In addition, the meeting noted that IATA had expressed an additional requirement of 30-hour TAF for AOP aerodromes in Jordan and Syria (namely OJAI and OSDI respectively). The meeting was pleased to note that since MET SG/2, Syria had taken action to ensure 30-hour TAF for OSDI was now being provided, and that Jordan was expecting 30-hour TAF to commence imminently.

5.6.15 The meeting noted that at MET SG/2, OPMET monitoring had revealed that for several States in the MID Region, two different types of TAF were being sent for international exchange in contradiction to Annex 3 and MID ANP requirements. In the context of Jordan (OJAI, OJAM and OJAQ) and Syria (OSAP, OSDI and OSLK), the meeting was pleased to note that latest OPMET monitoring indicated the States concerned had taken action since MET SG/2 to ensure that only long-TAF (24- or 30-hour validity) were being exchanged internationally for the aerodromes concerned. The

meeting noted that the associated MIDANPIRG Air Navigation Deficiency against Jordan had already been deleted, and that the entry against Syria would be deleted subject to official notification by Syria to the MID Regional Office. In this context of Saudi Arabia, for which 9-hour and 30-hour TAFs had been exchanged intentionally for non-AOP aerodromes OEAB, OEGN, OETB and OEYN, contradicting provisions in Annex 3 and the MID ANP, the meeting was pleased to note that recent OPMET monitoring had indicated that the international exchange of the 9-hour TAF had ceased as required. The meeting also noted that 30-hour TAF for the aerodromes concerned was continuing, exceeding the IATA requirement for 24-hour TAF provision. Accordingly, the meeting agreed to delete the MIDANPIRG Air Navigation Deficiency against Saudi Arabia in this regard.

5.6.16 The meeting noted that the MET SG had identified that during a seven day monitoring period in 2009, no SIGMET messages were available on international exchange system for flight information regions (FIRs) in the MID Region – indicating that either no SIGMET messages had been considered necessary for issuance by Meteorological Watch Offices (MWO) or that there was a problem in the communication networks. The meeting supported MET SG considerations that States should investigate the reasons for the absence of SIGMET messages, including problems with message generation and transmission. In view of the foregoing and noting that follow-up was required in respect of MIDANPIRG Conclusion 11/81b) (Improving the procedures for sending of MID OPMET data to the EUR Region), the meeting agreed to the following Conclusion:

CONCLUSION 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.

5.6.17 With regards to the coding accuracy of OPMET data originating from the MID Region, principally TAF, the meeting noted with concern that since the adoption of Amendment 74 to Annex 3 in November 2007, OPMET monitoring had indicated that the number of incorrectly coded OPMET messages has increased. In order to enable automated systems to process OPMET data, the meeting noted that all incorrect messages must be rectified manually or the user systems must be configured to enable automated corrections. Both actions were very costly and could be avoided if all States ensured quality control and verification of all outgoing OPMET data. In order to improve the situation and, additionally, to harmonize the issuance of scheduled OPMET data in the MID Region, the meeting noted that the MET SG had considered proposals based on well established procedures applied within the EUR Region and formulated MET SG Draft Conclusion 2/8 accordingly. In view of the foregoing, the meeting agreed to the following Conclusion:

CONCLUSION 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.

5.6.18 The meeting noted that at MET SG/2, the necessary follow-up of MIDANPIRG/11 Decision 11/82 (Activation of the MID OPMET Bulletin Management Group (BMG)) had not been undertaken, and that MET SG/2 had recommended that the MID OPMET BMG should convene an inaugural meeting to discuss and progress activities as reflected in the Terms of Reference of the group. Noting that MET SG/2 had formulated Draft Conclusion 2/14 in this regard, the meeting was informed that with the exception of Egypt, no other States involved in the MID OPMET BMG (namely Bahrain, Kuwait, Oman (Rapporteur), Saudi Arabia and the United Arab Emirates) had nominated appropriate experts in response to a State Letter. The meeting was pleased to note that Iran now wished to support the efforts to be undertaken by the MID OPMET BMG, and agreed to update the Terms of Reference accordingly. In view of the foregoing, and the important role that the MID OPMET BMG will play in improving the implementation and exchange of OPMET data in the MID Region, the meeting agreed to the following Conclusion:

CONCLUSION 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.

Institutional Issues Related to MET

5.6.19 The meeting noted that MIDANPIRG Conclusion 11/83 had invited the MID Regional Office to conduct a survey on the status of implementation of the meteorological services and facilities in the MID Region, including up-to-date information on the designated meteorological authorities and meteorological service providers through a comprehensive questionnaire. The meeting acknowledged that it had not been possible to conduct the survey in 2009; but that a provisional questionnaire had been reviewed at MET SG/2. The meeting noted that MET SG had agreed that the questionnaire should be used at the basis for the conducting a regional survey of States in the MID Region at least every 18 months, in keeping with the schedule of MET SG meetings, since it would. The meeting acknowledged that the MET SG had proposed Draft Conclusion 2/11 in this regard to replace and supersede MIDANPIRG Conclusion 11/83. Accordingly, the meeting agreed to the following Conclusion:

CONCLUSION 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*

Quality Assurance of MET Information

5.6.20 The meeting noted that in relation to the ICAO requirements for the establishment of a safety management system, the establishment of a quality management system (QMS) for the provision of meteorological service for international air navigation would be "upgraded" from a Recommended Practice to a Standard as part of Amendment 75 to Annex 3. In order to raise the awareness of meteorological authorities and meteorological service providers on quality assurance matters, and to foster the implementation of QMS for the provision of MET, the meeting was pleased to note that as a follow-up to MIDANPIRG/11 Conclusion 11/84 b), ICAO in coordination with the World Meteorological Organization (WMO) had convened a two-day QMS for MET seminar at the MID Regional Office immediately prior to MET SG/2.

5.6.21 The meeting was informed that MET SG/2 had reviewed the outcomes of the QMS for MET seminar, and noted that six key recommendations had been identified. In this regard, the meeting noted that the MET SG had proposed Draft Conclusion 2/12 to replace and supersede MIDANPIRG/11 Conclusion 11/84 part a) to ensure that the momentum gained from such an event was sustained as follows. Accordingly the meeting agreed to the following Conclusion:

CONCLUSION 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.*

Volcanic Ash Contingency

5.6.22 In response to the unprecedented disruption to air traffic caused by the eruption of the Eyjafjallajökull volcano in Iceland during April and May 2010, the meeting was informed of regional and global coordination activities undertaken by ICAO to address the issues highlighted by the event – in particular, the establishment of a EUR/NAT Volcanic Ash Task Force (EUR/NAT VATF) and an International Volcanic Ash Task Force (IVATF). The EUR/NAT VATF had been principally tasked to determine what changes were necessary to a Volcanic Ash Contingency Plan for the EUR and NAT Regions (essentially an ATM contingency plan), whilst the IVATF was developing a global safety risk management framework that would make it possible to determine the safe levels of operation in airspace contaminated by volcanic ash. In addition, the meeting was apprised of the scope and activities of a EUR/NAT Volcanic Ash Exercises Steering Group (EUR/NAT VOLCEX/SG), which had been established in 2008 to improve the regional response to a volcanic ash incident in the EUR/NAT Region.

5.6.23 The meeting acknowledged that a collaborative and coordinated response to a volcanic ash incident by all stakeholders was of paramount importance during a volcanic ash incident – irrespective of whether volcanic ash from an eruption had originated within or beyond the bounds of the MID Region. Whilst the International Airways Volcano Watch (IAWV) system, administered by the IAVW Operations Group of ICAO, provided the necessary volcanic ash warning notification mechanism for international civil aviation, the meeting discussed ways and means to improve the regional response to a future volcanic ash incident in the MID Region.

5.6.24 The meeting strongly supported a proposal that a Volcanic Ash Contingency Plan for the MID Region should be developed, similar in scope to the prevailing Plan in the EUR/NAT Region. The meeting recognized that the Plan would principally be an ATM contingency plan but with multi-disciplinary inputs covering AIS, ATS, MET, user organizations etc. Accordingly the meeting agreed to the following Decision:

DECISION 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.

5.6.25 The meeting acknowledged that once a Volcanic Ash Contingency Plan for the MID Region was in place, it would be prudent for the MIDANPIRG to consider the initiation of regular volcanic ash exercises in the MID Region through the activation of a MID Volcanic Ash Exercises Steering Group, similar to the EUR/NAT VOLCEX/SG.

MET provisions in the Basic ANP and FASID

5.6.26 The meeting was informed that MET SG/2 had recognized that in order for MIDANPIRG/11 Decision 11/75 (Review and amendment of the FASID MET Tables) to be undertaken, urgent activation of the MID OPMET BMG was required. In view of the outstanding action required under MIDANPIRG/11 Decision 11/82 (Activation of the MID OPMET BMG), the meeting noted that a *full* review and amendment of the MET provisions in the MID ANP had not been possible prior to MET SG/2 meeting.

5.6.27 The meeting nevertheless, was pleased to note that the MET SG/2 had undertaken a review of the MET provisions in the MID ANP in respect of the International Airways Volcano Watch, the World Area Forecast System and FASID Table MET 1A (Meteorological service requirements at aerodromes). The meeting noted that the MET SG/2 had prepared a proposal for amendment in this regard under Draft Conclusion 2/9. In addition, the meeting was informed that the MET SG/2 had proposed Draft Decision 2/10 concerning the necessary follow-up action to be undertaken with respect to all the remaining MET parts of the FASID. Draft Decision 2/10 part a) would not require input from the MID OPMET BMG, whilst part b) would require input.

5.6.28 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 April 2010 based on MET SG/2 Draft Conclusion 2/9 and Draft Decision 2/10 a). The meeting was informed that, having completed the necessary consultation process, the proposals for amendment to the MET part of the Basic ANP and FASID in this regard had been approved in August 2010. Consequently, the meeting agreed that no further follow-up was required in respect of MET SG/2 Draft Conclusions 2/9 and Draft Decision 2/10 a).

5.6.29 Recognizing that follow-up was required in respect of MET SG/2 Draft Decision 2/10 b), since the exchange of OPMET originating in the MID Region required input from the MID OPMET BMG, the meeting accordingly agreed to the following Conclusion:

CONCLUSION 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.

SIGMET TEST PROCEDURES FOR THE MID REGION
(VERSION 1.1, OCTOBER 2010[1])

1. INTRODUCTION

1.1. Regular SIGMET monitoring exercises are used to check the routing of SIGMET messages within the ICAO MID Region. Based on the results, the routings are updated to ensure the dissemination to all centres within the region.

1.2. The SIGMET monitoring exercises are carried out two times per year during the Bulletin Management Group (BMG) OPMET monitoring periods. The BMG OPMET monitoring periods are **1 to 14 February and 1 to 14 September** each year.

1.3. A WS-SIGMET monitoring test is conducted on the **first Wednesday** of these periods. A WV-SIGMET monitoring test is conducted on the **first Thursday** of these periods (i.e. the day immediately following the WS monitoring exercise).

1.4. The exact date is promulgated by the SIGMET monitoring focal point two weeks in advance of each exercise to all participants via email. The monitoring for both WS-SIGMET and WV-SIGMET starts at 0800 UTC and ends at 1200 UTC each day.

1.5. For WS-SIGMET monitoring, the Meteorological Watch Offices (MWOs) are requested to **send their test WS-SIGMET bulletin(s) at 1000 UTC**. One SIGMET should be issued for each FIR under MWO area of responsibility. The format of the test messages is explained under section 2.

1.6. For WV-SIGMET monitoring, Volcanic Ash Advisory Centre (VAAC) Toulouse is requested to send a test Volcanic Ash Advisory (FV-bulletin) at 1000 UTC. Furthermore, a test Volcanic Ash Graphic (PF-bulletin) should be sent to accompany the Volcanic Ash Advisory. An example of the FV-test message is shown under section 3.

1.7. For WV-SIGMET monitoring, the MWOs are requested to **send their test WV-SIGMET bulletin(s) at 1000 UTC independent of the reception of any test Volcanic Ash Advisories/Graphics issued by VAAC Toulouse.** Again, one SIGMET should be issued for each FIR under MWO area of responsibility. The format of the test messages is explained under section 3.

1.8. The format to be used by monitoring centres to send the monitoring results to the Focal Point can be found under paragraph 4.

2. FORMAT OF WS-SIGMET TEST MESSAGES

2.1. There are a few rules that test WS-SIGMET messages should adhere to:

- *One SIGMET should be issued for **each FIR** under the responsibility of the MWO;*
- *The **correct format** should be used;*

[1] Note that version 1.1 accommodates changes to SIGMET test procedures arising from the Twentieth Meeting of the METG of the EANPG (METG/20) which are of direct relevance, at the present time, to MID SIGMET test procedures.

- *It should be sent at **1000 UTC**; and*
- *The validity period should be from **1100 to 1105 UTC** in order to not lose delayed test messages.*

2.2. There now follows some examples on how test WS-SIGMET messages should be composed:

If no current or previously valid WS SIGMET has been issued for the FIR concerned

2.2.1. If there is no current or previously valid WS-SIGMET for the FIR concerned (i.e. if no WS-SIGMET has been issued since 0001 UTC prior to the test commencing), then a test WS- SIGMET shall be transmitted with sequence number (n) = **1** or **01** or **N1**. Please also take care of including the **FIR indicator** and **FIR name** on the third line as this is the correct format for SIGMET messages according to ICAO Annex 3 – *Meteorological Service for International Air Navigation*.

2.2.2. Example:

WSEG31 HECA 131000
HECC SIGMET 1 VALID 131100/131105 HECA-
HECC CAIRO FIR TEST SIGMET PLEASE DISREGARD=

If a currently valid WS SIGMET is in force for the FIR concerned

2.2.3. If there is a currently valid WS-SIGMET in force for the FIR concerned, the test WS-SIGMET has to be issued with the next consecutive sequence number.

2.2.4. Example valid WS-SIGMET:

WSEG31 HECA 130800
HECC SIGMET 2 VALID 130800/131200 HECA-
HECC CAIRO FIR text=

2.2.5. Example test WS-SIGMET:

WSEG31 HECA 131000
EGTT SIGMET 3 VALID 131100/131105 HECA-
HECC CAIRO FIR TEST SIGMET PLEASE DISREGARD=

2.2.6. There is no need to send out another SIGMET with the next consecutive number to reissue SIGMET number 2 as, according to ICAO Annex 3, it is possible to have more than one valid SIGMET available at the same time.

3. FORMAT OF WV-SIGMET TEST MESSAGES

3.1. As with WS-SIGMET test messages, there are also rules for WV-SIGMET messages which should be adhered to.

- *One SIGMET should be issued for **each FIR** under the responsibility of the MWO;*
- *The **correct format** should be used;*
- *It should be sent **at 1000 UTC**; and*
- *The validity period should be from **1100 to 1105 UTC** in order to not lose delayed test messages.*

3.2. There now follows some examples on how test Volcanic Ash Advisories (FV) and test volcanic ash SIGMET (WV) messages should be composed:

Volcanic Ash Advisory (FV) test message

3.2.1. On the monitoring day VAAC Toulouse will send out a test FV message at 1000 UTC. The message itself will look like the following example. **Note that the 'ii' used for the message can vary between 01 and 05**.

3.2.2. Example:

FVXX01 LFPW 071000
VA ADVISORY
DTG: 20100207/1000
VAAC: TOULOUSE
VOLCANO: UNKNOWN
PSN: UNKNOWN
AREA: MID REGION
SUMMIT ELEV: UNKNOWN
ADVISORY NR: 2010/00
INFO SOURCE: TEST MID BMG
AVIATION COLOUR CODE: UNKNOWN
ERUPTION DETAILS: TEST MID BMG
OBS VA DTG: 07/1000Z
OBS VA CLD: NO VA EXP
FCST VA CLD +6 HR: 07/1600Z NO VA EXP
FCST VA CLD +12 HR: 07/2200Z NO VA EXP
FCST VA CLD +18 HR: 08/0400Z NO VA EXP
RMK: REGULAR BMG VA TEST
TEST TEST TEST TEST TEST TEST TEST TEST TEST TEST TEST TEST
NXT ADVISORY: NO FURTHER ADVISORIES=

If no current or previously valid WV SIGMET has been issued for the FIR concerned

3.2.3. If there is no current or previously valid WV-SIGMET for the FIR concerned (i.e. if no WV-SIGMET has been issued since 0001 UTC prior to the test commencing), then a test WV-SIGMET shall be transmitted with sequence number (n) = **1** or **01** or **N1**. Please also take care of including the **FIR indicator** and **FIR name** on the third line as this is the correct format for SIGMET messages according to ICAO Annex 3 – *Meteorological Service for International Air Navigation.*

3.2.4. Example:

WVEG31 HECA 071000
HECC SIGMET 1 VALID 071100/071105 HECA-
HECC CAIRO FIR TEST SIGMET PLEASE DISREGARD=

If a currently valid WV SIGMET is in force for the FIR concerned

3.2.5. If there is a currently valid WV-SIGMET in force for the FIR concerned, the test WV-SIGMET has to be issued with the next consecutive sequence number.

3.2.6. Example valid WV-SIGMET:

WVEG31 HECA 070800
HECC SIGMET 2 VALID 070800/071200 HECA-
HECC CAIRO FIR text=

3.2.7. Example test WV-SIGMET:

WVEG31 HECA 071000
HECC SIGMET 3 VALID 071100/071105 HECA-
HECC CAIRO FIR TEST SIGMET PLEASE DISREGARD=

3.2.8. There is no need to send out another SIGMET with the next consecutive number to reissue SIGMET number 2 as, according to ICAO Annex 3, it is possible to have more than one valid SIGMET available at the same time.

4. FORMAT OF SIGMET TEST MESSAGE MONITORING RESULTS

4.1. The monitoring of SIGMET messages starts at 0800 UTC until 1200 UTC. The reason for this period is to gather also actual SIGMET messages, as not all centres (i.e. MWOs) participate by sending test messages.

4.2. If centres intend to participate by sending monitoring results, there are two ways to send the data:

Via fax

4.2.1. In case of using fax to send your data, please send it in the following structure:

TTAAii	CCCC	YYGGgg	FIR	Reception time	Type of reception
Example					
WSOS31	LOWW	131000	LOVV	1003	A
WSBX31	EBBR	131000	EBBU	1001	G/current

4.2.2. There are the following possible entries for the type of reception:

A .....Received via AFTN, CIDIN/AFTN or CIDIN/OPMET
G .....Received via GTS
S .....Received via SADIS
X .....Others

4.2.3. If no test SIGMET has been received during the monitoring period but an actual one has been received, please indicate the type of reception plus /current e.g. A/current (see above example).

Via email

4.2.4. This is the most efficient way to receive results, saving BMG considerable time, and meaning that the analysis can start much earlier. If respondents wish to reply via email, they **must** use the two empty excel spreadsheets transmitted together with information letter. One spreadsheet is for WS-SIGMET monitoring, and the other is for volcanic ash advisory (FV) and WV-SIGMET monitoring.

4.2.5. The fields are filled out in the following way:

Reception Time / **Received Via** (/**current**)

4.2.6. As an example on how to fill out the spreadsheets, results from a previous monitoring period can be provided upon request from the SIGMET monitoring focal point (outlined below). In addition, requests for blank excel spreadsheets should also be made to the SIGMET monitoring focal point.

4.2.7. For all SIGMET bulletins received which are not in the excel spreadsheet, respondents may add additional columns after the FV-entries. **This is especially necessary for non-MID SIGMET bulletins.**

4.3. There are some formal rules which should be followed when compiling a report for

presentation to the SIGMET monitoring focal point (via fax or email), as follows:

4.3.1. If a SIGMET is received more than once via the same medium (e.g. AFTN, GTS, etc), please indicate **only the reception time and method that the first message was received**.

4.3.2. If a certain SIGMET is not requested to be received by your centre, please add **NO RQ** in the respective field. This will then be kept in the sheet for all consecutive monitoring exercises.

4.3.3. In case you receive a SIGMET from the MID Region ***not presently included*** in the excel spreadsheet, please **do not add a new column** to the spreadsheet in between. Instead, pass this information to the SIGMET monitoring focal point by including it in the text of your fax or email response, or add it at the end of the spreadsheet.

4.3.4. It would be appreciated very much if respondents could send their monitoring results as soon as possible to the SIGMET monitoring focal point, and in any case **NO LATER THAN ONE MONTH AFTER THE MONITORING DATE.**

5. FOCAL POINTS OF CONTACT

5.1. The Inter-regional OPMET Gateway (IROG) in Vienna is the responsible centre for organising the regular SIGMET tests and collating the results.

5.2. IROG Vienna contact details are as follows:

Fax: +43 5 1703 4006
Email: sigmet@austrocontrol.at

5.3. For any further information you can also contact Mr. Michael Pichler (IROG Vienna, SIGMET monitoring focal point) or Mr. Greg Brock (ICAO Regional Officer, MET):

Fax: +43 5 1703 4050
Email: Michael.Pichler@austrocontrol.at

Fax: +33 1 46 41 8585
Email: icaoeurnat@paris.icao.int

INTERNATIONAL CIVIL AVIATION ORGANIZATION

Working Draft of the

MID SIGMET GUIDE

FIRST EDITION
October 2010

PREPARED BY THE MIDDLE EAST OFFICE OF ICAO

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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.

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TABLE OF CONTENTS

PART 1. INTRODUCTION 1

PART 2. RESPONSIBILITIES AND COORDINATION 2
2.1 General 2
2.2 Meteorological Watch Office - responsibilities and procedures related to SIGMET 2
2.3 Responsibilities of ATS units 4
2.4 Responsibilities of pilots 4
2.5 Coordination between MWOs and the VAACs and TCACs 4

PART 3. RULES FOR PREPARATION OF SIGMET INFORMATION 6
3.1 General 6
3.2 Types of SIGMET 6
3.3 Structure of the SIGMET message 6
3.4 Format of SIGMET 7

APPENDIX A 17
List of the abbreviations and decode used in SIGMET 17

APPENDIX B 19
List of MID SIGMET (WS, WV and WC) headers 19

APPENDIX C 21
Meteorological phenomena to be reported by SIGMET 21

APPENDIX D 22
Guidelines for reporting geographical coordinates in SIGMET 22

DRAFT

PART 1. INTRODUCTION

1.1 The main purpose of this document is to provide guidance for standardization and harmonization of the procedures and formats related to the occurrence or expected occurrence of specified hazardous en-route weather conditions which may affect the safety of aircraft and low-level aircraft operations, known as SIGMET information. The guidance is complementary to the Annex 3 standards and recommended practices (SARPS) regarding SIGMET, and to the SIGMET related provisions of the MID ANP/FASID (ICAO Doc 9708).

1.2 In respect of SIGMET messages, this document includes guidance concerning SIGMET messages for significant en-route weather phenomena, volcanic ash and tropical cyclone SIGMET messages.

1.3 ICAO provisions concerning the issuance and dissemination of SIGMET information are contained in:

- Annex 3 - *Meteorological Service for International Air Navigation*, Part I, Chapter 3, paragraphs 3.4 – 3.7, Chapter 7, paragraphs 7.1 – 7.2, and Part II, Appendix 6.
- MID Basic ANP, Part VI and FASID Table MET 1B , MET 2B, MET 3A and MET 3B.
- Annex 11 - *Air Traffic Services*, Chapter 4, paragraph 4.2.1 and Chapter 7, paragraph 7.1.
- PANS – *Air Traffic Management*, Doc 4444, Chapter 9, paragraph 9.1.3.2.

Additional guidance on the SIGMET procedures is contained in the *Manual of Aeronautical Meteorological Practice*, Doc 8896, and *Manual on Coordination between Air Traffic Services, Aeronautical Information Services and Aeronautical Meteorological Services*, Doc 9377.

1.4 The SIGMET Guide is intended mainly to assist the meteorological watch offices (MWOs) in the MID Region in preparing and disseminating SIGMET information. It provides detailed information on the format of SIGMET messages as specified by Annex 3. The explanations of the format are accompanied by a number of examples based on region-specific meteorological phenomena. The guide also provides information regarding the necessary coordination between the MWOs, the ATS units and the pilots, and their respective responsibilities.

1.5 This document is prepared by the ICAO MID Regional Office. It should be reviewed and updated regularly in order to be kept in line with the ICAO SARPs and regional procedures. This first edition of the MID SIGMET Guide takes into account changes to SIGMET provisions resulting from the applicability of Amendment 75 to Annex 3 on 18 November 2010.

DRAFT

PART 2. RESPONSIBILITIES AND COORDINATION

2.1 General

2.1.1 SIGMET is warning information; hence it is of highest priority among other types of OPMET information provided to aviation users. The primary purpose of SIGMET is for in-flight service, which requires timely transmission of the SIGMET messages to pilots by the ATS units and/or through VOLMET and D-VOLMET.

2.1.2 Airlines are the main users of the SIGMET information. Pilots contribute to the effectiveness of the SIGMET service through issuance of special air-reports to the ATS units. Special air-reports are among the most valuable sources of information for the Meteorological Watch Offices (MWO) in the preparation of SIGMET. The ATS units receiving special air-reports should forward them to the associated MWOs without delay.

2.1.3 As seen from the above, the SIGMET service involves MET, ATS and pilots. In order for the SIGMET service to be effective, close coordination between these parties, as well as mutual understanding of the needs and responsibilities, should be maintained.

2.1.4 For the special case of SIGMET for volcanic ash, the MWOs are provided with advisories from the volcanic ash advisory centres (VAAC) designated in the Regional ANP.

2.1.5 SIGMET is also used for the flight planning. This requires global dissemination of SIGMET through the international OPMET data banks and the satellite broadcasts: ISCS and SADIS. SIGMET should also be distributed to the World Area Forecast Centres (WAFC) London and Washington for use in the preparation of the significant weather (SIGWX) forecasts.

2.1.6 In the next paragraphs, the main responsibilities and coordination links between MET, ATS and pilots are described.

2.2 Meteorological Watch Office – responsibilities and procedures related to SIGMET

2.2.1 SIGMET information is issued by the MWO in order to provide timely warning for the occurrence or expected occurrence of specified en-route weather phenomena, affecting the safety of the flight operations in the MWO's area of responsibility (AOR). SIGMET provides information concerning the location, extent, intensity and expected evolution of the specified phenomena.

2.2.2 Information about the provision of SIGMET service, including details on the designated MWO(s), should be included in the State's Aeronautical Information Publication (AIP) as specified in Annex 15, Aeronautical Information Service, Appendix 1, GEN 3.5.8.

2.2.3 All designated MWOs in the MID Region are listed in the FASID Table MET 1B of the MID FASID.

2.2.4 If, for some reason, a MWO is not able to meet its obligations, including the provision of SIGMET, arrangements have to be made by the meteorological authority concerned, that another MWO takes over these responsibilities for a certain period of time. Such delegation of responsibilities has to be notified by a NOTAM and a letter to the ICAO Regional Office.

2.2.5 Since the MWO is normally not a separate administrative unit, but part of the functions of an aerodrome meteorological office or another meteorological office, the meteorological authority concerned should ensure that the MWO obligations and responsibilities are clearly defined and assigned to the unit

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designated to serve as MWO. The corresponding operational procedures have to be established and the meteorological staff should be trained accordingly.

2.2.6 In preparing SIGMET information, the MWOs have to strictly follow the format determined in Annex 3 (detailed format description is provided in Appendix 6, Table A6-1 of Annex 3). SIGMET should be issued only for those weather phenomena listed in Annex 3 and only when specified criteria for intensity and spatial extent are met.

2.2.7 The MWOs should be adequately equipped in order to identify, analyse and forecast (to the extent required) those phenomena for which SIGMET is required. The MWO should make use of all available sources of information, such as special air-reports, information from meteorological satellites and weather radars, numerical predictions, etc.

2.2.8 On receipt of a special air-report from the associated ACC or FIC, the MWO should :

a) issue the corresponding SIGMET information; or

b) send the special air-report for on-ward transmission in case that the issuance of SIGMET information is not warranted (e.g., the phenomenon reported is of transient nature).

2.2.9 Appropriate telecommunication means have to be available at the MWO in order to ensure timely dissemination of SIGMETs according to a dissemination scheme, which includes transmission to:

- local ATS users;
- aeronautical MET offices within the AOR;
- other MWOs concerned (it should be ensured that SIGMET is sent to all MWOs whose AORs are, at least partly, within the 925 km (500 NM) range from the reported phenomenon);
- centres designated for transmission of VOLMET or D-VOLMET where SIGMET is required for transmission;
- the responsible Regional OPMET Centres (ROC) and international OPMET data banks (it should be arranged through the EUR RODEX scheme, that SIGMETs are sent to the designated OPMET data banks in other ICAO Regions, to the WAFCs and to the uplink stations of SADIS and ISCS);
- responsible TCAC or VAAC (if applicable) according to FASID Table MET 3A and MET 3B respectively; and

2.2.10 In issuing SIGMET for volcanic ash or tropical cyclone, the MWOs should take into consideration the advisory information received from the responsible VAAC or TCAC. In addition to the information received from the VAAC or TCAC, the MWOs may use available complementary information from other reliable sources. In such a case the responsibility for this additional information would lie completely on the MWO concerned.

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2.3 Responsibilities of ATS units

2.3.1 Close coordination should be established between the MWO and the corresponding ATS unit (ACC or FIC), including arrangements in order to ensure:

- receipt without delay and display at the relevant ATS units of SIGMETs issued by the associated MWO;

- receipt and display at the ATS unit of SIGMETs issued by MWOs responsible for the neighbouring FIRs /ACCs if these SIGMETs are required according to paragraph 2.3.4 below ; and

- transmission without delay of special air-reports received through voice communication to the associated MWO.

2.3.2 SIGMET information should be transmitted to aircraft with the least possible delay on the initiative of the responsible ATS unit, by the preferred method of direct transmission followed by acknowledgement or by a general call when the number of aircraft would render the preferred method impracticable.

2.3.3 SIGMET information passed to aircraft should cover a portion of the route up to a flying time of two hours ahead of the aircraft.

2.3.4 Air traffic controllers should ascertain whether any of the currently valid SIGMETs may affect any of the aircraft they are controlling, either within or outside their AOR up to a flying time of two hours ahead of the current position of the aircraft. If this is the case, the controllers should transmit the SIGMET promptly to the aircraft-in-flight likely to be affected.

2.3.5 The ATS units have to transmit to the concerned aircraft-in-flight the special air reports received, for which SIGMET has not been issued. Once a SIGMET for the weather phenomenon reported in the special air report is made available, this obligation of the ATS unit expires.

2.4 Responsibilities of pilots

2.4.1 Timely issuance of SIGMET information is largely dependent on the prompt receipt by MWOs of special air reports. That is why, it is essential that pilots prepare and transmit such reports to the ATS units whenever any of the specified en-route conditions are encountered or observed.

2.4.2 It should be emphasized that, even when automatic dependent surveillance (ADS) is being used for routine air reports, pilots should continue to make special air reports.

2.5 Coordination between MWOs and the VAACs and TCACs

2.5.1 Amongst the phenomena for which SIGMET information is required, the volcanic ash clouds and tropical cyclones are of particular importance for the planning of long-haul flights.

2.5.2 Since the identification, analysis and forecasting of volcanic ash and tropical cyclones requires considerable technical and human resource, normally not available at each MWO, the Volcanic Ash Advisory Centres (VAAC) and Tropical Cyclone Advisory Centres (TCAC) have been designated to provided VA and TC advisories to the users and assist the MWOs in the preparation of the forecast part of the SIGMETs for those phenomena. Close coordination should be established between the MWO and its responsible TCAC and/or VAAC.

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2.5.3 Information regarding the VAACs and TCACs serving the MID Region with their corresponding areas of responsibility and lists of MWOs to which advisories are to be sent is provided in the MET FASID Tables MET 3A and MET 3B.

2.5.4 TC and VA advisories are required for global exchange through the satellite distribution systems, SADIS and ISCS. They are used by the operators during the pre-flight planning. Nevertheless, it should be emphasized that SIGMET information is still of higher operational status and is required especially for in-flight re-planning. SIGMETs should be transmitted to aircraft-in-flight through voice communication or VOLMET or D-VOLMET thus providing vital information for making in-flight decisions regarding large-scale route deviations due to volcanic ash clouds or tropical cyclones.

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PART 3. RULES FOR PREPARATION OF SIGMET INFORMATION

3.1 General

3.1.1 SIGMET information is prepared in abbreviated plain language using approved ICAO abbreviations, a limited number of non-abbreviated words, geographical names and numerical values of self-explanatory nature. All abbreviations and words to be used in SIGMET are given in **Appendix A.**

3.1.2 The increasing use of automated systems for handling MET information by the MET offices and the aviation users makes it essential that all types of OPMET information, including SIGMET, are prepared and transmitted in the prescribed standardized formats. Therefore, the structure and format of the SIGMET message, as specified in Annex 3, Part II, Appendix 6, should be followed strictly by the MWOs. Appendix 6 provides detailed information regarding the content and order of elements in the SIGMET message.

3.1.3 SIGMET is intended for transmission to aircraft in flight either by ATC or by VOLMET or D-VOLMET. Therefore, SIGMET messages should be kept short and clear, without additional descriptive text other than that prescribed in Annex 3.

3.1.4 After issuing a SIGMET, the MWO maintain watch over the evolution of the phenomenon for which the SIGMET has been issued and issue a new updated SIGMET when necessary. VA SIGMETs have to be updated at least every 6 hours.

3.1.5 SIGMETs should be promptly cancelled when the phenomenon is no longer occurring or no longer expected to occur in the MWO's area of responsibility. The SIGMET is understood to cancel itself automatically at the end of its validity period. If the phenomenon persists a new SIGMET message for a further period of validity has to be issued.

3.2 Types of SIGMET

3.2.1 Although Annex 3 provides one general SIGMET format, which encompasses all weather phenomena, it is convenient when describing the structure and format of the messages to distinguish between three types of SIGMET, as follows:

- SIGMET for en-route weather phenomena other than volcanic ash or tropical cyclones (this includes: TS, TURB, ICE, MTW, DS and SS); this SIGMET will be referred as WS SIGMET;
- SIGMET for volcanic ash (VA SIGMET) (to be referred also as WV SIGMET)
- SIGMET for tropical cyclones (TC SIGMET (to be referred also as WC SIGMET)).

3.2.2 The three types of SIGMET can be identified through the data type designator included in the WMO abbreviated heading of the SIGMET message, as explained in the following paragraphs.

3.3 Structure of the SIGMET message

3.3.1 A SIGMET message consists of:

- *WMO heading* – all SIGMETs are preceded by an appropriate WMO heading;
- *First line*, containing location indicators of the relevant ATS unit and MWO, sequential number and period of validity;
- *Meteorological part*, containing meteorological information concerning the phenomenon for which the SIGMET is issued;

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3.3.2 The first two parts of the SIGMET message are common for all types of SIGMETs. The content and format of the meteorological part is different depending on the type of SIGMET. Therefore, in the following paragraphs, the meteorological part of the WS, WV and WC types of SIGMET is described separately.

3.4 Format of SIGMET

Note: In the following text, square brackets - [ ] - are used to indicate an optional or conditional element, and angled brackets - < > - for symbolic representation of a variable element, which in the real SIGMETs accepts concrete numerical values.

3.4.1 WMO Header

$T_1T_2A_1A_2$ii CCCC YYGGgg

3.4.1.1 The group **$T_1T_2A_1A_2$ii** is the bulletin identification for the SIGMET message. It is constructed in the following way:

T_1T_2	Data type designator	**WS** – for SIGMET **WV** – for SIGMET for volcanic ash **WC** – for SIGMET for tropical cyclone
A_1A_2	Country or territory designators	Assigned according to Table C1, Part II of Manual on the Global Telecommunication System, Vol I – Global Aspects (WMO - No. 386)
ii	Bulletin number	Assigned on national level according to paragraph 2.3.2.2, Part II of Manual on the Global Telecommunication System, Vol I – Global Aspects (WMO - No. 386)

3.4.1.2 **CCCC** is the ICAO location indicator of the communication centre disseminating the message (could be the same as the MWO).

3.4.1.3 **YYGGgg** is the date/time group, where YY is the date and GGgg is the time in hours and minutes UTC, of the transmission of the SIGMET (normally this is the time assigned by the AFTN centre which disseminates the message).

3.4.1.4 It is recommended to assign a unique WMO header for each SIGMET bulletin per FIR, CTA or UIR. The distinction between different SIGMET bulletins issued by the State's MWOs should be through the respective data type designator (T_1T_2) and bulletin number (ii**).**

Examples (fictitious AHL):

WSOM50 OOMS 231100
WVOM50 OOMS 011400
WCOM50 OOMS 161700

Note: A table with WMO SIGMET headers used by the MID Meteorological Watch Offices is included in ***Appendix B***

3.4.2 First line of SIGMET

CCCC SIGMET [nn]n VALID YYGGgg/YYGGgg CCCC-

3.4.2.1 The meaning of the groups in the first line of the SIGMET is as follows:

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CCCC	ICAO location indicator of the ATS unit serving the FIR or CTA to which the SIGMET refers
SIGMET	Message identifier
[nn]n	Daily sequence number (see paragraph 3.4.2.2)
VALID	Period of validity indicator
YYGGgg/YYGGgg	Validity period of the SIGMET given by date/time group of the beginning and date/time group of the end of the period (see paragraph 3.4.2.3)
CCCC-	ICAO location indicator of the MWO originating the message and – (hyphen, without space, to separate the preamble from the text)

3.4.2.2 The numbering of SIGMETs should start every day at 0001 UTC. The sequence number should consist of up to three symbols and may be a combination of letters and numbers, such as:

- 1, 2, …
- 01, 02, …
- A01, A02, …

Examples:

OOMM SIGMET 1 VALID 121100/121500 OOMS-
OEJD SIGMET 01 VALID 231300/231700 OEJD-

Note 1: No other combinations should be used, like "CHARLIE 05" or "NR7".

Note 2: Correct numbering of SIGMET is very important since the number is used for reference in the communication between ATC and pilots and in VOLMET and D-VOLMET.

3.4.2.3 The following has to be considered when determining the validity period:

- the period of validity of WS SIGMET should not exceed 4 hours;
- the period of validity of WV and WC SIGMET should be up to 6 hours;
- in case of a SIGMET for an observed phenomenon the filing time (date/time group in the WMO heading) should be same or close to the date/time group indicating the start of the SIGMET validity period;
- when the SIGMET is issued for an expected (forecast) phenomenon:
  - the beginning of validity period should be the time of expected commencement (occurrence) of the phenomenon;
  - the lead time (the time of issuance of the SIGMET) should be not more than 4 hours before the start of validity period (i.e., expected time of occurrence of the phenomenon); for VA and TC SIGMETs the lead time may be up to 12 hours.

3.4.2.4 The period of validity is the period during which the SIGMET is valid for transmission to aircraft in flight.

Examples:

1. SIGMET for an observed phenomenon:

WSSD20 OEJD 231300
OEJD SIGMET 01 VALID 231300/231700 OEJD-

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2. SIGMET for a forecast phenomenon (expected time of occurrence 1530)

WSSD20 OEJD 231300
OEJD SIGMET 01 VALID 231530/231930 OEJD-

3.4.3 *Format of the meteorological part of SIGMET messages for weather phenomena other than VA and TC*

3.4.3.1 The meteorological part of a SIGMET consists of eight elements as shown in the table below.

Start of the second line of the message

1	2	3	4	5	6
Location indicator of the FIR/UIR or CTA	Name of the FIR or UIR or FIR/UIR or CTA	Description of the phenomenon	Observed or forecast	Location	Level
<CCCC>	<name> FIR [UIR, FIR/UIR, CTA]	<Phenomenon>	OBS [AT <GGggZ>] or FCST [AT <GGggZ>]	Geographical location of the phenomenon given by coordinates, or geographical objects, or location indicators	FL<nnn/nnn> or [SFC/]FL<nnn> or [SFC/]<nnnn>M or [SFC/]<nnnn>FT or TOP FL<nnn> or [TOP] ABV FL<nnn>

7	8
Movement or expected movement	Changes in intensity
MOV <direction, speed> KMH[KT], or STNR	INTSF or WKN or NC

3.4.3.1.1 Location indicator and name of the FIR, UIR, FIR/UIR or CTA

location indicator <name> FIR
or
location indicator <name> UIR
or
location indictor <name> FIR/UIR
or
location indicator <name> CTA

Example:

OOMM MUSCAT FIR

3.4.3.1.2 Phenomenon

The description of the phenomenon consists of a qualifier and a phenomenon abbreviation. SIGMET shall be issued only for the following phenomena (with only one phenomenon in each SIGMET):

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at cruising levels (irrespective of altitude):

- thunderstorms – if they are OBSC, EMBD, FRQ or SQL with or without hail;
- turbulence – only SEV
- icing – only SEV with or without FZRA
- mountain waves – only SEV
- dust storm – only HVY
- sand storm – only HVY
- radioactive cloud – RDOACT CLD

The appropriate abbreviations and combinations thereof, and their meaning are given in **Appendix C**.

3.4.3.1.3 Indication if the phenomenon is observed or forecast

OBS [AT <GGggZ>]
or
FCST [AT <GGggZ>]

The indication whether the information is observed or forecast is given by the abbreviations OBS and FCST. OBS and FCST are optionally followed by a time group in the form AT GGggZ, where GGgg is the time of the observation or forecast in hours and minutes UTC. If the exact time of the observation or forecast is not known the time is not included.

Examples:

OBS AT 0140Z
FCST AT 0200Z

3.4.3.1.4 Location of the phenomenon

The location of the phenomenon is given with reference to geographical coordinates (latitude and longitude) or with reference to geographical features well known internationally. The MWOs should try to be as specific as possible in reporting the location of the phenomenon and, at the same time, to avoid overwhelming geographical information, which may be difficult to process or perceive.

The following are the most common ways to describe the location of the phenomenon:

- Indication of a part of the FIR with reference to latitude:
  N OF or S OF <Nnn[nn]> or <Snn[nn]>

- indication of a part of the FIR with reference to a longitude:
  E OF or W OF <Ennn[nn]> or <Wnnn[nn]>

- indication of a part of the FIR with reference to a latitude and longitude:
  any combination of the above two cases;

- with reference to a location with ICAO location indicator CCCC (normally, this should be the case in a SIGMET based on a special air-report in which the reported phenomenon is given with reference to an airport or another object with an ICAO location indicator CCCC), or

- with reference to geographical features well known internationally.

More details on reporting of the location of the phenomenon are given in Appendix 6 to Annex 3 and in **Appendix D** to this Guide.

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3.4.3.1.5 Flight level or altitude and extent

[SFC/]FL<nnn>
or FL<nnn/nnn>
or [SFC/]<nnnn>M
or [SFC/]<nnnn>FT
or TOP FL<nnn>
or [TOP] ABV FL<nnn>

The location or extent of the phenomenon in the vertical is given by one or more of the above abbreviations, as follows:

- reporting of single level – **FL<nnn>**;
- reporting of a layer – **SFC/FL<nnn>, SFC/<nnnn>M, or SFC/<nnnn>FT**, where the lower level is the surface and the upper level is a flight level, an altitude in metres or an altitude in feet respectively;
- reporting a layer using flight levels – **FL<nnn/nnn>**, where the lower flight level is reported first; this is used particularly in reporting turbulence and icing;
- reporting the top of a phenomenon with reference to one flight level – **TOP FL<nnn>;**
- reporting a phenomenon with reference to one flight level and the abbreviation ABV – **ABV FL<nnn>;**
- reporting the top of a phenomenon with reference to one flight level and the abbreviation ABV – **TOP ABV FL<nnn>;**

Examples:

EMBD TS … TOP ABV FL340
SEV TURB … FL180/210
SEV ICE … SFC/FL150
SEV MTW … FL090

3.4.3.1.6 Movement

MOV <direction> <speed> KMH[KT]
or
STNR

Direction of movement is given with reference to one of the sixteen points of compass. Speed of movement is given in KMH or KT. The abbreviation STNR is used if no significant movement is expected.

Examples:

MOV NW 30KMH
MOV NNW 30KMH
MOV E 25KT

3.4.3.1.7 Expected changes in intensity

The expected evolution of the phenomenon's intensity is indicated by one of the following abbreviations:

INTSF – intensifying
WKN – weakening
NC – no change

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3.4.4 Structure of the meteorological part of VA SIGMET

3.4.4.1 The general structure of the meteorological part of the SIGMET message is given in the table below:

Start of the second line of the message

1	2	3		4
Location indicator of the FIR/UIR or CTA	Name of the FIR or UIR or FIR/UIR or CTA	Volcano		Volcanic ash cloud
		Name	Location	
<CCCC>	<name> FIR [UIR, FIR/UIR, CTA]	[VA ERUPTION] [MT <name>]	[PSN <position>]	VA CLD OBS [AT <GGggZ>] or VA CLD FCST [AT GGggZ]

5			6
Extent of the cloud			Expected movement
Location	Vertical	Horizontal	
Location (referring to latitude and longitude (in degrees and minutes) or locations or geographic features well known internationally)	FL<nnn/nnn>	[APRX <nnn>KM BY <nnn>KM] or [APRX <nnn>NM BY <nnn>NM]	MOV <direction> <speed>

7	
Volcanic ash cloud forecast at the end of the period of validity	
FCST time	Position
FCST <GGggZ>	VA CLD APRX <lat,lon> - <lat,lon> - …

3.4.4.2 Name and location of the volcano and/or indicator for VA cloud

[VA ERUPTION] [MT <name>] [PSN <lat,lon>] VA CLD
or
VA CLD

3.4.4.2.1 The description of the volcano injecting volcanic ash consists of the following elements:

- the term **VA ERUPTION** is used when the SIGMET is issued for a known volcanic eruption;
- geographical/location information:
  i. if the name of the volcano is known, it is given by the abbreviation **MT** – mountain, followed by the name, e.g. **MT RABAUL**
  ii. the position of the volcano is given by the abbreviation **PSN**, followed by the latitude and longitude in degrees and minutes, e.g. **PSN N3520 E09040**
- this section of the message ends with the abbreviation **VA CLD** – volcanic ash cloud.

3.4.4.2.2 If the FIR is affected by a VA cloud with no information about the volcanic eruption which generated the cloud, only the abbreviation **VA CLD** shall be included in the SIGMET.

3.4.4.3 Time of VA CLD observation or forecast

VA CLD OBS [AT <GGgg>Z]
or

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VA CLD FCST [AT <GGgg>Z]

The time of observation is taken from the source of the observation – satellite image, special air- report, report from a ground volcano logical station, etc. If the VA cloud is not yet observed over the FIR but the volcanic ash advisory received from the responsible VAAC indicates that the cloud is affecting the FIR after certain time, SIGMET shall be issued, and the abbreviation VA CLD FCST [AT <GGgg>Z] shall be used.

Examples:

VA CLD OBS AT 0100Z
VA CLD FCST AT 1200Z

3.4.4.4 Level and extent of the volcanic ash cloud

<P1(lat,lon) - P2(lat,lon) - … > FL<nnn/nnn> [APRX <nnn>KM BY <nnn>KM] or
<P1(lat,lon) - P2(lat,lon) - … > FL<nnn/nnn> [APRX <nnn>NM BY <nnn>NM]

<P1(lat,lon) – P2(lat,lon) - … >	Approximate description of the VA cloud by a number of points given with their geographical coordinates[1]; the points shall be separated by hyphen
FL<nnn/nnn>	The layer of the atmosphere where the VA cloud is situated, given by two flight levels from the lower to the upper boundary of the cloud
[APRX <nnn>KM BY <nnn>KM] or [APRX <nnn>NM BY <nnn>NM]	Approximate horizontal extent of the VA cloud in KM or NM

If the VA cloud spreads over more than one FIR, separate SIGMETs shall be issued by all MWOs whose FIRs are affected. In such a case, the description of the volcanic ash cloud by each MWO should encompass the part of the cloud, which lies over the MWO's area of responsibility. The MWOs should try to keep the description of the volcanic ash clouds consistent by checking the SIGMET messages received from the neighbouring MWOs.

Examples:

N0100 E09530 – N1215 E11045 FL100/180 APRX 10KM BY 50KM

S0530 E09300 – N0100 E09530 – N1215 E11045 FL 150/210

3.4.4.5 Movement or expected movement of the VA cloud

MOV <direction> <speed>

The direction of movement is given by the abbreviation **MOV** – moving, followed by one of the sixteen points of compass: N, NNE, NE, ENE, E, ESE, SE, SSE, S, SSW, SW, WSW, W, WNW, NW, NNW. The speed of movement is given in KMH or KT.

Examples:

MOV E 35 KMH
MOV SSW 20 KT
STNR

[1] The format of geographical coordinates reporting in SIGMET is given in **Appendix D.**

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3.4.4.6 Forecast position of the VA cloud at the end of the validity period of the SIGMET message

FCST <GGggZ> VA CLD APRX <P1(lat,lon) - P2(lat,lon) - … >

3.4.4.6.1 The **GGggZ** group should indicate the end of the validity period given in the first line of the SIGMET message. The description of the expected position of the volcanic ash cloud is given by a number of points forming a simplified geometrical approximation of the cloud.

3.4.4.6.2 In describing the VA cloud, up to four different layers can be used, indicated by flight levels in the form FL<nnn/nnn>. The use of more than one level is necessary when the wind direction changes with height which causes the VA cloud to spread into different directions at different heights.

3.4.5 ***Structure of the meteorological part of TC SIGMET***

3.4.5.1 The general structure of the meteorological part of the TC SIGMET is given in the table below:

Start of the second line of the message

1	2	3	4		5
Location indicator of the FIR/UIR or CTA	Name of the FIR or UIR or FIR/UIR or CTA	TC name	Observed or forecast		Extent
			Time	Location of TC centre	
<CCCC>	<name> FIR [UIR, FIR/UIR, CTA]	TC <name> or TC NN	OBS [AT <GGgg>Z] or FCST [AT <GGgg>Z]	<lat,lon>	CB TOP [ABV or BLW] FL<nnn> WI <nnn> KM[NM] OF CENTRE

6	7	8
Expected movement	Intensity change	Forecast of the centre position at the end of the validity period
MOV <direction> <speed> KMH[KT] or STNR	INTSF or WKN or NC	FCST <GGgg>Z TC CENTRE <lat,lon>

3.4.5.2 Name of the tropical cyclone

TC <name>
TC NN

Note: NN used for unnamed tropical cyclones.

The description of the tropical cyclone consists of the abbreviation TC followed by the international name of the tropical cyclone given by the corresponding WMO RSMC. If the TC has not yet been given a name, the abbreviation NN shall be used.

Examples:

TC GLORIA
TC 04B
TC NN

3.4.5.3 Time of observation or indication of forecast

DRAFT

OBS [AT <GGgg>Z]
or
FCST [AT <GGgg>Z]

The time in UTC is given in hours and minutes, followed by the indicator Z. Normally, time is taken from own observations or from a TC advisory received from the responsible TCAC. If the TC is not yet observed in the FIR but the tropical cyclone advisory received from the responsible TCAC, or any other TC forecast used by the MWO, indicates that the TC is going to affect the FIR within the next 12 hrs, SIGMET should be issuedand the abbreviation FCST should be used.

Examples:
OBS AT 2330Z
FCST AT 1400Z

3.4.5.4 Location of the TC centre

<location>

The location of the TC centre is given by its lat, lon coordinates in degrees and minutes.

Examples:

N1535 E14230

3.4.5.5 Vertical and horizontal extent of the CB cloud formation around TC centre

CB TOP [ABV or BLW] <FLnnn> WI <nnnKM or nnnNM> OF CENTRE

Examples:

CB TOP ABV FL450 WI 200NM OF CENTRE
CB TOP FL500 WI 250KM OF CENTRE

3.4.5.6 Movement or expected movement

MOV <direction> <speed>KMH[KT]
or
STNR

Direction of movement is given with reference to one of the sixteen points of compass. Speed is given in KMH or KT. The abbreviation STNR is used if no significant movement is expected.

Examples:

MOV NW 30KMH
MOV NNW 30KMH
MOV E 25KT

3.4.5.7 Intensity change

The expected change of the intensity of the tropical cyclone is indicated by one of the following abbreviations:

INTSF – intensifying
WKN – weakening
NC – no change

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3.4.5.8 Forecast location of the TC centre at the end of the validity period of the SIGMET Message

FCST <GGgg>Z TC CENTRE <location>

Normally, the time given by GGggZ should be the same as the end of validity period indicated in the first line of the SIGMET message. Since the period of validity is up to 6 hours (normally, 6 hours), this is a 6-hour forecast of the position of the TC centre.

The location of the TC centre is given by its lat, lon coordinates following the general rules of reporting lat, lon information provided in Appendix D to this Guide.

Examples:

FCST 1200Z TC CENTRE N1430 E12800

3.4.6 ***Cancellation of SIGMET***

3.4.6.1 If, during the validity period of a SIGMET, the phenomenon for which the SIGMET had been issued is no longer occurring or no longer expected, this SIGMET should be cancelled by the issuing MWO. The cancellation is done by issuing the same type of SIGMET with the following structure:

- WMO heading with the same data type designator;
- first line, including the next sequence number followed by a new validity period, and
- second line, which contains the location indicator and name of the FIR or CTA, the combination CNL SIGMET, followed by the sequential number of the original SIGMET and its validity period.

Examples:

1. Cancellation of a WS or WC SIGMET with the following first line

WSXY31 YUSO 101200
YUDD SIGMET 5 VALID 101200/101600 YUSO-
YUDD SHANLON FIR …

Cancellation SIGMET:

WSXY31 YUSO 101430
YUDD SIGMET 6 VALID 101430/101600 YUSO-
YUDD SHANLON FIR CNL SIGMET 5 101200/101600=

2. Cancellation of a VA SIGMET

WVXY31 YUSO 131518
YUDD SIGMET 03 VALID 131515/132115 YUSO-
YUDD SHANLON FIR …

Cancellation SIGMET:

WVXY31 YUSO 132000
YUDD SIGMET 04 VALID 132000/132115 YUSO-
YUDD SHANLON FIR CNL SIGMET 03 13151500/132115 VA MOV TO YUDO FIR=

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APPENDIX A

List of the abbreviations and decode used in SIGMET

Abbreviation	Decode
ABV	Above
AND*	And
APRX	Approximate or approximately
AT	At *(followed by time)*
BLW	Below
BY*	By
CB	Cumulonimbus
CENTRE*	Centre *(used to indicate tropical cyclone centre)*
CLD	Cloud
CNL	Cancel *or* cancelled
CTA	Control area
DS	Duststorm
E	East *or* eastern longitude
EMBD	Embedded in layer *(to indicate CB embedded in layers of other clouds)*
ENE	East-Northeast
ERUPTION*	Eruption *(used to indicate volcanic eruption)*
ESE	East=Southeast
FCST	Forecast
FIR	Flight information region
FL	Flight level
FRQ	Frequent
FZRA	Freezing rain
GR	Hail
HVY	Heavy *(used to indicate intensity of weather phenomena)*
ICE	Icing
INTSF	Intensify *or* intensifying
ISOL	Isolated
KM	Kilometres
KMH	Kilometres per hour
KT	Knots
LINE	Line
MOD	Moderate *(used to indicate intensity of weather phenomena)*
MOV	Move *or* moving *or* movement
MPS	Metres per second
MT	Mountain
MTW	Mountain waves
N	North *or* northern latitude
NC	No change
NE	North-east
NM	Nautical miles
NNE	North-Northeast
NNW	North-Northwest
NW	North-west
OBS	Observe *or* observed *or* observation
OBSC	Obscure *or* obscured *or* obscuring
OCNL	Occasional *or* occasionally
OF*	Of … *(place)*
PSN	Position
RA	Rain
RDOACT*	Radioactive

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Abbreviation	Decode
S	South *or* southern latitude
SE	South-east
SEV	Severe *(used e.g. to qualify icing and turbulence reports)*
SIGMET	Information concerning en-route weather phenomena which may affect the safety of aircraft operations
SQL	Squall line
SS	Sandstorm
SSE	South-Southeast
SSW	South-Southwest
STNR	Stationary
SW	South-west
TC	Tropical cyclone
TO	To … *(place)*
TOP	Cloud top
TS	Thunderstorm
TURB	Turbulence
UIR	Upper flight information region
VA	Volcanic ash
VALID*	Valid
W	West *or* western longitude
WI	Within
WID	Width
WNW	West-Northwest
WSW	West-Southwest
Z	Coordinated Universal Time *(used in meteorological messages)*

** not in the ICAO Doc 8400, ICAO Abbreviations and Codes*

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APPENDIX B

List of MID SIGMET (WS, WV and WC) headers

State	MWO name (Doc 7910)	MWO Loc. Ind.	WS AHL	WV AHL	WC AHL	FIR Name (Doc 7910)	FIR Loc. Ind.	ATSU serving the FIR
BAHRAIN	BAHRAIN INTERNATIONAL	OBBI	WS[AAii] [CCCC]	WV[AAii] [CCCC]	WC[AAii] [CCCC]	BAHRAIN	OBBB	OBBB
EGYPT	CAIRO/INTL	HECA	WS[AAii] [CCCC]	WV[AAii] [CCCC]	N/A	CAIRO	HECC	HECC
IRAN (ISLAMIC REPUBLIC OF)	TEHRAN/MEHRABAD INTL	OIII	WS[AAii] [CCCC]	WV[AAii] [CCCC]	WC[AAii] [CCCC]	TEHRAN	OIIX	OIIX
IRAQ	BAGHDAD INTERNATIONAL AIRPORT	ORBI	WS[AAii] [CCCC]	WV[AAii] [CCCC]	N/A	BAGHDAD	ORBB	ORBS
ISRAEL	TEL-AVIV/BEN GURION AIRPORT	LLBG	WS[AAii] [CCCC]	WV[AAii] [CCCC]	N/A	TEL AVIV	LLLL	LLAD
JORDAN	AMMAN/QUEEN ALIA	OJAI	WS[AAii] [CCCC]	WV[AAii] [CCCC]	N/A	AMMAN	OJAC	OJAC
KUWAIT	KUWAIT/INTL AIRPORT	OKBK	WSKW10 OKBK	WVKW10 OKBK	WCKW10 OKBK	KUWAIT	OKAC	OKAC
LEBANON	BEIRUT/BEIRUT INTL	OLBA	WS[AAii] [CCCC]	WV[AAii] [CCCC]	N/A	BEIRUT	OLBB	OLBA
OMAN	MUSCAT/SEEB INTL	OOMS	WS[AAii] [CCCC]	WV[AAii] [CCCC]	WC[AAii] [CCCC]	MUSCAT	OOMM	OOMM
SAUDI ARABIA	JEDDAH/KING ABDULAZIZ INTL	OEJN	WS[AAii] [CCCC]	WV[AAii] [CCCC]	WC[AAii] [CCCC]	JEDDAH	OEJD	OEJD
SYRIAN ARAB REPUBLIC	DAMASCUS/INTL	OSDI	WS[AAii] [CCCC]	WV[AAii] [CCCC]	N/A	DAMASCUS	OSTT	OSDI
UNITED ARAB EMIRATES	ABU DHABI INTERNATIONAL	OMAA	WS[AAii] [CCCC]	WV[AAii] [CCCC]	WC[AAii] [CCCC]	EMIRATES	OMAE	OMAE
YEMEN	SANAA/INTL	OYSN	WS[AAii] [CCCC]	WV[AAii] [CCCC]	WC[AAii] [CCCC]	SANAA	OYSC	OYSN

Note 1: Qatar is not indicated in the above table, since it has no FIR area if responsibility.

Note 2: The AHL for each of the WS, WV and WC SIGMETs (highlighted above) is to be completed based on information provided by the State(s) concerned following consultation.

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APPENDIX C

Meteorological phenomena to be reported by SIGMET

Phenomenon	Description	Meaning
Thunderstorm (TS)	OBSC[2] TS EMBD[3] TS FRQ[4] TS SQL[5] TS OBSC TSGR EMBD TSGR FRQ TSGR SQL TSGR	Obscured thunderstorm(s) Embedded thunderstorm(s) Frequent thunderstorm(s) Squall line thunderstorm(s) Obscured thunderstorm(s) with hail Embedded thunderstorm(s) with hail Frequent thunderstorm(s) with hail Squall line thunderstorm(s) with hail
Tropical cyclone (TC)	TC (+ TC name)	Tropical cyclone (+ TC name)
Turbulence (TURB)	SEV TURB[6]	Severe turbulence
Icing (ICE)	SEV ICE SEV ICE (FZRA)	Severe icing Severe icing due to freezing rain
Mountain wave (MTW)	SEV MTW[7]	Severe mountain wave
Duststorm (DS)	HVY DS	Heavy duststorm
Sandstorm (SS)	HVY SS	Heavy sandstorm
Volcanic ash cloud (VA)	VA (+ volcano name, if known)	Volcanic ash (+ volcano name)
Radioactive cloud	RDOACT CLD	Radioactive cloud

Notes:

1. Only one of the weather phenomena listed should be selected and included in each SIGMET

*2. Obscured (**OBSC**) indicates that the thunderstorm is obscured by haze or smoke or cannot be readily seen due to darkness*

*3. Embedded (**EMBD**) – indicates that the thunderstorm is embedded within cloud layers and cannot be readily recognized*

*4. Frequent (**FRQ**) indicates an area of thunderstorms within which there is little or no separation between adjacent thunderstorms with a maximum spatial coverage greater than 75% of the area affected, or forecasts to be affected, by the phenomenon (at a fixed time or during the period of validity)*

*5. Squall line (**SQL**) indicates thunderstorms along a line with little or no space between individual clouds*

*6. Severe (**SEV**) turbulence (**TURB**) refers only to:*
- *low-level turbulence associated with strong surface winds;*
- *rotor streaming;*
- *turbulence whether in cloud or not in cloud (CAT) near to jet streams.*
- *Turbulence is considered severe whenever the peak value of the cube root of the eddy dissipation rate (EDR) exceeds 0.7.*

*7. A mountain wave (**MTW**) is considered:*
- *severe – whenever an accompanying downdraft of 3.0 m/s (600 ft/min) or more and/or severe turbulence is observed or forecasted..*

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APPENDIX D

Guidelines for reporting geographical coordinates in SIGMET

When reporting geographical coordinates of points in SIGMET the following should apply:

1. Each point is represented by latitude/longitude coordinates in whole degrees or degrees and minutes in the form:

N(S)nn[nn] W(E)nnn[nn]

Note: There is a space between the latitude and longitude value.

Examples:

N3623 W04515

S1530 E12500

N42 E023

2. In describing lines or polygons, the latitude, longitude coordinates of the respective points are separated by the combination space-hyphen-space, as in the following examples:

S0530 E09300 – N0100 E09530 – N1215 E11045 – S0820 E10330

S05 E093 – N01 E095 – N12 E110 – S08 E103

Note1: It is not necessary to repeat the first point when describing a polygon.

Note 2: In the case of the same phenomenon covering more than one area within the FIR, these elements may be repeated, as necessary.

3. When describing a volcanic ash cloud approximate form and position, a limited number of points, which form a simplified geometric figure (a line, or a triangle, or quadrangle, etc.) should be used in order to allow for a straightforward interpretation by the user.

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TERMS OF REFERENCE OF THE MID OPMET BULLETIN MANAGEMENT GROUP (MID OPMET BMG)

1. Terms of Reference

a) Review the OPMET exchange schemes in the MID Region and develop proposals for their optimization taking into account the current trends in the global OPMET exchange;

b) Develop monitoring and management procedures related to the ROBEX exchange and other exchanges of OPMET information;

c) Keep up-to-date the regional guidance material related to OPMET exchange;

d) Liaise with similar groups in the adjacent ICAO Regions in order to ensure harmonized and seamless OPMET exchange; and

e) The group will report to the MET Sub-Group of MIDANPIRG.

2. Work Programme

The work to be addressed by the MID OPMET BMG includes:

a) examine the existing requirements and any new requirements for the OPMET exchange in MID Region and to assess the feasibility of satisfying these requirements, taking into account the availability of the data;

b) review the ROBEX scheme and other OPMET exchange schemes and prepare proposal for updating and optimizing of the schemes;

c) review and update the procedures for interregional exchange and for transmission of the regional OPMET data to SADIS;

d) review and amend the regional guidance materials on the OPMET exchange and include procedures for the exchange of all required OPMET message types: SA, SP, FC, FT, WS, WC, WV, FK, FV, UA;

e) develop procedures for monitoring and management of the OPMET information, based on similar procedures used in the EUR and APAC Regions; and

f) provide regular progress reports to MET SG meetings.

3. Composition

a) The OPMET/BMG is composed by experts from Egypt, Iran, Kuwait and Oman (Rapporteur). Bahrain, Saudi Arabia and UAE are also expected to participate in the activity of the Group; and

b) Experts from the EUR OPMET Data Management Group (DMG), the VAAC Toulouse, APAC OPMET/M Task Force and IATA are invited to participate in the work of the MID OPMET BMG.

4. Working arrangements

It is expected that most of the work of the group will be conducted via correspondence by fax, e-mail or telephone. The group should establish a network of OPMET focal points at all MID COM/MET centres dealing with OPMET data. When necessary, the Rapporteur, in coordination with the Regional Office, Cairo, will call teleconferences or meetings to discuss important issues.

REGIONAL SURVEY ON THE IMPLEMENTATION OF METEOROLOGICAL SERVICES AND FACILITIES

A. Background

In response to Middle East Planning and Implementation Regional Group (MIDANPIRG) Conclusion 12/70, the MID Regional Office has been tasked to conduct a regional survey on the status of implementation of the meteorological services and facilities in the MID Region, including up-to-date information on the designated meteorological authorities and authorised meteorological service provider(s).

This regional survey is designed to collect information that can be used as a benchmark for measuring the success of the activities conducted by the Meteorological Sub-Group (MET SG) of the MIDANPIRG in accordance with its work programme. Such a survey will also help in the identification of MET deficiencies.

In order to ensure the relative currency of the information, the MID Regional Office expects to conduct the survey at least once every 18 months, in keeping with the schedule of MET SG meetings.

Please complete sections B1 to B3 in full. At section B4, please answer each question in turn by placing an 'X' in the appropriate box. If necessary, please provide additional remarks in the 'Comments' column.

B. Regional Survey

1. Respondent

STATE:	
Organisation:	
Name:	
Position:	
Contact address:	
Contact telephone:	
Contact fax:	
Contact email:	

2. Meteorological Authority

Organisation:	
Focal point of contact:	
Contact address:	
Contact telephone:	
Contact fax:	
Contact email:	

3. Meteorological Service Provider

Organisation:	
Focal point of contact:	
Contact address:	
Contact telephone:	
Contact fax:	
Contact email:	

4. Questionnaire (over page)

Please place an ‘X’ in the appropriate column. Only one answer is permissible per question. If necessary, please provide any relevant comments in the final column.

QUESTION NUMBER	QUESTION	ANSWER			COMMENTS
		YES	NO	NOT APPLICABLE OR UNSURE	
Meteorological Services - Oversight					
1.	Is the MET authority of the State also the provider of MET services?				
2.	If not, has the MET authority of the State delegated the provision of the service to a non-governmental agency or another State?				
3.	Does the State ensure that an agreement has been established between ATS authorities and MET authorities for the provision of MET services?				
4.	Does the State ensure that the MET authority employs a sufficient number of qualified MET staff in the inspectorate?				
5.	Are all the functions and responsibilities of the MET inspectorate clearly defined?				
6.	Have job descriptions been developed for MET inspectorate staff?				
7.	Has the State established minimum qualifications and experience requirements for MET inspectorate personnel?				
8.	Has the State developed a formal training programme detailing what type of training should be provided to its MET inspectorate staff?				
9.	Does the MET authority develop a periodic training plan detailing and prioritizing what type of training will be provided during the established period?				
10.	Is the training programme appropriately implemented for MET inspectorate staff?				

QUESTION NUMBER	QUESTION	ANSWER			COMMENTS
		YES	NO	NOT APPLICABLE OR UNSURE	
11.	Are MET inspectorate staff required to satisfactorily complete on-the-job training prior to being assigned tasks and responsibilities?				
12.	Does the MET inspectorate have a system for the maintenance of training records for its technical staff?				
13.	Does the State effectively conduct safety oversight over the entity providing the MET service?				
14.	Has the State established a mechanism/system with time frame for elimination of deficiencies identified by MET inspectorate staff?				
Meteorological Services - Operational					
15.	Does the State ensure that the entity providing the MET service has established a properly organized quality system?				
16.	Does the State ensure that the entity providing the MET service has developed job descriptions for its technical staff?				
17.	Does the State ensure that the entity providing the MET service has established a training programme for its technical staff?				
18.	Does the State ensure that the entity providing the MET service maintains training records for its technical staff?				
19.	Does the State ensure that the wind sensors for local routine reports are appropriately sited to give the best practicable indication of conditions along the runway/touchdown zone?				
20.	Do MET Watch Offices issue SIGMET messages,				

QUESTION NUMBER	QUESTION	ANSWER			COMMENTS
		YES	NO	NOT APPLICABLE OR UNSURE	
	including those for volcanic ash and tropical cyclones?				
21.	Does the State ensure that provisions related to special air-reports, including those for volcanic ash, are being adhered to concerning their relay to the relevant MET offices?				
22.	Does the State ensure that MET offices issue wind shear warnings for aerodromes where wind shear is considered as a safety factor?				
23.	Does the State ensure that the MET authority, in coordination with the ATS authority, has promulgated regulatory criteria for special observations?				
24.	Does the State ensure that the MET offices issue local routine and special reports?				
25.	Does the State ensure that the MET offices issue METAR, SPECI and TAF?				
26.	Are MET offices readily accessible to provide briefing, consultation and flight documentation to flight crew members and/or other flight operations personnel?				
27.	Does the State ensure that the following reports are issued in accordance with the format in Annex 3? 1. Local routine and local special reports 2. METAR and SPECI 3. TAF 4. SIGMET and AIRMET 5. Aerodrome warning and wind shear warning				

RECOMMENDATIONS FROM THE QMS FOR MET SEMINAR

(13 -14 December 2009, MID Regional Office, Cairo)

In order to expedite the implementation of a Quality Management System for Meteorological Service to International Air Navigation, the seminar recommends that MID States that have not already done so should:

1. Engender a top level management commitment by:
    a. fostering a quality culture within the organization concerned;
    b. providing sufficient financial resources; and
    c. providing appropriate human resources.

2. Appoint a Quality Manager/Team.

3. Conduct a gap analysis and ensure that necessary technical documentation is available and maintained, and create initial QMS documentation using the examples provided.

4. Engage a consultant and ensure that adequate internal training and awareness is provided to all staff concerned.

5. Identify internal and external customers, and take necessary measures to determine, satisfy and continuously monitor their requirements.

6. Share experience and exchange information related to implementation of QMS for MET service.

REPORT ON AGENDA ITEM 5: PERFORMANCE FRAMEWORK FOR REGIONAL AIR NAVIGATION PLANNING AND IMPLEMENTATION

5.7 TRAFFIC FORECASTING

5.7.1 The meeting reviewed the outcomes of the third meeting of Traffic Forecasting Sub-Group (TF SG/3 April 2009) held at the ICAO Regional Office in Cairo. In this regard, the meeting agreed to maintain Conclusion 11/85 adopted by MIDANPIRG/11 meeting as the basis for the work programme of the Sub-Group .

CONCLUSION 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.

5.7.2 The meeting was presented with the passenger traffic forecast developed by ICAO and adopted by TF SG/3 meeting for the five major route groups to, from and within the Middle East Region for the period 2007-2025 as at **Appendix 5.7A** to the Report on Agenda Item 5.7. According to these forecasts, the number of passengers is expected to increase at an average annual rate of 8.2 per cent. The Intra-Middle East passenger traffic is expected to experience the highest average annual growth rate of 11.4 per cent per annum and the number of aircraft movements is forecasted to grow from about 625 thousand to above 2.3 million movements at an average annual growth rate of 7.6 per cent. The meeting adopted the forecast and was of opinion that the future forecasts should be expanded to cover Egypt.

Inventory of Air Navigation Equipment on Board Aircraft and on the Ground

5.7.3 The meeting was briefed on ICAO new proposal to collect data on air navigation equipment on board aircraft (avionics) and on the ground, on a regular basis. The proposal was presented to the ICAO Statistics Panel Meeting held in Montreal in November 2009. Several States in that panel expressed concerns with regard to the additional burden the proposed data collection would put on national civil aviation administrations and aircraft operators. Hence, in order to minimize the burden on States and aircraft operators, the panel agreed to establish a joint ICAO-Industry working group to explore ways and means to collect data on navigation equipment on board aircraft and on the ground.

FIR Data from States

5.7.4 The meeting noted with appreciation the support and commitment of Bahrain and Saudi Arabia to traffic forecasting activities within the MID Region and, empahssized on the importance of the availability of complete and reliable traffic and financial data for the development of traffic forecasts and re-iterated its request to MID States to provide ICAO with the data as required by its Statistics program in addition the occasional requests needed for specific analyses.

MIDANPIRG/12
Appendix 5.7A to the Report on Agenda Item 5.7

MOVEMENT FORECASTS FOR THE MIDDLE EAST REGION

October 2008

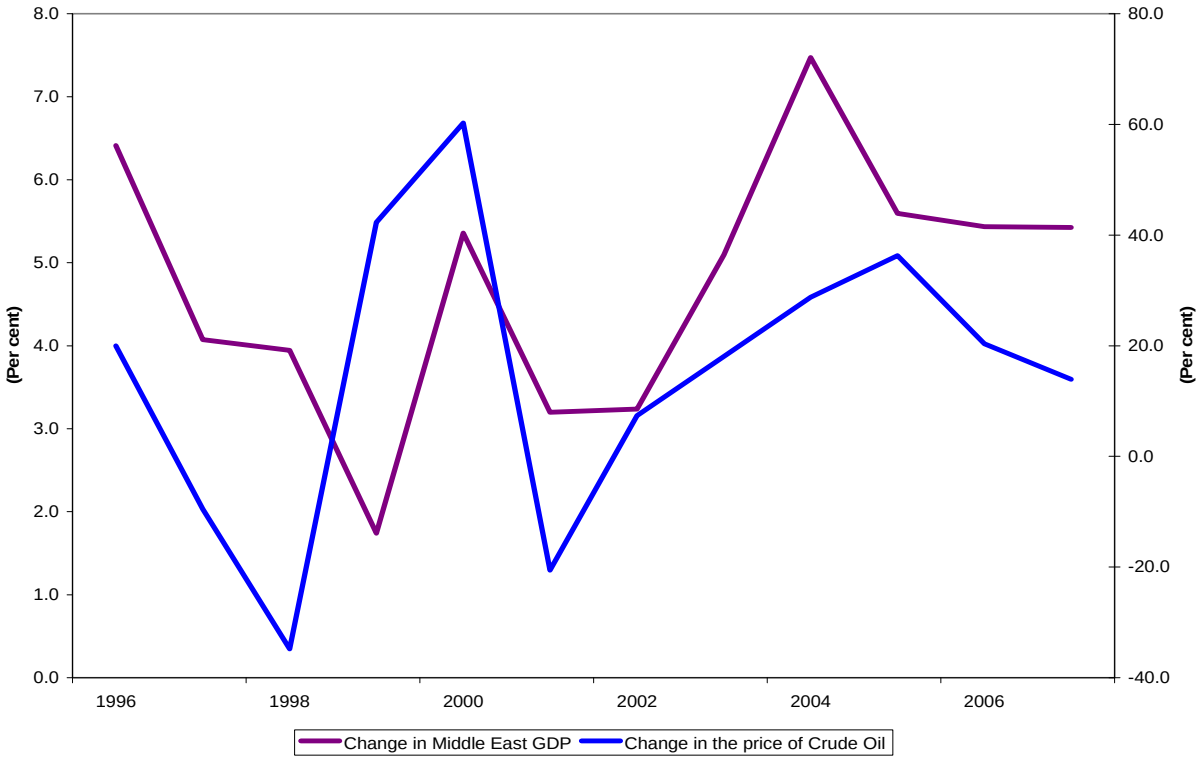
1. INTRODUCTION

1.1 The MIDANPIRG Traffic Forecasting Sub-Group (TFSG) superseded, in 2004, the Middle East Traffic Forecasting Group (AFI 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 AFI region. The TFSG has, so far, held three meetings in September 2004, in May 2006and in April 2009.

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 Fuel Prices
(per cent)



2.2 The recent hike in oil prices since 2002 has helped the economy of the region grow at faster rates through increased investment particularly in construction projects, higher trade volumes and tourism activity. This particularly fast pace of growth has 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. This is expected in the short term to lead governments to intervene to control inflation and lay the ground for more sustainable growth. It is also expected that the impact of the global financial crisis on the economy of the region will be manageable. 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 per cent for the 2007-2025 periods.

3. GEOGRAPHICAL SCOPE AND HISTORICAL DATA

3.1 Geographical Scope

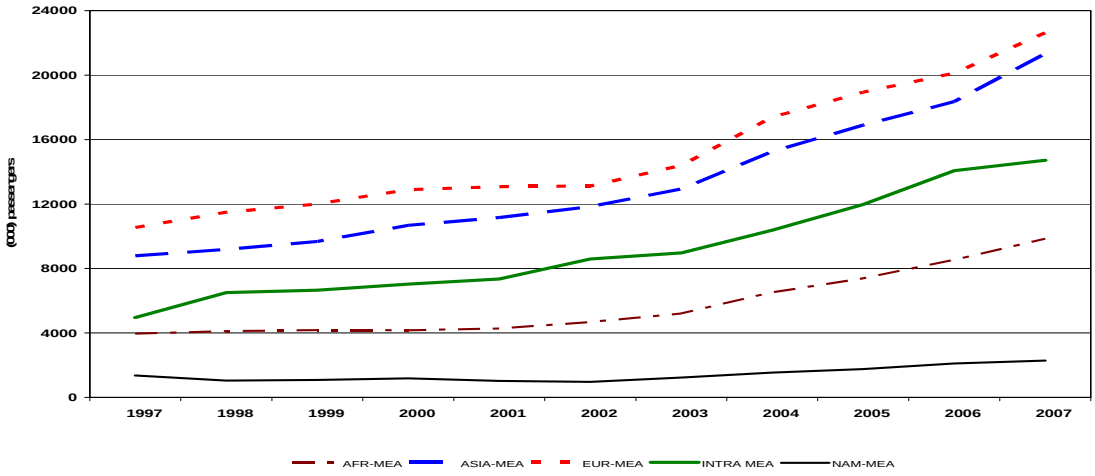
3.1.1 In order to facilitate the group's work and the forecasting process, the following major route groups to; from and within the Middle East Region have been identified:

- 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 It is estimated that the air traffic on the identified five major route groups to, from and within the Middle East region increased from about 30 million in 1997 to more than 70 million passengers in 2007 at an average annual growth rate of 9.1 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 - 1997 -2007
(Thousand Passengers)



3.2.2 All route groups grew at an average annual rate ranging from 5.3 per cent to 11.5 per cent.

3.2.3 In 2007, the Middle East-Europe route group had the highest share in passenger traffic (32 per cent), followed by Middle East-Asia (30 per cent), Intra Middle East (21 per cent), Middle East-Africa, and Middle East-North America route groups.

3.3 Historical Average Aircraft Seating Capacity on Major Identified Route Groups

3.3.1 During the 1997-2007 period, the average aircraft seating capacity has decreased significantly on the Middle East –North America and moderately on Middle East-Asia Pacific route groups. This average has fluctuated in the range of 208-229 seats per aircraft for the Middle East Africa and the Middle East-Europe route groups while it has increased from around 181 to 190 seats per aircraft for the Intra-Middle East route group, during the same period. The historical trends of the average aircraft seating capacity by route group is provided in **Table 1** below.

TABLE 1
Average aircraft seating capacity by route group

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
AFR-MEA	213	216	210	209	218	221	214	209	214	229	227
ASIA-MEA	266	266	263	266	266	257	259	250	246	249	253
EUR-MEA	217	219	213	208	211	213	218	222	219	224	226
INTRA MEA	181	185	180	185	185	188	190	193	193	192	190
NAM-MEA	376	343	312	311	304	312	307	296	295	292	291

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 1997 to 2007. 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 1997-2007

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
AFR-MEA	58.9	59.5	58.5	58.3	61.1	63.8	65.1	68.7	70	67.8	70
ASIA-MEA	65.4	67.5	66.1	68.9	69.7	72.7	69.8	72.1	74.3	77.3	79.7
EUR-MEA	65.9	66.2	65.9	68.1	66.3	69.1	68.1	70.6	72.1	70.4	74.8

INTRA MEA	58.3	65.1	58.9	60	61.9	61.2	63.9	66.2	66.8	66.1	64.8
NAM-MEA	71.7	67.8	66.5	71.7	72.8	75.5	75.7	78.6	81.7	80.6	80.3

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:

$$\text{Aircraft movements} = \frac{\text{passenger numbers}}{(\text{passenger/seats}) \,.\, (\text{seats/aircraft})}$$

$$= \frac{\text{passenger numbers}}{(\text{load factor}) \,.\, (\text{aircraft seating capacity})}$$

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 movement forecasts for the year 2025 were estimated. These forecasts were developed for each of the major route groups concerned using the 2007 OAG (Official Airline Guide) data as the base year.

5. PASSENGER TRAFFIC FORECASTS

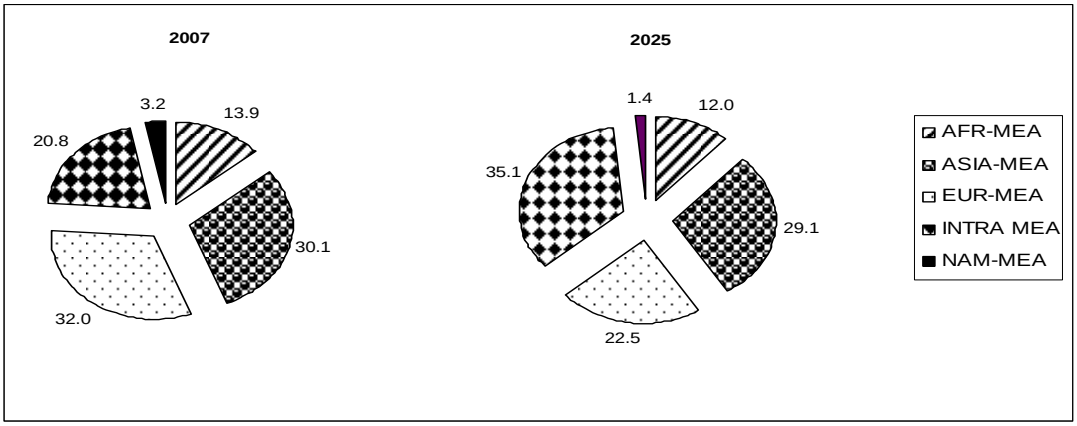
5.1 Based on the methodology described above, passenger traffic forecasts were developed for the major route groups concerned (Table 6). The traffic to, from and within the Middle East region on the five major route groups concerned for the period 2007-2025 is expected to increase at an average annual rate of 8.2 per cent. The Intra-Middle East route group is expected to experience the highest average annual growth rate of 11.4 per cent per annum, followed by Asia/Pacific-Middle East, Africa-Middle East, Europe-Middle East and North America-Middle East route groups with growth rates of 8 per cent, 7.3 per cent, 6.1 per cent and 3.1 per cent respectively for the period concerned as illustrated in **Table 3**.

TABLE 3
Passenger Forecast to the Year 2025
(Thousand Passengers)

	Actual		Forecast	Average Annual Growths (per cent)	
	1997	2007	2025	1997-2007	2007-2025
AFR-MEA	3955	9843	34987	9.5	7.3
ASIA-MEA	8786	21334	85250	9.3	8.0
EUR-MEA	10542	22631	65704	7.9	6.1
INTRA MEA	4958	14709	102687	11.5	11.4
NAM-MEA	1362	2281	3951	5.3	3.1
TOTAL	29603	70798	292580	9.1	8.2

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 movement 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 2007-2025 Period

	1997	2007	2025		1997	2007	2025
AFR-MEA	213	227	220	**AFR-MEA**	58.9	70	75
ASIA-MEA	266	253	350	**ASIA-MEA**	65.4	79.7	75
EUR-MEA	217	226	300	**EUR-MEA**	65.9	74.8	75
INTRA MEA	181	190	220	**INTRA MEA**	58.3	64.8	70
NAM-MEA	376	291	300	**NAM-MEA**	71.7	80.3	80

6.2 Using the methodology described above, movement forecasts for the major route groups for the 2007-2025 period are depicted in **Table 5**.

TABLE 5

Aircraft Movements Forecast to the Year 2025

	Actual 2007	Forecast 2025	Average Annual (per cent) 2007-2025	Growths
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	

6.3 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 4**.

FIGURE 4
Shares of Selected Route Groups in Aircraft Movements

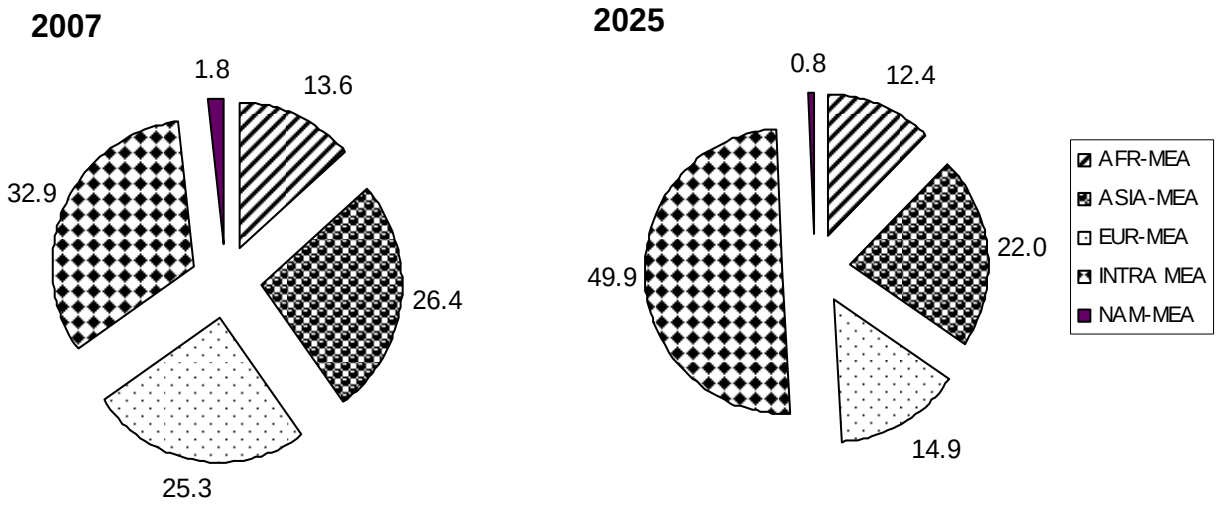


TABLE 6

BETWEEN MIDDLE EAST AND ASIA /PACIFIC
TOP 25 CITY-PAIRS RANKED BY 2007 MOVEMENTS

Rank	City-Pair	No of aircraft movements 2007	2025	Average growth (Percent)
1	Karachi Pakistan-Dubai U.A. Emirates	6360	19758	6.5
2	Mumbai India-Dubai U.A. Emirates	4883	15170	6.5
3	Dubai U.A. Emirates-Delhi India	3358	10432	6.5
4	Singapore(Changi)-Dubai U.A. Emirates	2836	8810	6.5
5	Dubai U.A. Emirates-Bangkok (Intl) Thailand	2744	8525	6.5
6	Muscat (Intl) Oman-Mumbai India	2674	8307	6.5
7	Dubai U.A. Emirates-Colombo(Bandaranaike) Sri Lanka	2499	7764	6.5
8	Dubai U.A. Emirates-Chennai India	2277	7074	6.5
9	Dubai U.A. Emirates-Dhaka Bangladesh	2048	6362	6.5
10	Lahore Pakistan-Dubai U.A. Emirates	1989	6179	6.5
11	Shamshabad India-Dubai U.A. Emirates	1914	5946	6.5
12	Dubai U.A. Emirates-Beijing(Capital) China	1897	5893	6.5
13	Hong Kong(Intl) China-Dubai U.A. Emirates	1773	5508	6.5
14	Doha(Intl) Qatar-Colombo(Bandaranaike) Sri Lanka	1681	5222	6.5
15	Islamabad Pakistan-Dubai U.A. Emirates	1661	5160	6.5
16	Sharjah U.A. Emirates-Kochi India	1655	5142	6.5
17	Karachi Pakistan-Jeddah Saudi Arabia	1619	5030	6.5
18	Mumbai India-Kuwait	1590	4940	6.5
19	Kabul Afghanistan-Dubai U.A. Emirates	1504	4672	6.5
20	Bangkok (Intl) Thailand-Abu Dhabi(Intl) U.A. Emirates	1486	4616	6.5
21	Karachi Pakistan-Abu Dhabi(Intl) U.A. Emirates	1481	4601	6.5
22	Doha(Intl) Qatar-Bangkok (Intl) Thailand	1467	4557	6.5
23	Sharjah U.A. Emirates-Mumbai India	1460	4536	6.5
24	Perth WA Australia-Dubai U.A. Emirates	1460	4536	6.5
25	Muscat (Intl) Oman-Karachi Pakistan	1458	4530	6.5
	All Other	109590	341708	6.5
	Total	165364	514979	6.5

BETWEEN MIDDLE EAST AND EUROPE
TOP 25 CITY-PAIRS RANKED BY 2007 MOVEMENTS

Rank	City-Pair	No of aircraft movements 2007	2025	Average growth (Percent)
1	London(Heathrow) England UK-Dubai U.A. Emirates	7165	15824	4.5
2	Tel Aviv(Ben Gurion) Israel-Paris(Charles De Gaulle) France	3356	7412	4.5
3	Paris (Charles De Gaulle) France-Dubai U.A. Emirates	2724	6016	4.5
4	Tel Aviv (Ben Gurion) Israel-Moscow(Domodedovo) Russian Fed.	2699	5961	4.5
5	Zurich Switzerland-Tel Aviv(Ben Gurion) Israel	2659	5872	4.5
6	Tel Aviv(Ben Gurion) Israel-London(Heathrow) England UK	2610	5764	4.5
7	Frankfurt Germany-Dubai U.A. Emirates	2504	5530	4.5
8	London(Heathrow) England UK-Bahrain	2305	5091	4.5
9	London(Heathrow) England UK-Abu Dhabi(Intl) U.A. Emirates	2234	4934	4.5
10	London(Gatwick) England UK-Dubai U.A. Emirates	2196	4850	4.5
11	Zurich Switzerland-Dubai U.A. Emirates	2190	4837	4.5
12	London(Heathrow) England UK-Doha(Intl) Qatar	2186	4828	4.5
13	Paris (Charles De Gaulle) France-Beirut Lebanon	2118	4678	4.5
14	Tel Aviv(Ben Gurion) Israel-Frankfurt Germany	2104	4647	4.5
15	Vienna Austria-Tel Aviv(Ben Gurion) Israel	1966	4342	4.5
16	Tel Aviv(Ben Gurion) Israel-Istanbul (Ataturk) Turkey	1908	4214	4.5
17	Istanbul (Ataturk) Turkey-Dubai U.A. Emirates	1881	4154	4.5
18	Tel Aviv(Ben Gurion) Israel-Milan (Malpensa) Italy	1788	3949	4.5
19	Munich(Intl) Germany-Dubai U.A. Emirates	1752	3869	4.5
20	Tel Aviv(Ben Gurion) Israel-Bucharest(Otopeni) Romania	1719	3796	4.5
21	Tel Aviv(Ben Gurion) Israel-Kiev(Borispol) Ukraine	1640	3622	4.5
22	Tel Aviv(Ben Gurion) Israel-Madrid Spain	1600	3534	4.5
23	Tel Aviv(Ben Gurion) Israel-Rome(Fiumicino) Italy	1597	3527	4.5
24	Larnaca Cyprus-Beirut Lebanon	1495	3302	4.5
25	Tel Aviv(Ben Gurion) Israel-Budapest Hungary	1485	3280	4.5
	All Other	100465	222551	4.5
	Total	158346	350380	4.5

INTRA MIDDLE EAST (INTERNATIONAL)
TOP 25 CITY-PAIRS RANKED BY 2007 MOVEMENTS

Rank	City-Pair	No of aircraft movements 2007	2025	Average growth (Percent)
1	Doha(Intl) Qatar-Bahrain	9050	51147	10.1
2	Dubai U.A. Emirates-Bahrain	8298	46897	10.1
3	Kuwait-Dubai U.A. Emirates	8261	46688	10.1
4	Dubai U.A. Emirates-Doha(Intl) Qatar	8231	46518	10.1
5	Muscat (Intl) Oman-Dubai U.A. Emirates	7503	42404	10.1
6	Tehran(Imam Khomeini Intl) Iran-Dubai U.A. Emirates	6813	38504	10.1
7	Istanbul (Ataturk) Turkey-Ercan Cyprus	5018	28360	10.1
8	Doha(Intl) Qatar-Abu Dhabi(Intl) U.A. Emirates	4984	28168	10.1
9	Kuwait-Bahrain	4707	26602	10.1
10	Bahrain-Abu Dhabi(Intl) U.A. Emirates	4643	26240	10.1
11	Muscat (Intl) Oman-Bahrain	4338	24517	10.1
12	Kuwait-Doha(Intl) Qatar	3533	19967	10.1
13	Kish Island Iran-Dubai U.A. Emirates	3476	19645	10.1
14	Dubai U.A. Emirates-Beirut Lebanon	3439	19436	10.1
15	Muscat (Intl) Oman-Abu Dhabi(Intl) U.A. Emirates	3364	19012	10.1
16	Riyadh Saudi Arabia-Dubai U.A. Emirates	2956	16706	10.1
17	Beirut Lebanon-Amman(Intl) Jordan	2830	15994	10.1
18	Jeddah Saudi Arabia-Dubai U.A. Emirates	2699	15254	10.1
19	Muscat (Intl) Oman-Doha(Intl) Qatar	2633	14881	10.1
20	Dubai U.A. Emirates-Amman(Intl) Jordan	2204	12456	10.1
21	Kuwait-Beirut Lebanon	2105	11897	10.1
22	Kuwait-Damascus Syria	2000	11303	10.1
23	Tel Aviv(Ben Gurion) Israel-Istanbul (Ataturk) Turkey	1908	10783	10.1
24	Istanbul (Ataturk) Turkey-Dubai U.A. Emirates	1881	10631	10.1
25	Shiraz Iran-Dubai U.A. Emirates	1668	9427	10.1
	All Other	97227	557273	10.1
	Total	205769	1170709	10.1

BETWEEN MIDDLE EAST AND AFRICA
TOP 25 CITY-PAIRS RANKED BY 2007 MOVEMENTS

Rank	City-Pair	No of aircraft movements 2007	2025	Average growth (Percent)
1	Jeddah Saudi Arabia-Cairo Egypt	6215	21362	7.1
2	Kuwait-Cairo Egypt	2901	9971	7.1
3	Riyadh Saudi Arabia-Cairo Egypt	2725	9366	7.1
4	Cairo Egypt-Amman(Intl) Jordan	2588	8896	7.1
5	Nairobi(Intl) Kenya-Dubai U.A. Emirates	2577	8858	7.1
6	Dubai U.A. Emirates-Cairo Egypt	2367	8136	7.1
7	Dubai U.A. Emirates-Addis Ababa Ethiopia	2150	7390	7.1
8	Cairo Egypt-Abu Dhabi(Intl) U.A. Emirates	1823	6266	7.1
9	Johannesburg(Tambo) South Africa-Dubai U.A. Emirates	1740	5981	7.1
10	Damman Saudi Arabia-Cairo Egypt	1645	5654	7.1
11	Doha(Intl) Qatar-Cairo Egypt	1594	5479	7.1
12	Istanbul (Ataturk) Turkey-Cairo Egypt	1589	5462	7.1
13	Cairo Egypt-Beirut Lebanon	1547	5317	7.1
14	Sanaa Yemen-Cairo Egypt	1399	4809	7.1
15	Kuwait-Alexandria(El Nozha) Egypt	1365	4692	7.1
16	Sharjah U.A. Emirates-Alexandria(El Nozha) Egypt	1308	4496	7.1
17	Cairo Egypt-Bahrain	1238	4255	7.1
18	Damascus Syria-Cairo Egypt	1225	4211	7.1
19	Lagos Nigeria-Dubai U.A. Emirates	1105	3798	7.1
20	Madinah Saudi Arabia-Cairo Egypt	1066	3664	7.1
21	Khartoum Sudan-Jeddah Saudi Arabia	1057	3633	7.1
22	Jeddah Saudi Arabia-Alexandria(El Nozha) Egypt	1042	3582	7.1
23	Luxor Egypt-Kuwait	1020	3506	7.1
24	Istanbul (Ataturk) Turkey-Algiers Algeria	929	3193	7.1
25	Khartoum Sudan-Dubai U.A. Emirates	838	2880	7.1
	All Other	39880	136301	7.1
	Total	84933	291159	7.1

BETWEEN MIDDLE EAST AND NORTH AMERICA
TOP 25 CITY-PAIRS RANKED BY 2007 MOVEMENTS

Rank	City-Pair	No of aircraft movements 2007	2025	Average growth (Percent)
1	Tel Aviv(Ben Gurion) Israel-Newark/New York(Liberty) NJ USA	2067	3491	3.0
2	New York(Kennedy) NY USA-Dubai U.A. Emirates	1460	2466	3.0
3	Tel Aviv(Ben Gurion) Israel-New York(Kennedy) NY USA	1423	2403	3.0
4	Toronto(Pearson Intl) ON Canada-Tel Aviv(Ben Gurion) Israel	813	1373	3.0
5	New York(Kennedy) NY USA-Abu Dhabi(Intl) U.A. Emirates	729	1231	3.0
6	Tel Aviv(Ben Gurion) Israel-Atlanta(Intl) GA USA	726	1226	3.0
7	Chicago(O'Hare) IL USA-Amman(Intl) Jordan	535	904	3.0
8	New York(Kennedy) NY USA-Amman(Intl) Jordan	468	790	3.0
9	Tel Aviv(Ben Gurion) Israel-Los Angeles(Intl) CA USA	340	574	3.0
10	Washington(Dulles Intl) DC USA-Doha(Intl) Qatar	332	561	3.0
11	Washington(Dulles Intl) DC USA-Kuwait	331	559	3.0
12	New York(Kennedy) NY USA-Kuwait	312	527	3.0
13	Dubai U.A. Emirates-Atlanta(Intl) GA USA	306	517	3.0
14	Tel Aviv(Ben Gurion) Israel-Miami(Intl) FL USA	278	469	3.0
15	Toronto(Pearson Intl) ON Canada-Abu Dhabi(Intl) U.A. Emirates	183	309	3.0
16	New York(Kennedy) NY USA-Jeddah Saudi Arabia	131	221	3.0
17	Montreal(P.E. Trudeau) QC Canada-Amman(Intl) Jordan	126	213	3.0
18	Detroit(Metro Wayne) MI USA-Amman(Intl) Jordan	112	189	3.0
19	Riyadh Saudi Arabia-New York(Kennedy) NY USA	74	125	3.0
20	Washington(Dulles Intl) DC USA-Riyadh Saudi Arabia	69	117	3.0
21	Muscat (Intl) Oman-Fictitious City Five	59	100	3.0
22	Toronto(Pearson Intl) ON Canada-Dubai U.A. Emirates	56	95	3.0
23	Washington(Dulles Intl) DC USA-Jeddah Saudi Arabia	39	66	3.0
24	Houston(G.Bush Intl) TX USA-Dubai U.A. Emirates	26	44	3.0
25	New York(Kennedy) NY USA-Madinah Saudi Arabia	2	3	3.0
	All Other	78	131	3.0
	Total	11075	18703	3.0

REPORT ON AGENDA ITEM 6: AIR NAVIGATION DEFICIENCIES AND SAFETY MATTERS

6.1 AIR NAVIGATION DEFICIENCIES

6.1.1 The meeting recalled that MIDANPIRG/10 and MIDANPIRG/11 noted with concern that many deficiencies continue to persist for a number of years.

6.1.2 The meeting noted that as a follow-up action to MIDANPIRG/11 Conclusion 11/86, the ICAO MID Regional Office issued a State Letter in January 2010 followed by another one in September 2010 requesting States, that have not done so, to send an official request to acquire access (username and password) to the MID Air Navigation Deficiency Database (MANDD), and give effect to the MIDANPIRG/11 Conclusion 11/86 by submitting online amendments to the list of air navigation deficiencies using MANDD.

6.1.3 The meeting noted that, as part of their Terms of Reference (TOR), all MIDANPIRG Subsidiary bodies carried out a review and update of the air navigation deficiencies related to their area of expertise. It was further noted that the ANS SG/1 meeting, held in Cairo, 21-23 June 2010, further reviewed and updated the deficiencies in all air navigation fields.

6.1.4 The meeting recognized the importance of the harmonization of the air navigation deficiency prioritization. The meeting noted with concern, that in many cases, two (2) or three (3) rationale for the non-elimination of deficiencies are reflected in the MANDD (i.e.: F, H and O or F, H and S), which does not provide an accurate result, when carrying out an analysis related to the root-causes for non-elimination of deficiencies. Accordingly, the meeting agreed that, to the extent possible, it is preferable to reflect in the MANDD only the major factor/rationale for the non-elimination of the concerned deficiency.

6.1.5 The meeting noted that the ANS SG/1 meeting carried out a quantitative analysis of the MID States' air navigation deficiencies *(as of 23 June 2010)*, based on the results shown in the tables and graphs presented as at **Appendices 6.1F** to **6.1J** to the Report on Agenda Item 6.1**,** which revealed the following:

- The total number of air navigation deficiencies recorded in MANDD is 187 deficiencies compared to 213 deficiencies approved by MIDANPIRG/11, which means that the number of deficiencies was reduced by 12.2%.

- The total number of deficiencies varies between 4 and 35 deficiencies per State as shown in **Appendix 6.1G** to the Report on Agenda Item 6.1**.**

- The distribution of these deficiencies between the different fields is as follows: AOP 27%, AIS/MAP 28%, ATM/SAR 30%, CNS 13%, and MET 2%.

- The priority for the elimination of air navigation deficiencies as well as their distribution by air navigation field is shown at **Appendix 6.1I** to the Report on Agenda Item 6.1: 31% "U", 46% "A", and 23% "B":

- o ***AIS/MAP***: 39% "U", 46% "A" , 15% "B"
- o ***AOP***: 68% "U", 32% "A"
- o ***ATM/SAR***: 16% "U", 51% "A", 33% "B"
- o ***CNS***: 29% "U", 46% "A", 25% "B"
- o ***MET***: 100% "A"

- The rationale for the non-elimination of deficiencies in the different air navigation fields is shown at **Appendix 6.1H** to the Report on Agenda Item 6.1: 20% "F", 32% "H", 20% "S", and 28% "O". Their distribution by air navigation field is shown at **Appendix 6.1J** to the Report on Agenda Item 6.1:

  - o ***AIS/MAP***: 25% "F", 37% "H", 6% "S", 32% "O"
  - o ***AOP***: 30% "F", 35% "H", 16% "S", 19% "O"
  - o ***ATM/SAR***: 1% "F", 28% "H", 53% "S", 18% "O"
  - o ***CNS***: 7% "F", 10% "H", 17% "S", 66% "O"
  - o ***MET***: 33% "F", 34% "H", 0% "S", 33% "O"

6.1.6 The meeting noted that during the review and analysis of the list of deficiencies, the ANS SG/1 meeting noted in particular, that six (6) deficiencies in the AOP field were eliminated; the remaining deficiencies were mainly related to the non-implementation of SMS and Aerodrome certification. Seven (7) deficiencies in the AIS/MAP field were eliminated; the lack of implementation of a Quality Management System (QMS) followed by the non-production of aeronautical charts and lack of AIS automation represent more than 70% of reported deficiencies. In the ATM/SAR field, although some progress has been achieved, twelve (12) deficiencies were eliminated, significant work is still required to eliminate the remaining deficiencies, which are related mainly to the lack of the (SAR) agreements, development of contingency plans, and SMS for ATS. In the CNS field, the meeting noted that eight (8) deficiencies were eliminated. This is due mainly to the implementation of upgraded links and installation of software for calculation of loading statistics. The meeting noted that the identification of deficiencies in the MET field has improved. In this regard, it was noted that four (4) new deficiencies have been identified while two (2) deficiencies have been removed. The majority of deficiencies (three) are related to the provision of 24 H Aerodrome Forecast (TAF) and the remaining one is related to the lack of dissemination of OPMET information.

6.1.7 The meeting underlined that the lack of sufficient number of qualified technical staff ("H": Human resources) is a significant factor for the non-elimination of deficiencies, especially those with priority "U" and "A". In this regard, the meeting noted that the distribution of the rationale for non-elimination of the priority "U" and "A" deficiencies is as follows: 18% "F", 29% "H", 13% "S", and 40% "O" as at **Appendix 6.1H** to the Report on Agenda Item 6.1. Accordingly, the meeting agreed that efforts should be made to further improve the competencies and professionalism of aviation personnel and to ensure that the training of aviation professionals is enhanced to meet the demand of new procedures and increasingly complex technologies and that this will lead to the overall enhancement of air navigation safety.

6.1.8 The meeting noted that all the figures presented above are based on the update of the deficiencies carried out by the ANS SG/1 meeting. The meeting reviewed and updated the list of deficiencies in the AOP, AIS/MAP, ATM/SAR, CNS and MET fields as at **Appendices 6.1A, 6.1B, 6.1C, 6.1D** and **6.1E,** to the Report on Agenda Item 6.1 respectively. It was highlighted that further to the update by the ANS SG/1 meeting, 22 deficiencies were eliminated. Accordingly, the

total number of air navigation deficiencies recorded in MANDD was further reduced to 165, which means a reduction of 22% compared to the deficiencies approved by the MIDANPIRG/11 meeting. The maximum number of deficiencies per State was also reduced from 35 to 27 as at **Appendix 6.1K** to the Report on Agenda Item 6.1.

6.1.9 The meeting recognized 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. Accordingly, the meeting urged User Organizations (IATA and IFALPA) to use the online facility offered by MANDD to submit requests for additions, updates, and the elimination of Air Navigation Deficiencies.

6.1.10 Based on the above, the meeting recognized the need for MID States to accord high priority to the elimination of their air navigation deficiencies, especially those with priority "U" and agreed to the following Conclusion which replaces and supersedes MIDANPIR/11Conclusion 11/86:

CONCLUSION 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.

MIDANPIRG/12
Appendix 6.1A to the Report on Agenda Item 6.1

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
1	Annex 14 Vol. 1.4.1, 1.4.4	Bahrain Intl Airport	Implementation of Certification of Aerodromes used for international operations.	Nov, 2006	Updated Information on Feb. 2009: Aerodrome Manual for Bahrain Int`l Airport is ready awaiting the completion of legislations.	H	Need to approve the developed Aerodrome Manual for the international aerodrome and insure it includes a Safety management system prior to granting the aerodrome certificate.	BCAA	Dec, 2011	U

(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	This restriction require runway upgrade and length extensionCAA has no plans, at the time being, to upgrade the said runway as it is not possible, from the engineering point of view, to upgrade these runways. However, Borg el Arab Airport runway can be used. List of alternate airports for Cairo FIR is to be revised. (PFA of MID FASID AOP1-Tables)	ECAA	Dec, 2011	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**
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.2011	ECAA	Nov, 2011	U

(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
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 2012	ECAA	Nov, 2012	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	need to have a visual cues to define a safe holding position prior to the intersection point of RWYs 18/36 and 04/22 and not to be lift to the pilot judgment to decide where to hold and how far from the RWY edge.	EAC	Nov, 2011	U

(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**
5	Annex 14 Volume I, Chapter 5	Cairo Int`l Airport	Taxiway marking to Stands are confusing as old markings are not removed.Problem exacerbated at night and when wet. Stop markings at new Terminal 2 difficult to interpret	Jan, 2008	-	F H O	Remove old markings	CAC	Dec, 2011	A
6	Annex 14 Volume I, Chapter 5	Aswan Int`l Airport	First 200m RWY 35 unusable. No displaced threshold markers	Jan, 2008	-	F H	Markers required	EAC	Nov, 2012	A

(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 Khomaini, 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	CAO & IAC	Dec, 2011	U
2	Annex 14 Vol. 1.4.1, 1.4.3, 1.4.4	Emam Khomaini, 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.	CAO & IAC	Dec, 2011	U

(1) Rationale for non-elimination: "F"= Financial "H"= Human Resources "S"= State (Military/political) "O"= Other unknown causes

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	ICAA	Dec, 2011	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	ICAA	Dec, 2011	U

(1) Rationale for non-elimination: "F"= Financial "H"= Human Resources "S"= State (Military/political) "O"= Other unknown causes

Deficiencies in the AOP Field

ISRAEL

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.I, FASID Table AOP-1MID/3 Rec. 1/3	Ovda Int. Airport	Threshold markings/lighting do not conform to ICAO SARPs.	Jul, 2000	State` update on 20 Sep 2010: Ovda Aerodrome is a military aerodrome. This item may not be corrected. A remark was added to the AIP.	S	-	EDF	Dec, 2011	A
2	Annex 14 Vol. IFASID Table AOP-1MID/3 Rec. 1/3	Ovda Int. Airport	No lighted sign with RWY designators	Jan, 2002	State` Update on 20 Sep 2010: Ovda Aerodrome is a military aerodrome. This item may not be corrected.	S	-	IDF	Dec, 2011	U
3	Annex 14 Vol. IFASID Table AOP-1MID/3 Rec. 1/3	Ovda Int. Airport	Non-Standard taxiways lighting	Jan, 2002	State` Update on 20 Sep 2010: Ovda Aerodrome is a military aerodrome. This item may not be corrected.	S	-	IDF	Dec, 2011	U

(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
4	Annex 14 Vol. IFASID Table AOP-1MID/3 Rec. 1/3	Ovda Int. Airport	Limited parking space	Jan, 2002	One wide-body plus 3 smaller aircraftNote:Recommended for operations with minima not less than alternate minima. State` update on 20 sep 2010: Ovda Aerodrome is a military aerodrome. This item may not be corrected	S	-	IDF	Dec, 2011	A
5	Annex 14 Vol. IFASID Table AOP-1 MID/3 Rec. 1/3	Tel Aviv/Ben Gurion Int. Airport	No taxiways to RWYs 26 and 21, and inbound from 08 and 03	Jan, 2003	For RWYs 26 and 21, taxing is on active RWYS. State update on 20 Sep 2010: This item is being corrected as part of the major upgrade program of the runways at Ben-Gurion International Aiport. This program is due to be completed by 2014.	S O	-	EDF	Jul, 2014	U

(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 14 Vol. IFASID Table AOP-1MID/3 Rec. 1/3	Elat Int. Airport	Aprons – limited space that is too close to runway	Jan, 2003	State update on 20 Sep. 2010: This item may not be corrected due to the aerodrome structure	S	-	EDF	Dec, 2011	U
7	Annex 14 Vol. IFASID Table AOP-1MID/3 Rec. 1/3	Elat Int. Airport	No taxiway	Jan, 2003	State update on 20 Sep 2010: No taxiway may be built due to the aerodrome structure	S	-	EDF	Dec, 2011	A
8	Annex 14 Vol. IFASID Table AOP-1, MID/3 Rec. 1/3	Tel Aviv/Ben Gurion Int. Airport	No high speed turn off end of RWYs: 21/03 and RWY 26	Jan, 2003	State update on 20 Sep. 2010: This item is being corrected as part of the major upgrade program of the runways at Ben-Gurion International Aerodrome. This program is due to be completed by 2014.	F O	-	EDF	Jul, 2014	A
9	Annex 14 Vol. IFASID Table AOP-1MID/3 Rec. 1/3	Elat Int. Airport	Localizer (LOC) App. and DME plus PAPIS	Jan, 2003	VOR/DME (LOT) available. Unstable LOC App due to ground movement interference (Notamed)Note:Not recommended for use by big jets (wide-body/4 engines)	H O	State update on 20 Sep. 2010: The PAPI was updated, and is now being approved for service. The Localizer was disassembled due to the unstable readings, and it is now being under consideration for reassembly with a new stable installation. No wide body airplanes are approved for landing at Eilat Aerodrome.	EDF	Dec, 2011	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
10	Annex 14 Vol. IFASID Table AOP-1MID/3 Rec. 1/3	Tel Aviv/Ben Gurion Int. Airport	Centre light RWY 26 too high from the asphalt may cause damage to tyres	Sep, 2004	State update on 20 sep. 2010: This item is being corrected as part of the major upgrade program of the runways at Ben-Gurion International Aerodrome. This program is due to be completed by June 2011.	S	-	EDF	Jun, 2011	U
11	Annex 14 Vol.1.5.1, 1.5.2, 1.5.3 & 1.5.4	Tel Aviv/Ben Gurion, Tel Avive/SDE DOV, Eilat, Ovda, Haifa Intl. Airports	Implementation of Aerodrome Operations Safety Management	Nov, 2006	-	F H	Aerodrome Safety Management System (SMS) will be implemented by the end of 2010. A state Safety Program (SSP) is being composed at the CAAI.	EDF	Dec, 2011	U

(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**
12	Annex 14 Vol. 1.4.1, 1.4.3	Tel Aviv/Ben Gurion, Tel Avive/SDE DOV, Eilat, Ovda, Haifa Intl. Airport,	mplementation of Certification of Aerodromes used for international operations	Nov, 2006	State update on 20 Sep 2010: According to the current Aerodrome regulations, every aerodrome operator has to present the Aerodrome Operation Manual to the CAA for approval, but there is no requirement for licensing of the Aerodrome. According to the draft of the Israeli Air Navigation Law, every Aerodromes operator shall need a license, and the regulations that deal with Aerodromes shall be updated, according to Annex 14 SARPs, within a fixed time frame	H S	Need to establish an appropriate regulatory framework. Need to establish a criteria for the certification of aerodromes. Need to devlope an Aerodrome Manual for each international aerodrome and insure it includes a safety management system prior to grant certification of each aerodrome.	EDF	Dec, 2011	U

(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**
13	Annex 14 Vol.I, Chapter 5 and MID ANP/FASID Tables	Tel Aviv/Ben Gurion Int. Airport	Visual Aids for taxiways and runways (signage, lighting and markings are not in accordance with ICAO SARPs	Jul, 2008	Number of visual aids discrepancies in relation to Annex 14 Vol. I, Chapter 5 at the Airport and need urgent corrective actions in accordance with ICAO SARPs and relevant specs. State` response on 20 Sep. 2010: This note is a general note, and is not quite understood. All visual aids for the taxiways and the runways, including signage, lighting and markings at Ben-Gurion International Airport are in accordance with ICAO Annex 14 SARPs:	H S O	Visual Aids and Taxi route are to be revised and to be rectified	EDF	Dec, 2011	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, 2011	U

(1) Rationale for non-elimination: "F"= Financial "H"= Human Resources "S"= State (Military/political) "O"= Other unknown causes

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	LCAA	Dec, 2011	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	LCAA	Dec, 2011	U

(1) Rationale for non-elimination: "F"= Financial "H"= Human Resources "S"= State (Military/political) "O"= Other unknown causes

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	-	F H	Need to devlope an Aerodrome Manual for each international aerodrome and insure it includes a safety management system prior to granting the aerodrome certificate	DGCAM	Dec, 2011	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	-	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	DGCAM	Dec, 2011	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
1	Annex 14 Vol. 1.5.1, 1.5.2, 1.5.3 & 1.5.4	Doha Intl. Airport	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	CAA	Dec, 2011	U
2	Annex 14 Vol. 1.4.1, 1.4.3, 1.4.4	Doha Intl. Airport	Implementation of Certification of Aerodromes used for international operations	Nov, 2006	-	H	Need to establish an appropriate regulatory framework. Need to establish a criteria for the certification of aerodromes. Need to devlope an Aerodrome Manual for each international aerodrome and insure it includes a safety management system prior to granti	CAA	Dec, 2011	U

(1) Rationale for non-elimination: "F"= Financial "H"= Human Resources "S"= State (Military/political) "O"= Other unknown causes

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	CAA	Dec, 2011	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	CAA	Dec, 2011	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	CAA	Dec, 2011	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 devlope an Aerodrome Manual for each international aerodrome and insure it includes a safety management system prior to granting the aerodrome certificate	CAA	Dec, 2011	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	CAA	Dec, 2011	U

(1) Rationale for non-elimination: "F"= Financial "H"= Human Resources "S"= State (Military/political) "O"= Other unknown causes

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	DGCA	Dec, 2011	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 devlope an Aerodrome Manual for each international aerodrome and insure it includes a safety management system prior to granti	GCAA	Dec, 2011	U

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(1) Rationale for non-elimination: "F"= Financial "H"= Human Resources "S"= State (Military/political) "O"= Other unknown causes

MIDANPIRG/12
Appendix 6.1B to the Report on Agenda Item 6.1

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

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+neighboring states	Jun, 2011	B
2	ANNEX 4: Para. 3.2	-	Non-production of Aerodrome Obstacle Chart-ICAO Type A	May, 1995	ICAO to follow up with State	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, 2011	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, 2011	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	ICAO to follow up with State	F H O	Need to fully comply with the AIRAC procedure	Iraq	Dec, 2011	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	Dec, 2011	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	Dec, 2011	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	Dec, 2011	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	Dec, 2011	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	Dec, 2011	U

(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**
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	Dec, 2011	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	Dec, 2011	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	Dec, 2011	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	Dec, 2011	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	Dec, 2011	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

ISRAEL

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	-	H	Implementation of QMS has been initiated in the ICAA. Completion date is expected by the end of 2011.	Israel	Dec, 2011	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

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-productionof World Aeronautical Chart – ICAO1:1 000 000	Feb, 2008	-	F H S	Need to produce the assigned sheets of the World Aeronautical Chart – ICAO 1:1 000 000	Jordan	Dec, 2009	B

(1) Rationale for non-elimination: "F"= Financial "H"= Human Resources "S"= State (Military/political) "O"= Other unknown causes

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 O	Need to introduce a properly organized quality system in conformity with ISO 9000 series of quality assurance standards.	Kuwait	Dec, 2010	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-productionof World Aeronautical Chart – ICAO1:1 000 000	May, 1995	-	F H S	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	-	F H	Need to introduce a properly organized quality system in conformity with ISO 9000 series of quality assurance standards.	Lebanon	Dec, 2010	U
3	ANNEX 15:Para. 3.7.2.4	-	Implementation of geoid undulation referenced to the WGS-84 ellipsoid.	Jan, 2003	ICAO to follow up with State to determine what action is needed to achieve implementation.	F H	Need to implement geoid undulation referenced to the WGS-84 ellipsoid.	Lebanon	Dec, 2011	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

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, 2011	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
1	ANNEX 15:Para. 3.2	-	Implementation of a Quality System	Jan, 2003	-	H O	Need to introduce a properly organized quality system in conformity with ISO 9000 series of quality assurance standards.	Qatar	Mar, 2011	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

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-productionof World Aeronautical Chart – ICAO1:1 000 000	May, 1995	-	O	Need to produce the assigned sheets of the World Aeronautical Chart – ICAO 1:1 000 000	Saudi Arabia	Jun, 2011	B
2	ANNEX 4: Para. 7.2	-	Non-production of the Enroute Chart-ICAO	May, 1995	-	H O	Need to produce the Enroute Chart-ICAO	Saudi Arabia	Dec, 2011	A
3	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.	Saudi Arabia	Jun, 2011	U
4	ANNEX 15: Para. 3.7.2.4	-	Implementation of geoid undulation referenced to the WGS-84 ellipsoid.	Jan, 2003	ICAO to follow up with State to determine what action is needed to achieve implementation.	O	Need to implement geoid undulation referenced to the WGS-84 ellipsoid.	Saudi Arabia	Jun, 2011	A
5	ANNEX 15: Para. 8.1	-	AIS Aerodrome Units not established at International Airports and pre-flight information service not provided	Nov, 2007	-	O	Need to provide a pre-flight information service at all aerodromes used for international air operations.	Saudi Arabia	Mar, 2011	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	ICAO to follow up with State	F H	Need to fully comply with the AIRAC procedure	Syria	Dec, 2010	U
2	ANNEX 4: Para. 16.2	-	Non-productionof World Aeronautical Chart – ICAO1:1 000 000	May, 1995	-	F H S	Need to produce the assigned sheets of the World Aeronautical Chart – ICAO 1:1 000 000	Syria	Dec, 2010	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	Dec, 2010	U
4	ANNEX 15: Para. 3.7.2.4	-	Implementation of geoid undulation referenced to the WGS-84 ellipsoid.	Jan, 2003	ICAO to follow up with States to determine what action is needed to achieve implementation.	F H	Need to implement geoid undulation referenced to the WGS-84 ellipsoid.	Syria	Dec, 2010	A
5	ANNEX 15: Para 4.2.9 & 4.3.7	-	Lack of regular and effective updating of the AIP	Jul, 2005	ICAO to follow up with State	F H O	Need to update the AIP on a regular basis	Syria	Dec, 2011	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	Dec, 2011	U

(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**
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	Dec, 2010	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	Dec, 2010	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
1	ANNEX 15: Para. 3.6.5	-	Lack of AIS automation	Mar, 2007	Contract signed	O	A project implementing an electronic AIP basedn AIXM 4.5 was completed in Q2/2010. However, difficulties related to the automatic production of charts sre not yt resolved. Migration to AIXM 5.1 is in progress; the project planned for completion in March 2011	UAE	Mar, 2011	A
2	ANNEX 15: Para. 3.2	-	The scope and objectives of the quality system implemented do not fully address the requirements of ICAO Annex 15	Jun, 2007	-	O	a properly organized quality system for AIS, which provides users with the necessary assurance and confidence that distributed aeronautical information/data satisfy stated requirements for data quality and for data traceability by the use of appropriate p	UAE	Mar, 2011	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

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	ICAO to follow up with State	H O	Need to fully comply with the AIRAC procedure	Yemen	Dec, 2011	U
2	ANNEX 4: Para. 16.2	-	Non-productionof World Aeronautical Chart – ICAO1:1 000 000	May, 1995	-	F H S	Need to produce the assigned sheets of the World Aeronautical Chart – ICAO 1:1 000 000	Yemen	Dec, 2011	B
3	ANNEX 4: Para. 7.2	-	Non-productionof the Enroute Chart-ICAO	May, 1995	-	F H	Need to produce the Enroute Chart-ICAO	Yemen	Dec, 2011	A
4	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.	Yemen	Dec, 2011	U
5	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	Need to produce Instrument Approach Chart-ICAO for all Int`l Aerodromes	Yemen	Dec, 2011	A
6	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	Dec, 2011	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**
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	Yemen	Dec, 2011	A

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(1) Rationale for non-elimination: "F"= Financial "H"= Human Resources "S"= State (Military/political) "O"= Other unknown causes

MIDANPIRG/12
Appendix 6.1C to the Report on Agenda Item 6.1

Deficiencies in the ATM/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	LIM/MID/RAN Concl. 3/7Cooperation between States in SAR	Bahrain with neighboring States	Lack of Search and Rescue Agreements between neighboring States	Nov, 1994	Work ongoing to sign agreements	S	A. States to commence negotiations with neighbors to establish SAR agreements B. Implement operational SAR agreements C. Implement entry agreements for SAR aircraft of other States	Bahrain	Dec, 2011	A
2	Annex 11 Para. 2.30	-	Development of contingency plan	Nov, 2006	Under development : signed with Saudi Arabia, Qatar, Kuwait, Iran and Oman. Pending : Agreement yet to be signed with UAE	O	Need to develop and promulgate contingency plans for implementation in the event of disruption of ATS and related supporting services	Bahrain	Dec, 2011	A

(1) Rationale for non-elimination: "F"= Financial "H"= Human Resources "S"= State (Military/political) "O"= Other unknown causes

Deficiencies in the ATM/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	LIM/MID/RAN Concl. 3/7Cooperation between States in SAR	Most of MID States	Lack of Search and Rescue Agreements between neighboring States	Nov, 1994	Egypt has promulgated regulations and started development of SAR agreement with Cyprus and other States	S	A. States to commence negotiations with neighbors to establish SAR agreements B. Implement operational SAR agreements C. Implement entry agreements for SAR aircraft of other States	Egypt with neighboring States	Dec, 2011	A
2	Annex 11 Para. 2.30	-	Development of contingency plan	Nov, 2006	-	H	Need to develop and promulgate contingency plans for implementation in the event of disruption of ATS and related supporting services	Egypt ICAO	Dec, 2011	A
3	MID ANP Table ATS-1	-	ATS Route L/UL315 not implemented	Mar, 2007	The segments CAIRO-HURGHADA-GIBAL are not implemented (Alternative A727)	S	-	Egypt	Dec, 2011	B

(1) Rationale for non-elimination: "F"= Financial "H"= Human Resources "S"= State (Military/political) "O"= Other unknown causes

Deficiencies in the ATM/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	LIM/MID/RAN Concl. 3/7Cooperation between States in SAR	Most of MID States	Lack of Search and Rescue Agreements between neighboring States	Nov, 1994	Work ongoing to sign agreements	S	A. States to commence negotiations with neighbors to establish SAR agreements B. Implement operational SAR agreements C. Implement entry agreements for SAR aircraft of other States	Iran with neighboring States	Dec, 2011	A
2	Annex 11 Para. 2.30	-	Development of contingency plans	Nov, 2006	Ongoing	H O	Need to develop and promulgate contingency plans for implementation in the event of disruption of ATS and related supporting services	Iran	Dec, 2011	A
3	Annex 11 para. 2.27	-	Implementation of ATS Safety Management	Nov, 2006	Ongoing	H	Need to establish a safety programme in order to achieve an acceptable level of safety in the provision of ATS	Iran	Dec, 2011	U
4	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. Iran has no plan to implement the route segment	Iran and UAE	Dec, 2011	B

(1) Rationale for non-elimination: "F"= Financial "H"= Human Resources "S"= State (Military/political) "O"= Other unknown causes

Deficiencies in the ATM/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	LIM/MID/RAN Concl. 3/7Cooperation between States in SAR	Iraq with neighboring States	Lack of Search and Rescue Agreements between neighboring States	Nov, 1994	Work ongoing to sign agreements	S	A. States to commence negotiations with neighbors to establish SAR agreements B. Implement operational SAR agreements C. Implement entry agreements for SAR aircraft of other States	Iraq with neighboring States	Dec, 2011	A
2	MID ANP Table ATS-1 Plan of ATS Routes	-	ATS route G667 not implemented	Sep, 2006	Iraq has no plan to open the route	S	-	Iraq Iran Kuwait	Dec, 2011	B
3	Annex 11 Para. 2.30	-	Development of contingency plan	Nov, 2006	-	S	Need to develop and promulgate contingency plan for implementation in the event of disruption of ATS and related supporting services	Iraq ICAO	Dec, 2011	A
4	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	Dec, 2011	U

(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**
5	MID ANP Table ATS-1 Plan of ATS routes	Iraq and Syria	ATS route UP975 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	Dec, 2011	B
6	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	Dec, 2011	B
7	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	Dec, 2011	B
8	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.	Iraq	Dec, 2011	B

(1) Rationale for non-elimination: "F"= Financial "H"= Human Resources "S"= State (Military/political) "O"= Other unknown causes

Deficiencies in the ATM/SAR Field

ISRAEL

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	LIM/MID/RAN Concl. 3/7Cooperation between States in SAR	Israel with neighboring States	Lack of Search and Rescue Agreements between neighboring States	Nov, 1994	Work ongoing	S	1. A Search and Rescue agreement is being formulated between Israel and Cyprus. 2. A general activity of formulating a Search and Rescue agreement between Israel and Jordan was initiated.	Israel with neighboring States	Dec, 2011	A
2	MID ANP Table ATS-1Plan of ATS routes	Israel Cyprus	ATS route B406 not implemented. Implemented as B/UB17 between Larnac and MERVA	Dec, 1997	No sections implemented Implemented as B17/UB17 Larnaca-MERVA(FIR BDY)	S O	To be followed by both the ICAO EUR and MID Offices. ATS route B406 does not exist. The method of using route B17 was defined. Israel and Cyprus ATM units` managers are working together to complete a work-share program, regarding the publications of NOTAMs and updating the AIP. This route is being used daily for a long time	Israel Cyprus ICAO to assist	Dec, 2011	B
3	Annex 11 para. 2.27	-	Implementation of ATS Safety Management	Nov, 2006	-	H	ATS Safety Management System (SMS) will be implemented by the end of 2010. A State Safety Program (SSP) is being composed at the CAAI.	Israel	Dec, 2011	U

(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**
4	Annex 11 Para. 2.30	-	Development of contingency plans	Nov, 2006	-	H S	A contingency plan is being composed at the IAA, and is expected to be completed by the end of 2011.	Israel	Dec, 2011	A

(1) Rationale for non-elimination: "F"= Financial "H"= Human Resources "S"= State (Military/political) "O"= Other unknown causes

Deficiencies in the ATM/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	MID ANP Table ATS-1Plan of ATS routes	Jordan, Syria	ATS route G662 not implemented -- Negotiations with military ongoing, in advanced stage	Dec, 1997	Not implemented Damascus to Guriat	S	States to continue coordination to achieve implementation	Jordan, Syria	Dec, 2011	B
2	Annex 11 Para. 2.30	-	Development of contingency plan	Nov, 2006	National Contingency plan developed	H S	Need to develop and promulgate contingency plan for implementation in the event of disruption of ATS and related supporting services	Jordan	Dec, 2011	A
3	Annex 11 para. 2.27	-	Implementation of ATS Safety Management	Nov, 2006	Work in progres -- SMS developed and details will be forwarded to ICAO	F H	Need to establish a safety programme in order to achieve an acceptable level of safety in the provision of ATS	Jordan	Dec, 2011	U
4	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, 2011	B

(1) Rationale for non-elimination: "F"= Financial "H"= Human Resources "S"= State (Military/political) "O"= Other unknown causes

Deficiencies in the ATM/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	LIM/MID/RAN Concl. 3/7Cooperation between States in SAR	Kuwait with neighboring States	Lack of Search and Rescue Agreements between neighboring States	Nov, 1994	Work ongoing to sign agreements	S	A. States to commence negotiations with neighbors to establish SAR agreements B. Implement operational SAR agreements C. Implement entry agreements for SAR aircraft of other States	Kuwait with neighboring States	Dec, 2011	A
2	Annex 11 para. 2.27	-	Implementation of ATS Safety Management	Nov, 2006	Implementation of SMS is expected to start in April 2007	H	Need to establish a safety programme in order to achieve an acceptable level of safety in the provision of ATS	Kuwait	Dec, 2011	U
3	Annex 11 Para. 2.30	-	Development of contingency plan	Nov, 2006	Continegency Plan was signed with Bahrain and Iran. Work is progressing for the coordination with other neighboring States	H S	Need to develop and promulgate contingency plan for implementation in the event of disruption of ATS and related supporting services	Kuwait	Dec, 2011	A
4	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	Dec, 2011	B

(1) Rationale for non-elimination: "F"= Financial "H"= Human Resources "S"= State (Military/political) "O"= Other unknown causes

Deficiencies in the ATM/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	LIM/MID/RAN Concl. 3/7Cooperation between States in SAR	Lebanon with neighboring States	Lack of Search and Rescue Agreements between neighboring States	Nov, 1994	Work ongoing to sign agreements. Agreement signed with Cyprus.	S	A. States to commence negotiations with neighbors to establish SAR agreements B. Implement operational SAR agreements C. Implement entry agreements for SAR aircraft of other States	Lebanon with neighboring States	Dec, 2011	A
2	MID ANP Table ATS-1Plan 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. Lebanon intends to discuss realignment with Syria	Lebanon Syria	Dec, 2011	B
3	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	H O	Need to develop and promulgate contingency plan for implementation in the event of disruption of ATS and related supporting services	Lebanon ICAO	Dec, 2011	A
4	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	Dec, 2011	U

(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**
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	-	Jordan-Lebanon and Syria	Dec, 2011	B

(1) Rationale for non-elimination: "F"= Financial "H"= Human Resources "S"= State (Military/political) "O"= Other unknown causes

Deficiencies in the ATM/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	LIM/MID/RAN Concl. 3/7Cooperation between States in SAR	Oman with neighboring States	Lack of Search and Rescue Agreements between neighboring States	Nov, 1994	Work ongoing to sign agreements	S	A. States to commence negotiations with neighbors to establish SAR agreements B. Implement operational SAR agreements C. Implement entry agreements for SAR aircraft of other States	Oman with neighboring States	Jun, 2012	A
2	Annex 11 Para. 2.30	-	Development of contingency plans	Nov, 2006	Under development : signed with Bahrain, Iran AND Yemen pending : Agreement yet to be signed with UAE, Pakistan and India	H O	Need to develop and promulgate contingency plans for implementation in the event of disruption of ATS and related supporting services	Oman	Dec, 2011	A

(1) Rationale for non-elimination: "F"= Financial "H"= Human Resources "S"= State (Military/political) "O"= Other unknown causes

Deficiencies in the ATM/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	LIM/MID/RAN Concl. 3/7Cooperation between States in SAR	Qatar and Bahrain with neighboring States	Lack of Search and Rescue Agreements between neighboring States	Nov, 1994	Lack of SAR agreements can be detrimental to safety of persons in distress where searches overlap national boundaries. Draft Model SAR agreements adopted at MIDANPIRG/5. No significant progress achieved- ICAO to assist	S	A. States to commence negotiations with neighbors to establish SAR agreements B. Implement operational SAR agreements C. Implement entry agreements for SAR aircraft of other States	Qatar and Bahrain	Dec, 2011	A
2	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	Dec, 2011	A

(1) Rationale for non-elimination: "F"= Financial "H"= Human Resources "S"= State (Military/political) "O"= Other unknown causes

Deficiencies in the ATM/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	LIM/MID/RAN Concl. 3/7Cooperation between States in SAR	Saudi Arabia with neighboring States	Lack of Search and Rescue Agreements between neighboring States	Nov, 1994	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	S	A. States to commence negotiations with neighbors to establish SAR agreements B. Implement operational SAR agreements C. Implement entry agreements for SAR aircraft of other States	Saudi Arabia with neighboring States	Dec, 2011	A
2	MID ANP Table ATS-1Plan of ATS routes	Qatar Saudi Arabia	ATS route A415 implemented with variance to Table ATS 1	Dec, 1997	Doha to King Khalid implemented at variance with the Plan . slightly longer-Military restrictions Economic impact-Not affecting safety. Negotiations with military ongoing	S	-	Saudi Arabia Qatar	Dec, 2011	B

(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**
3	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.	H O	Need to develop and promulgate contingency plan for implementation in the event of disruption of ATS and related supporting services	Saudi Arabia	Dec, 2011	A
4	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, 2011	U

(1) Rationale for non-elimination: "F"= Financial "H"= Human Resources "S"= State (Military/political) "O"= Other unknown causes

Deficiencies in the ATM/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	LIM/MID/RAN Concl. 3/7Cooperation between States in SAR	Syria with neighboring States	Lack of Search and Rescue Agreements between neighboring States	Nov, 1994	Work ongoing to sign agreements. Agreement with Turkey and Cyprus completed. Agreement with Iraq, Jordan and Lebanon pending	S	A. States to commence negotiations with neighbors to establish SAR agreements B. Implement operational SAR agreements C. Implement entry agreements for SAR aircraft of other States	Syria with neighboring States	Dec, 2011	A
2	MID ANP Table ATS-1Plan 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	Dec, 2011	B
3	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	Dec, 2011	B
4	MID ANP Table ATS-1 Plan of ATS routes	Iraq Syria	ATS route UP975 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	Dec, 2011	B

(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**
5	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	Dec, 2011	A
6	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	Dec, 2011	U
7	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	Dec, 2011	B

(1) Rationale for non-elimination: "F"= Financial "H"= Human Resources "S"= State (Military/political) "O"= Other unknown causes

Deficiencies in the ATM/SAR 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	LIM/MID/RAN Concl. 3/7Cooperation between States in SAR	UAE with neighboring States	Lack of Search and Rescue Agreements between neighboring States	Nov, 1994	Work ongoing. The agreement with Bahrain and Oman to be updated and the one with iran has to be developed/coordinated.	S	A. States to commence negotiations with neighbors to establish SAR agreements B. Implement operational SAR agreements C. Implement entry agreements for SAR aircraft of other States	UAE with neighboring States	Dec, 2012	A
2	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	UAE	Dec, 2011	A
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	States to continue negotiations with one another The UAE considers options for a resolution to be exhausted	Iran and UAE	Dec, 2011	B

(1) Rationale for non-elimination: "F"= Financial "H"= Human Resources "S"= State (Military/political) "O"= Other unknown causes

Deficiencies in the ATM/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	LIM/MID/RAN Concl. 3/7Cooperation between States in SAR	Yemen with neighboring States	Lack of Search and Rescue Agreements between neighboring States	Nov, 1994	Ongoing	S	A. States to commence negotiations with neighbors to establish SAR agreements B. Implement operational SAR agreements C. Implement entry agreements for SAR aircraft of other States	Yemen with neighboring States	Dec, 2011	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	Yemen	Dec, 2011	U
3	Annex 11 Para. 2.30	-	Development of contingency plan	Nov, 2006	Ongoing	H O	Need to develop and promulgate contingency plan for implementation in the event of disruption of ATS and related supporting services	Yemen	Dec, 2011	A
4	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	Dec, 2011	A

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(1) Rationale for non-elimination: "F"= Financial "H"= Human Resources "S"= State (Military/political) "O"= Other unknown causes

MIDANPIRG/12
Appendix 6.1D to the Report on Agenda Item 6.1

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	Dec, 2011	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

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	Dec, 2011	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	AFTN usage (LIM MID RAN Rec 6/2)	Baghdad AFTN Center	Circuit Loading Statistics	May, 1995	Monthly statistics should be sent to MID Office	S	Refers to ICAO fax ref. F.ME 165 reminding States to send data to ICAO Office	Iraq	Dec, 2011	B
2	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	Dec, 2011	U
3	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	Iraq and Jordan	Dec, 2011	U
4	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	Dec, 2011	U
5	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	Dec, 2011	U

(1) Rationale for non-elimination: "F"= Financial "H"= Human Resources "S"= State (Military/political) "O"= Other unknown causes

Deficiencies in the CNS Field

ISRAEL

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	LIM/MID/RAN AFTN CIRCUIT LOADING STATISTICS	AFTN	Requierement for statistics for evaluation of AFTN Activities	Aug, 2010	State informed that they will send the required data	O	State will extract the required data	Israel	Dec, 2011	B

(1) Rationale for non-elimination: "F"= Financial "H"= Human Resources "S"= State (Military/political) "O"= Other unknown causes

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	Dec, 2011	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	Iraq - Jordan	Dec, 2011	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
1	AFTN usage (LIM MID RAN Rec 6/2)	Kuwait AFTN Center	Circuit Loading Statistics	May, 1995	Monthly statistics should be sent to MID Office	O	Refer to ICAO fax ref. F.ME 165 reminding States to send data to Regional Office	Kuwait	Dec, 2011	B
2	AFTN Main Circuits (LIM MID RAN Rec10/5)	Lebanon-Kuwait-Beirut – Kuwait AFTN Circuit	The circuit is implemented on 100 bauds	Oct, 1999	The circuit is operating on 100 baud needs to be upgraded to meet new requirements	O	Kuwait is ready to upgrade to higher speed according to the readiness in Lebanon	Kuwait Beirut	Dec, 2011	B

(1) Rationale for non-elimination: "F"= Financial "H"= Human Resources "S"= State (Military/political) "O"= Other unknown causes

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	Dec, 2011	A
2	AFTN Main Circuits (LIM MID RAN Rec10/5	Lebanon – Kuwait Beirut – Kuwait AFTN Circuit	The circuit is implemented on 100 bauds	Oct, 1999	The circuit is operating on 100 baud needs to be upgraded to meet new requirements	O	Kuwait ready for upgrade to higher speed digital circuit	Kuwait Lebanon	Dec, 2011	B

(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 also advised that Yemen will be ready and cdirect speech circuit will be operational in few weeks	Oman - Yemen	Dec, 2010	A

(1) Rationale for non-elimination: "F"= Financial "H"= Human Resources "S"= State (Military/political) "O"= Other unknown causes

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**
1	AFTN usage (LIM MID RAN Rec 6/2)	Doha AFTN Centre	Circuit Loading Statistics	May, 1995	Refer to ICAO fax ref. F.ME 165 reminding States to send data to Regional Office	H	Data should be sent to ICAO Office	Qatar	Dec, 2011	B

(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
1	AFTN usage (LIM MID RAN Rec 6/2)	Jeddah AFTN Centre	Circuit Loading Statistics	May, 1995	Refer to ICAO fax ref. F.ME 165 reminding States to send data to Regional Office.	O	New software has been implemented.	Saudi Arabia	Dec, 2011	B

(1) Rationale for non-elimination: "F"= Financial "H"= Human Resources "S"= State (Military/political) "O"= Other unknown causes

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	Dec, 2011	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
1	VOR designator SHJ	VOR	Changed VOR designator from SHJ to SHR causing duplication with IRAN NDB	Dec, 2009	UAE GCAA are looking into the matter	O	Change to the correct designator which is SHJ	UAE GCAA	Jan, 2011	U

(1) Rationale for non-elimination: "F"= Financial "H"= Human Resources "S"= State (Military/political) "O"= Other unknown causes

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 centre Djibouti	Yemen - Djibouti	requirement for a Direct Speech Circuit with Adjacent centre Djibouti	Oct, 1998	-	O	Establishment of direct speech circuit between Yemen and Djibouti	Yemen - Djibouti	Dec, 2011	A
2	Direct Speech Circuit with Adjacent centre India	Yemen - India	Direct Speech Circuit with Adjacent centre India	Oct, 1998	-	O	Establishments of a Direct Speech Circuit with Adjacent centre in India	Yemen - India	Dec, 2011	A
3	Direct Speech Circuit with Adjacent centre Oman	Yemen - Oman	Requirement for a Direct Speech Circuit with Adjacent centre Oman	Oct, 1998	-	F H O	Establish a direct Speech Circuit with Adjacent centre Oman	Yemen - Oman	Dec, 2010	A
4	Direct Speech Circuit with Adjacent centre with Eritrea and Somalia	Yemen - Eritrea , Somalia	requirement for a direct Speech Circuit with Adjacent centre in Eritrea and Somalia	Oct, 1998	-	F H S O	Establishment of direct Speech Circuit with Adjacent centre in Eritrea and Somalia	Yemen - Eritrea , Somalia	Dec, 2011	A

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(1) Rationale for non-elimination: "F"= Financial "H"= Human Resources "S"= State (Military/political) "O"= Other unknown causes

Deficiencies in the MET 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 MET 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

Deficiencies in the MET 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 3 Chapter 6 Para 6.2.6. MID ANP Doc 9706 Volume I (Basic ANP) Part VI (MET) Para 9.	Provision of 30-hour aerodrome forecasts (TAF)	No international exchange requirement for 18-hour validity long-TAF in the MID Region. Only 30-hour validity long-TAF should be available internationally for OIFM, OISS and OITT.	Dec, 2009	Follow-up of MIDANPIRG METSG/2 report. State Letter ME 3/56.14-10/091 issued 15 March 2010.	F H O	Only 30-hour validity long-TAF should be available internationally for OIFM, OISS and OITT. Availability of 18-hour long-TAF for these aerodromes should cease.	Iran	Dec, 2010	A

(1) Rationale for non-elimination: "F"= Financial "H"= Human Resources "S"= State (Military/political) "O"= Other unknown causes

Deficiencies in the MET 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 3, App. 3, 3.1 and App. 5, 1.6	Provision of OPMET data (METAR and TAF) to international OPMET data banks	OPMET data not available at Vienna RODB	Jun, 2008	-	F H O	-	Iraq	Dec, 2011	A

(1) Rationale for non-elimination: "F"= Financial "H"= Human Resources "S"= State (Military/political) "O"= Other unknown causes

Deficiencies in the MET Field

ISRAEL

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 MET 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
No Deficiencies Reported									

[(1)] Rationale for non-elimination: "F"= Financial "H"= Human Resources "S"= State (Military/political) "O"= Other unknown causes

Deficiencies in the MET 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 MET 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
No Deficiencies Reported									

[(1)] Rationale for non-elimination: "F"= Financial "H"= Human Resources "S"= State (Military/political) "O"= Other unknown causes

Deficiencies in the MET 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
No Deficiencies Reported									

(1) Rationale for non-elimination: "F"= Financial "H"= Human Resources "S"= State (Military/political) "O"= Other unknown causes

Deficiencies in the MET 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 MET 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 MET 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 3 Chapter 6 Para 6.2.6. MID ANP Doc 9706 Volume I (Basic ANP) Part VI (MET) Para 9.	Provision of 24- or 30-hour aerodrome forecasts (TAF)	No international exchange requirement for 9-hour validity short-TAF or 18-hour long-TAF. Only 24- or 30-hour validity long-TAF should be exchanged internationally.	Dec, 2009	Follow-up of MIDANPIRG METSG/2 report. State Letter ME 3/56.14-10/093 issued 15 March 2010.	F H O	Only 24- or 30-hour long-TAF should be available internationally for OSAP, OSDI and OSLK. Availability of 9-hour short-TAF or 18-hour long-TAF for these aerodromes should cease.	Syria	Dec, 2010	A

(1) Rationale for non-elimination: "F"= Financial "H"= Human Resources "S"= State (Military/political) "O"= Other unknown causes

Deficiencies in the MET 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 MET 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
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.

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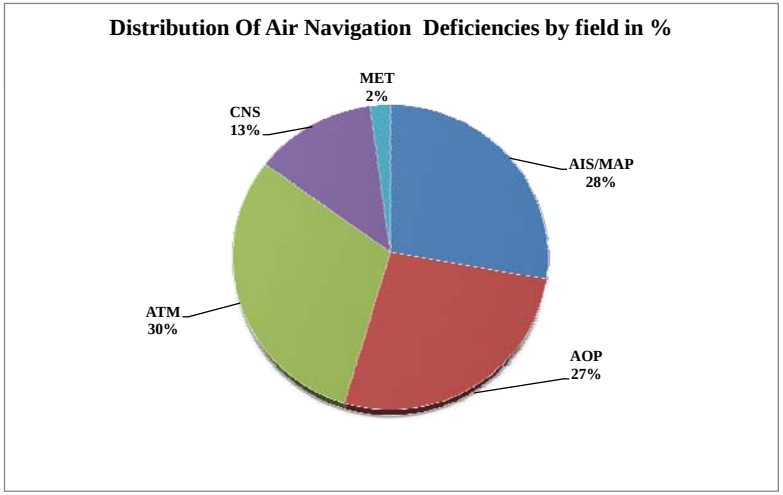
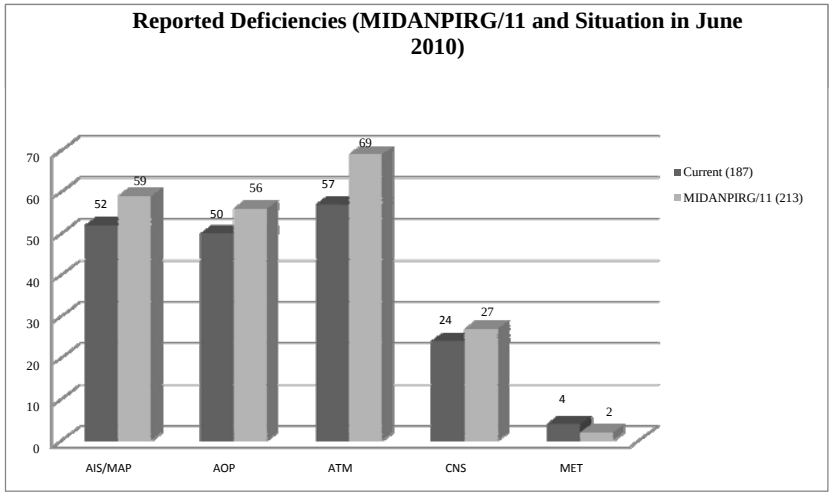
(1) Rationale for non-elimination: "F"= Financial "H"= Human Resources "S"= State (Military/political) "O"= Other unknown causes

MIDANPIRG/12
Appendix 6.1F to the Report on Agenda Item 6.1

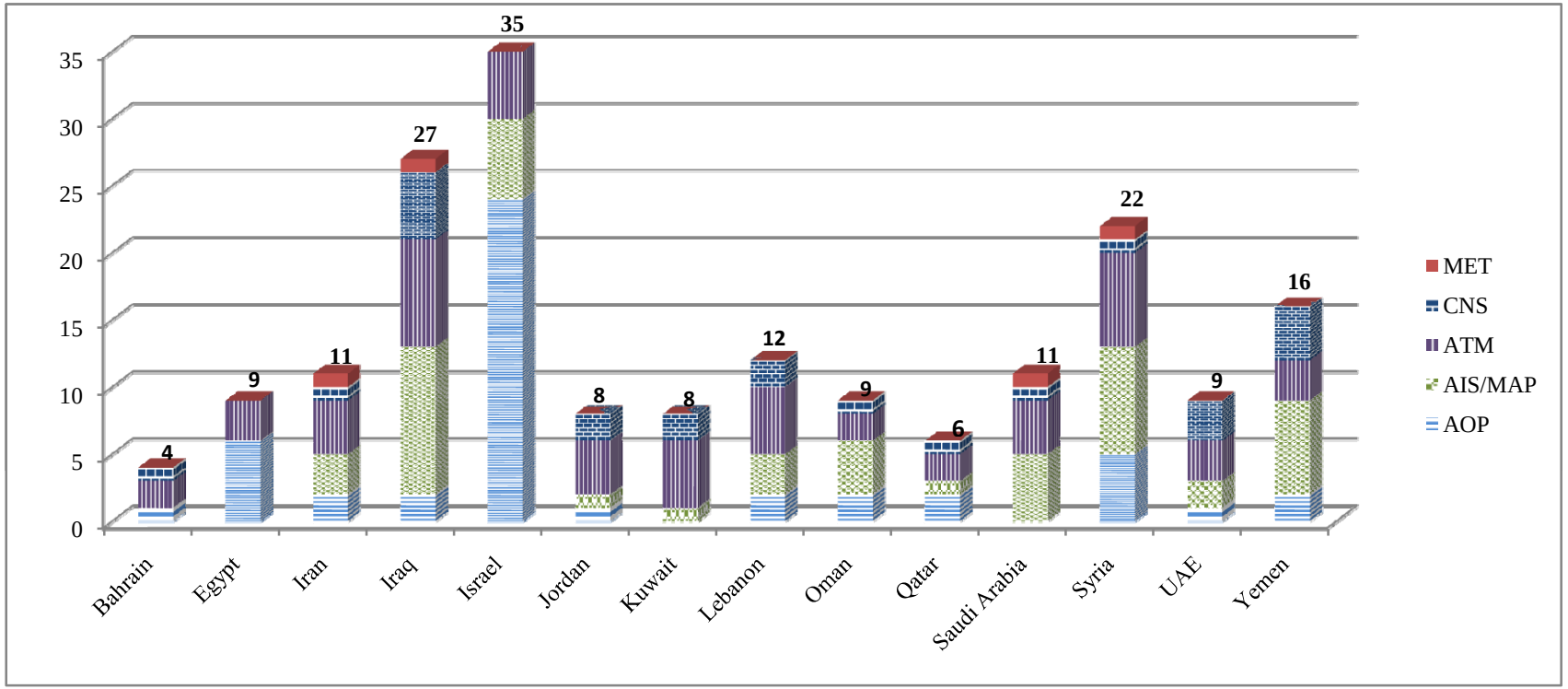
AIR NAVIGATION DEFICIENCIES IN THE THE MID REGION

STATE	AIS							Total AIS	AOP							Total AOP	ATM/SAR							Total ATM	CNS							Total CNS	MET							Total MET
	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				1			1		2				1	1	2		1					1	1							0
Egypt								0	3	3		6	4		2	6		2	1		1	2		3								0							0
Iran		2	1				3	3	2			2	2			2	1	2	1		2	2	1	4		1				1		1		1		1	1		1
Iraq	5	5	1	10	11	11	11	11	2			2	2		2	2	1	2	5		1	6	1	8	4		1			1	4	5		1		1	1		1	1
Israel	3	3			5	6	6	6	13	11		7	10	14	14	24	1	3	1		2	3	2	5								0							0
Jordan			1	1	1	1		1	1					1		1	1	1	2	1	2	3		4	1	1				1	1	2							0
Kuwait	1				1		1	1								0	1	3	1		2	3	1	5			2				2	2							0
Lebanon	1	1	1	3	3	1		3	2			2	2			2	1	2	2		2	3	1	5		1	1			1	1	2							0
Oman	1	2	1				4	4	2			2	2			2		2			1	1	1	2		1				1	1	2							0
Qatar	1				1		1	1	2				2			2		2				2		2			1		1			1							0
Saudi Arabia	1	3	1		2		4	5	0							0	1	2	1		2	2	1	4			1				1	1		1		1	1		1	1
Syria	4	3	1	7	8	1	1	8	3	2		5	4			5	1	2	4		2	5	1	7	1						1	1		1		1	1		1	1
UAE	1	1					2	2	1				1			1		2	1			2	1	3	1	2					3	3							0
Yemen	2	4	1	5	6	1	2	7	2			2	2			2	1	2			2	1	1	3		4		2	2	1	4	4							0
	20	24	8	26	38	21	35	52	34	16	0	28	32	15	18	50	9	29	19	1	19	36	12	57	7	11	6	2	3	5	19	24	0	4	0	4	4	0	4	4

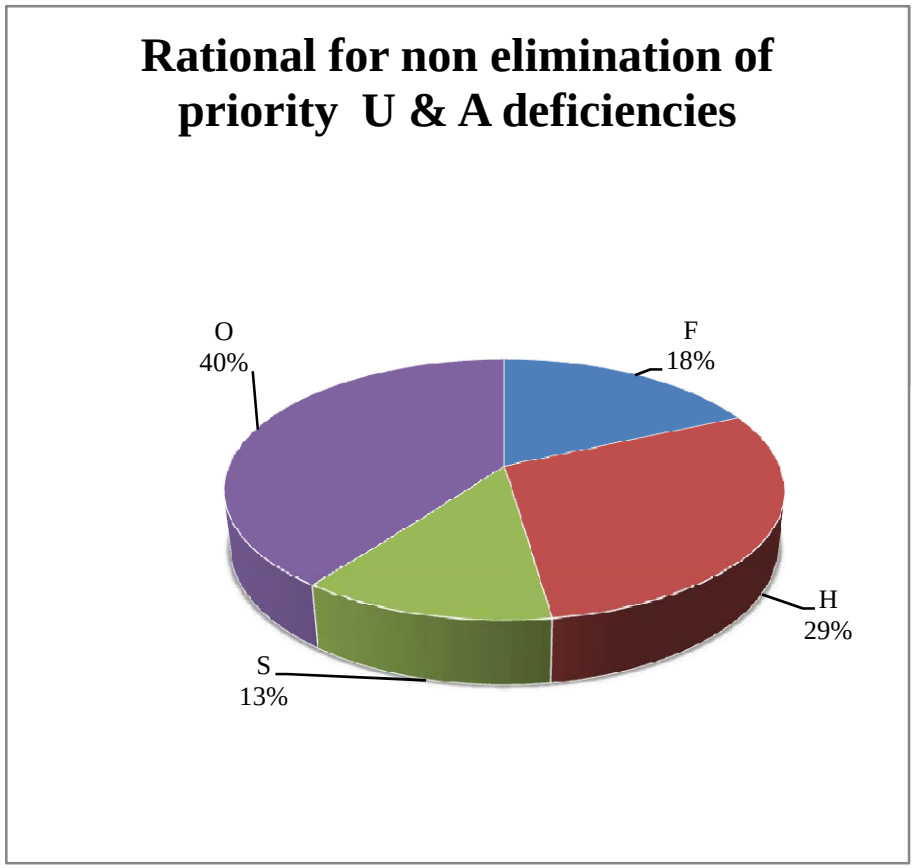


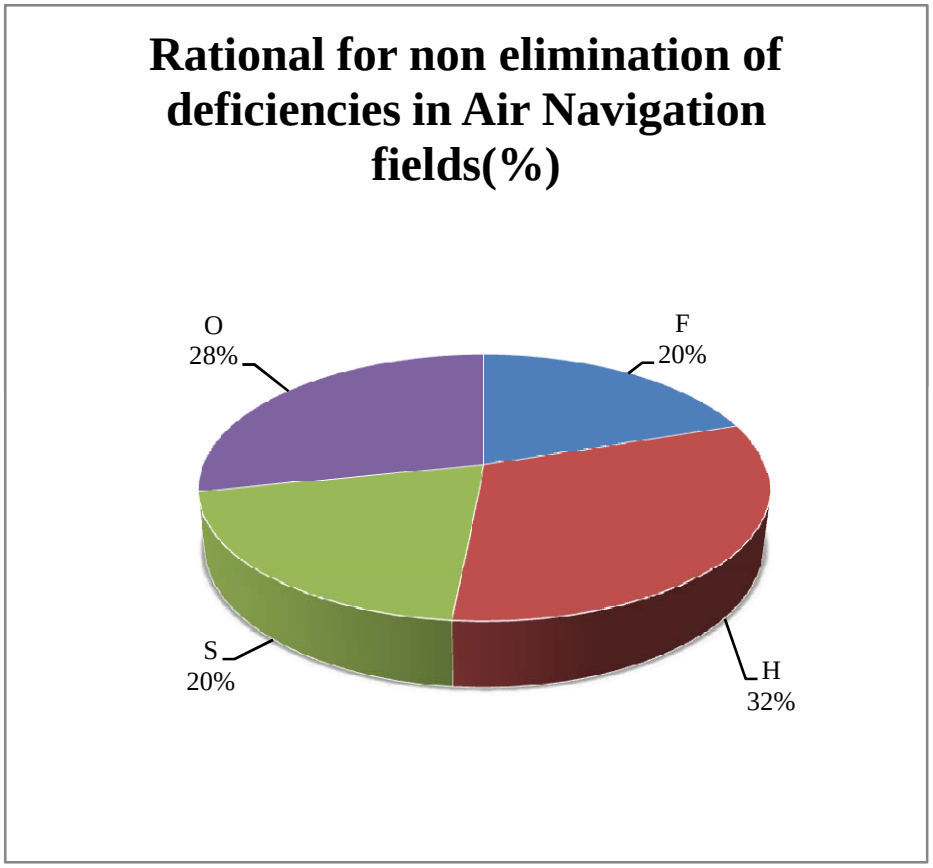


Number of Air Navigation Deficiencies by State (*Situation in June 2010)*

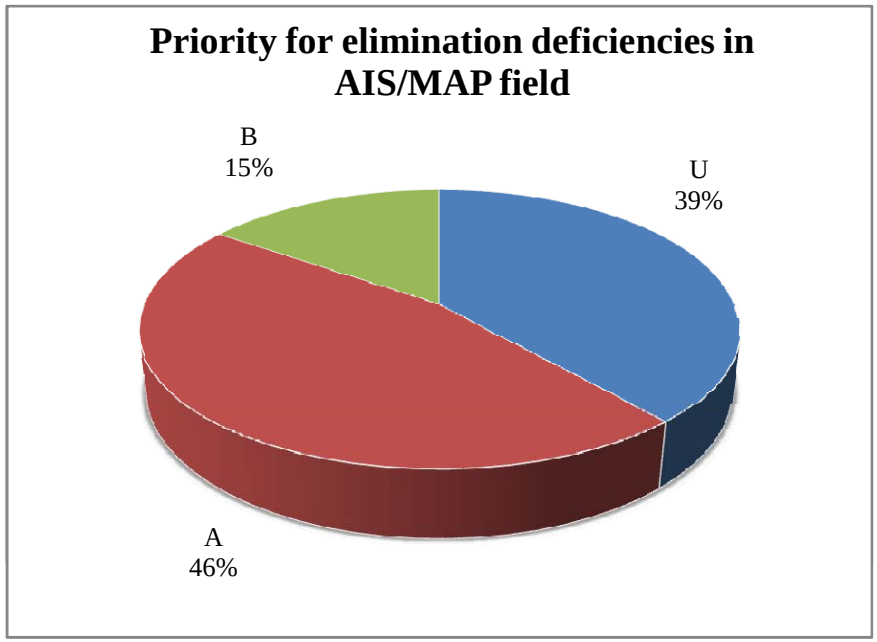


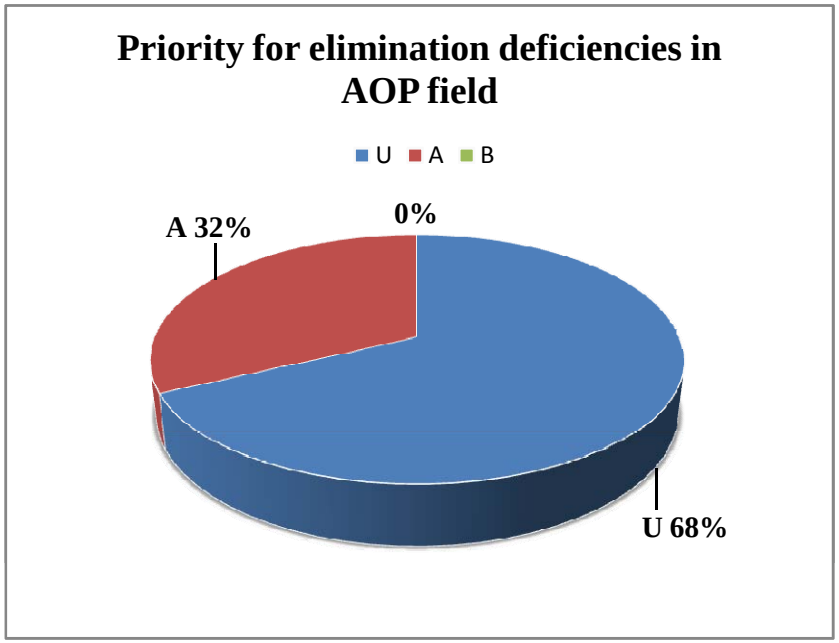
	Bahrain	Egypt	Iran	Iraq	Israel	Jordan	Kuwait	Lebanon	Oman	Qatar	Saudi Arabia	Syria	UAE	Yemen
AOP	1	6	2	2	24	1	0	2	2	2	0	5	1	2
AIS/MAP	0	0	3	11	6	1	1	3	4	1	5	8	2	7
ATM	2	3	4	8	5	4	5	5	2	2	4	7	3	3
CNS	1	0	1	5	0	2	2	2	1	1	1	1	3	4
MET	0	0	1	1	0	0	0	0	0	0	1	1	0	0
TOTAL	**4**	**9**	**11**	**27**	**35**	**8**	**8**	**12**	**9**	**6**	**11**	**22**	**9**	**16**

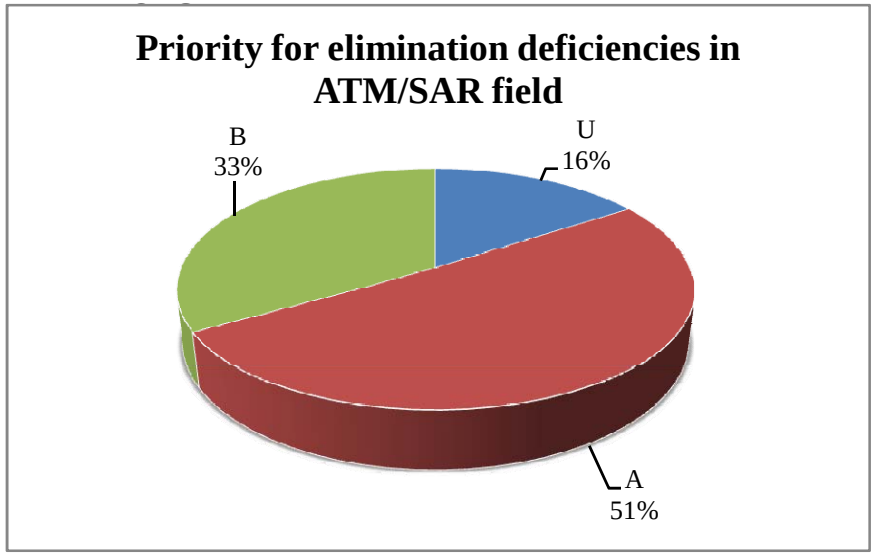

Rational for non elimination of priority U & A deficiencies
O
40%
F
18%
H
29%
S
13%

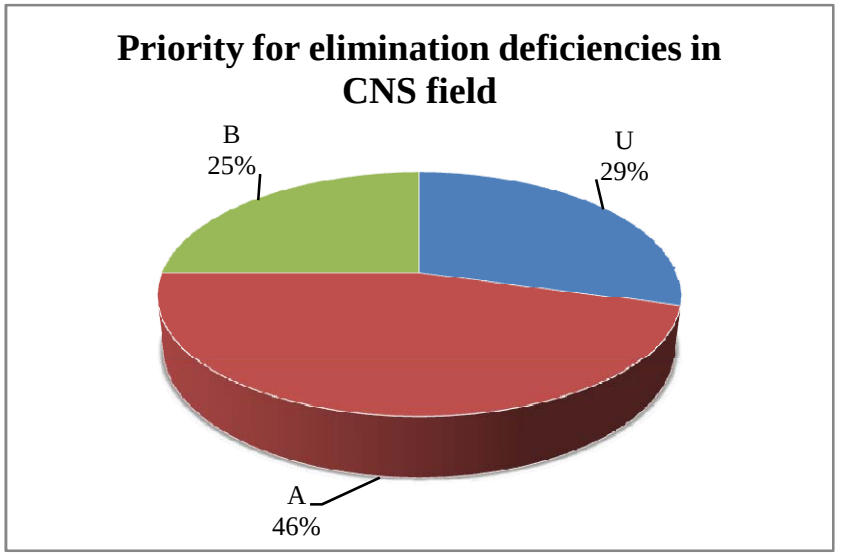

Rational for non elimination of deficiencies in Air Navigation fields(%)
O
28%
F
20%
S
20%
H
32%

MIDANPIRG/12
Appendix 6.1I to the Report on Agenda Item 6.1

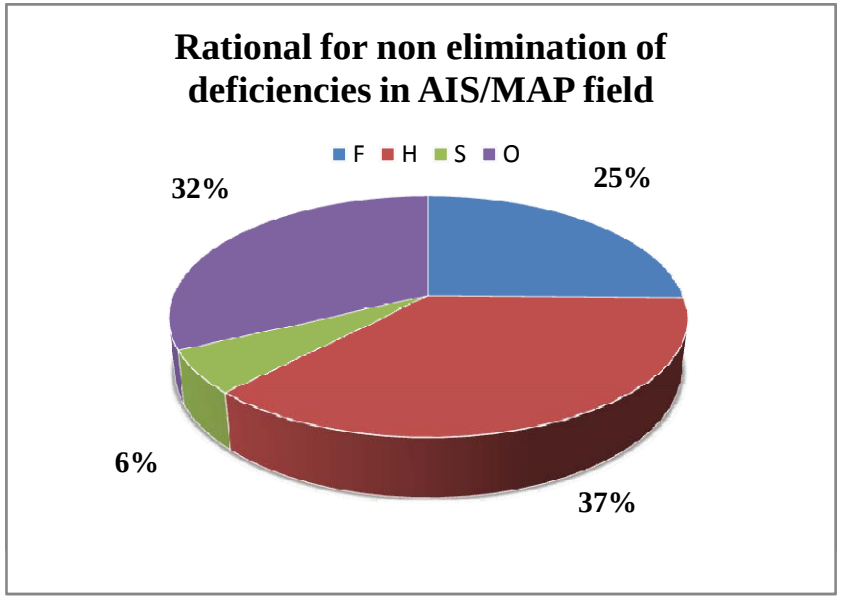


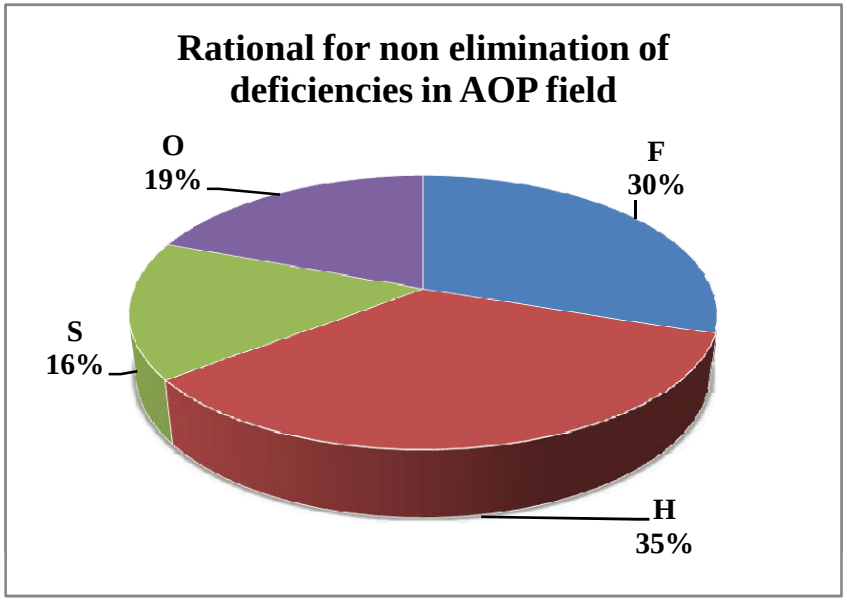


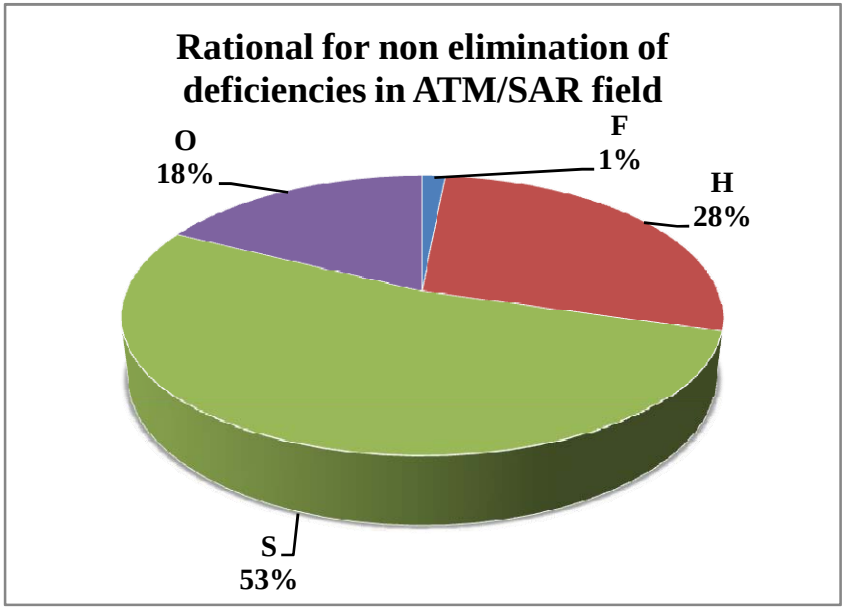


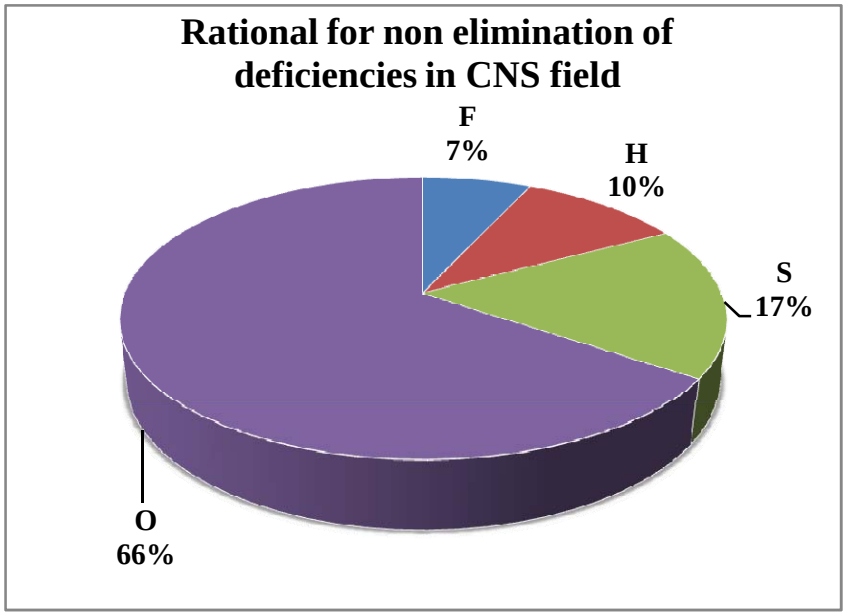


MIDANPIRG/12
Appendix 6.1J to the Report on Agenda Item 6.1





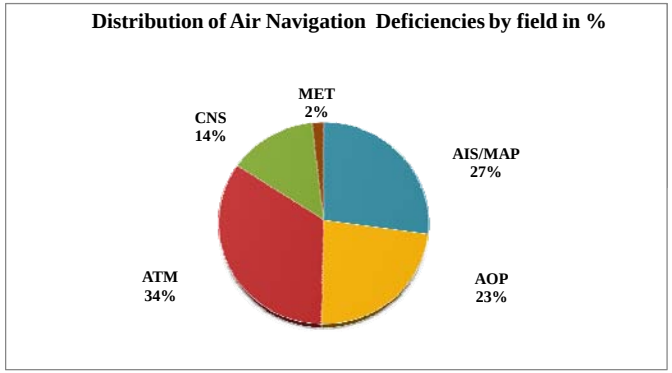


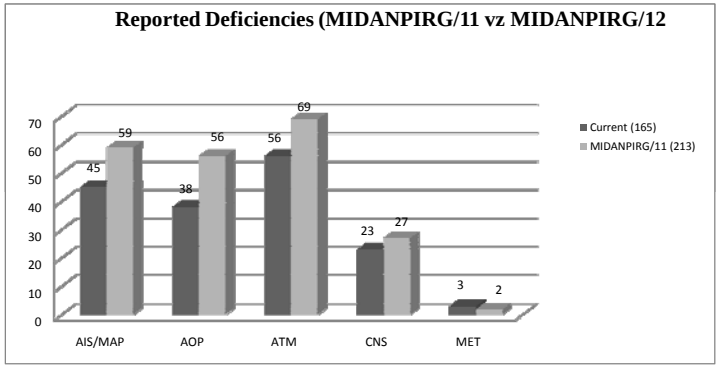


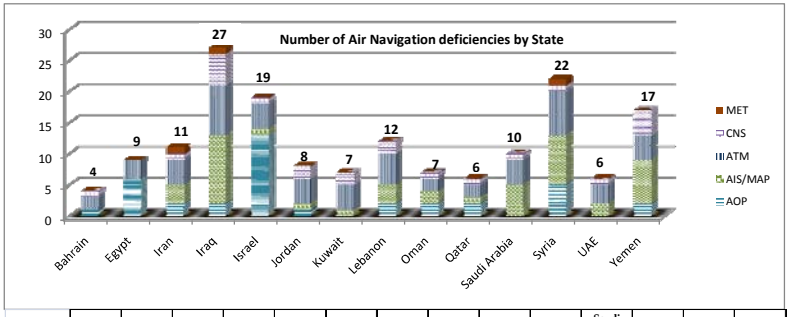
MIDANPIRG/12
Appendix 6.1K to the Report on Agenda Item 6.1

AIR NAVIGATION DEFICIENCIES IN THE THE MID REGION

STATE	AIS							Total AIS	AOP							Total AOP	ATM/SAR							Total ATM	CNS							Total CNS	MET							Total MET
	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				1			1		2				1	1	2		1					1	1								0
Egypt								0	3	3		5	4		2	6		2	1		1	2		3								0								0
Iran		2	1				3	3	2			2	2			2	1	2	1		2	2	1	4		1				1		1			1		1	1		1	1
Iraq	5	5	1	11	11		11	11	2			2	2		2	2	1	2	5		1	6	1	8	4		1			1	4	5		1		1	1		1	1
Israel	1				1		6	1	8	5			4	10	4	13	1	2	1		2	3	1	4			1				1	1								0
Jordan			1	1	1	1		1	1					1		1	1	1	2		2	3		4	1	1				1	1	2								0
Kuwait	1				1		1	1								0	1	2	1		2	3	1	4			2				2	2								0
Lebanon	1	1	1	3	3	3		3	2			2	2			2	1	2	2		2	3	1	5		1	1			1	1	2								0
Oman	1	1					2	2	2			2	2			2		2				2		2			1		1			1								0
Qatar	1			1			1	1	2				2			2		2				2		2			1		1			1								0
Saudi Arabia	1	3	1		2		4	5	0							0	1	2	1		2	2	1	4			1				1	1								0
Syria	4	3	1	7	8	1	1	8	3	2		5	4			5	1	2	4		2	5	1	7	1						1	1		1		1	1		1	1
UAE	1	1					2	2								0		2	1			2	1	3	1						1	1								0
Yemen	2	4	1	5	6	1	2	7	2			2	2			2	1	3			2	1	2	4		4		2	2	1	4	4								0
	18	20	7	27	34	6	33	45	28	10	0	20	25	11	8	38	9	28	19	0	18	37	11	56	7	8	8	2	4	5	17	23	0	3	0	3	3	0	3	3







	Bahrain	Egypt	Iran	Iraq	Israel	Jordan	Kuwait	Lebanon	Oman	Qatar	Saudi Arabia	Syria	UAE	Yemen
AOP	1	6	2	2	13	1	0	2	2	2	0	5	0	2
AIS/MAP	0	0	3	11	1	1	1	3	2	1	5	8	2	7
ATM	2	3	4	8	4	4	4	5	2	2	4	7	3	4
CNS	1	0	1	5	1	2	2	2	1	1	1	1	1	4
MET	0	0	1	1	0	0	0	0	0	0	0	1	0	0
TOTAL	4	9	11	27	19	8	7	12	7	6	10	22	6	17

REPORT ON AGENDA ITEM 6: AIR NAVIGATION DEFICIENCIES AND SAFETY MATTERS

6.2 AIR NAVIGATION SAFETY

Air Navigation Safety Sub-Group (ANS SG)

6.2.1 The meeting recalled that the main purpose of the ANS SG in accordance with its Terms of Reference (TOR) is to explore ways and means to assist States eliminate their air navigation deficiencies likely to have impact on the safety of air navigation, improving aviation safety, and foster the implementation of safety management system in the MID Region.

6.2.2 The meeting noted that the ICAO MID Air Navigation Deficiencies Database (MANDD) has been developed with the aim of enhancing the process of identification, assessment, reporting, and elimination of deficiencies and is updated on a regular basis. The meeting recognized that MANDD is mature enough and provides an easy tool for conducting analysis of deficiencies and allows States to monitor and update their deficiencies on line. In addition, it was highlighted that the different MIDANPIRG subsidiary bodies are conducting a thorough review and analysis of the air navigation deficiencies related to their area of expertise.

6.2.3 The meeting noted that subsequent to the ICAO Council's approval concerning the establishment of Regional Aviation Safety Groups (RASGs), RASG-MID will become the appropriate body to ensure harmonization and coordination of safety activities.

6.2.4 Based on the above, the meeting agreed that the work programme of the ANS SG could be achieved more efficiently using alternative mechanisms. Accordingly, the meeting agreed to the following Decision:

DECISION 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.

Accident Statistics

6.2.5 The meeting noted the presentation on accident statistics and recognized that the runway-related accidents and serious incidents continue to be a serious safety concern in the MID Region especially, Runway Excursions (RE) which has shown to greatly exceed all other occurrence categories in the MID Region as well as in the ICAO Accident/Incident Data Reporting (ADREP) system.

Implementation of Safety Management in the MID Region

6.2.6 The meeting recognized that the concept of safety has followed an evolutionary path. Although accident investigation, as a reactive method for improving safety was shown to be effective and became a valuable tool in helping to determine the cause of accidents with the aim of reducing their frequency, there was a need for a method or system that would help identify latent conditions to accidents before they actually occurred. Thus, the concept of management of safety was conceived.

6.2.7 The meeting agreed that a mature safety management requires the integration of reactive, proactive and predictive safety data capture systems, a judicious combination of reactive, proactive and predictive mitigation strategies, and the development of reactive, proactive and predictive mitigation methods.

6.2.8 The meeting noted that it is necessary for a Safety Management System (SMS) to define a set of measurable performance outcomes in order to determine whether the system is truly operating in accordance with design expectations, not simply meeting regulatory requirements, and to identify where an action may be required to bring the performance of the SMS to the level of design expectations. The meeting recalled that a measurable performance outcomes; permit the actual performance of activities critical to safety to be assessed against existing organizational controls so that necessary corrective action is taken and safety risks can be maintained As Low As Reasonably Probable.

6.2.9 The meeting recalled that 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 SMS that include safety performance for approved training organizations, aircraft operators, approved aircraft maintenance organizations, organizations responsible for type design and/or manufacture of aircraft, air traffic service providers; and aerodromes. Furthermore, a requirements regarding management accountability are addressed.

6.2.10 The meeting was informed about the affected Annexes and effective dates for implementation of the various safety management provisions

6.2.11 The meeting was informed that in order to assist States and their service providers with their implementation of Safety Management, ICAO developed an SMS training course delivered 137 courses from 2006 to 2009, three in the MID Region. More recently, an SSP training course was developed with 33 courses delivered during 2009 of which one in the MID Region, the next SSP training course will be held in Cairo from 17 to 20 January 2011. In addition, the *Safety Management Manual (SMM)* (Doc 9859) was also developed and first published in 2006. The second edition of this manual was published in March 2009 and is currently available through the following website: http://www2.icao.int/en/ism/default.aspx

6.2.12 To support a key SSP-SMS element of safety data collection, analysis and exchange by States, a course based on the European Coordination Centre for Aviation Incident Reporting Systems (ECCAIRS) has been developed. The meeting was informed that 6 ECCAIRS courses were delivered during 2009. The meeting encouraged States that so desire, to request the ICAO MID Regional Office to deliver a basic SSP implementation course for Civil Aviation Authorities' staff.

6.2.13 The meeting was informed that a new Annex to the *"Convention on International Civil Aviation"* on Safety Management pursuant to the recommendation made by the ICAO HLSC- 2010 that called upon ICAO to develop a new Annex dedicated to safety management processes which would define, among other things, the safety management responsibilities of States under the SSP. The proposed new Safety Management Annex will be the vehicle that will allow for the integration of the safety management functions of a State. The HLSC recommendation was endorsed by the 37th General Assembly.

6.2.14 The meeting noted that ICAO is developing a safety programme in response to emerging hazards and safety concerns. The safety programme development by ICAO is based on information derived from reactive and proactive identification of systemic deficiencies, and/or information derived from directed studies. Currently, there are two projects being advanced by ICAO in this regard:

a) the Integrated Safety Data Collection and Analysis System (ISDCAS); and

b) the Comprehensive Runway Safety Programme.

6.2.15 The meeting was informed that IATA has released a new amendment of IOSA which mandates the implementation of SMS as a standard for air operators.

6.2.16 The meeting was informed about the SMS Standard of Excellence that was developed by CANSO which provides a framework for a proactive performance-based approach to safety management for ATS.

6.2.17 The meeting was apprised on the outcome of the eleventh meeting of the ATM/SAR/AIS Sub-Group and the seventh meeting of the AOP Sub-Group and the updates made by the first meeting of the ANS Sub-Group pertaining to status of implementation of safety management system for Air Traffic Services and aerodrome operations in the MID Region.

6.2.18 The meeting noted the status of implementation of SSP by the Regulators and SMS by the ATS service providers, in the MID Region as shown in the following Table:

	Not started		**Planning/ Slow starting**		**Ongoing/ partial implementation**		**Implemented**		**Remarks**
	SSP	SMS	SSP	SMS	SSP	SMS	SSP	SMS	
Bahrain			X					X	
Egypt			X					X	
Iran	X					X			
Iraq									
Israel									
Jordan						X			
Kuwait									
Lebanon									
Oman	X			X					
Qatar	X							X	
Saudi Arabia					X	X			
Syria				X		X			
UAE					X			X	
Yemen									

6.2.19 The meeting agreed on the following Conclusion with respect to ATS Safety Management, to replace and supersede MIDANPIRG/11 Conclusion 11/38:

CONCLUSION 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).

6.2.20 The meeting noted the status of implementation of safety management requirements for certified aerodromes in the MID Region as contained at **Appendix 6.2A** to the Report on Agenda Item 6.2 and noted that the level of introduction and implementation of safety management of aerodromes in the MID Region have progressed as shown below, however it is still beyond required and expected level:

- 28% of MID Intl Aerodromes have implemented SMS.

- 65% of MID Intl Aerodromes will be implementing SMS before the end of 2010

6.2.21 The meeting was apprised with the outcome of the AOP SG/7 meeting , the ANS Sub-Group meeting and the CNS/ATM/IC Sub-Group meeting on performance monitoring and measurement of safety of aerodrome operations which calls for metrics in Key Performance Areas (KPAs) that envelopes access and equity, capacity, cost-effectiveness, efficiency, environment, flexibility, predictability, safety and security, which are subset of 11 KPAs listed in ICAO Doc 9854 -*Global Air Traffic Management Operational Concept*, and on guidance material contained at Doc 9883 that provides a step-by-step approach to performance-based planning.

6.2.22 The meeting was apprised on the transition to a performance-based planning approach through Global, Regional and National Performance Frameworks. The meeting recalled that a national performance framework in line with the agreed Regional Performance Framework and included under AGA; implementation of safety management (SMS & SSP) for aerodrome operations, should detail relevant national action plans, target dates and performance indicator in order to avoid duplicated States' efforts. Accordingly, the meeting agreed on closing MIDANPIRG/11 Conclusions 11/7, 11/8 and 11/9.

6.2.23 The meeting recognized the difficulties encountered by States in the implementation of SSP requirements and was of the view that a step -by-step approach should be followed for managing the transition to an SSP environment. The meeting further highlighted that the first step is to carry out a gap analysis. In connection with the above, the meeting noted that the Second Edition of ICAO Safety Management Manual (Doc 9859) of 2009 contains guidance material related to SSP, SMS and ALoS, as well as their relationships. The Guidance Material on "*SMS GAP Analysis for Service Providers*" contained in Appendix 2 to Chapter 7 of Doc 9859 and on "*the development of a State Safety Programme (SSP) GAP Analysis*" contained in Appendix 3 to Chapter 11 of Doc 9859; were particularly highlighted and States were encouraged to use this guidance material especially the checklists to expedite the implementation of the required SSP and SMS.

6.2.24 In the same vein, the meeting recalled that the High Level Safety Conference (HLSC), 2010 through Conclusion 2/1 requested States to undertake the necessary legal and structural adjustments required to manage a phased transition to the implementation of SSP with the integration of safety data management activities and risk reduction strategies, and that States require a phased transition to the implementation of SSP with the integration of performance-based processes and practices into the prevailing prescriptive environment.

English Language Proficiency (ELP)

6.2.25 The meeting recalled the requirements related to English Language Proficiency (ELP) to address language proficiency for pilots, air traffic controllers and aeronautical station operators and considered the outcomes of ATM/SAR/AIS SG/11 and the ANS SG/1 meetings which included the review of the status of implementation of ELP requirements in the MID Region.

6.2.26 The meeting was provided with an updated progress on the implementation of the Language Proficiency requirements in the MID Region based on the MID States plans posted on the ICAO Flight Safety Information Exchange (FSIX) website http://www.icao.int/fsix/lp.cfm.The results of the review that was conducted to determine States' level of implementation is given in the table below:

STATES	STATUS	DESCRIPTION	REMARKS
Bahrain	Completed		
Egypt	Completed		
Iran	Partial	Regulatory frame work partially implemented	Plan to complete in 2010
Iraq	Partial	SARPS related to regulatory framework	Plan to complete Dec 2009
Israel	Completed		
Jordan	Completed		
Kuwait	Partial	Annex 6 PART I-3.1.8 PART III-1.1.3	Implementation plans developed for ATC controllers only. No data for pilots involved in Int'l operations

STATES	STATUS	DESCRIPTION	REMARKS
Lebanon	Partial	Annex 10 VOL II Annex 11	
Oman	Partial		In 2009 more than 70% of the operational ATC staff will have level 4. In 2010 /full implementation
Qatar	Completed		
Saudi Arabia	Completed		
Syria	Completed		
UAE	Completed		
Yemen	Partial	Annex I 2.9.4 ,2.9.6 ,2.9.7 and 5.1.1.1.2 XIII Annex 6 PART I-3.1.8 PART III-1.1.3 Annex 11 3,29.1	Completion date of Annex 1 and 6 /2009 Completion date for Annex 11/2010

6.2.27 Iran indicated that 70% of the pilots and controllers have been evaluated in accordance with ICAO ELP requirements and expected to complete the remaining by end of 2011.

6.2.28 Iraq confirmed that it has completed all outstanding issues pertaining to ELP regulatory frame work.

6.2.29 The meeting was informed that the update of status of implementation of ELP requirements for States that have not completed the implementation will require submission of the amended plans to ICAO HQ for posting in ICAO website.

6.2.30 The meeting recognized that although good progress has been achieved in the implementation of ICAO ELP provisions in the MID Region, sustained efforts to implement the language proficiency requirements should be pursued, especially for States that have not yet completed the implementation to take necessary measures to ensure compliance with the requirements before 5 March 2011. Additionally States that have implemented the ELP requirements shall ensure that pilots, air traffic controllers and aeronautical station operators that demonstrated proficiency below the Expert Level are evaluated at intervals in accordance with their level of proficiency. Accordingly, the meeting agreed to the following Conclusion to replace and supersede MIDANPIRG/11 Conclusions 11/36 and 11/37 and the ATM/SAR/AIS SG/11 Draft Conclusion 11/13:

CONCLUSION 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;*

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.*

CONCLUSION 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.

6.2.31 The meeting noted that ICAO has produced guidance material contained in Circular CR 323 for the aviation English programmes which lay down a set of principles of best practice and guidelines by which any aviation English training can be assessed. These guidelines were based on the expertise and experience of the Board and members of the International Civil Aviation English Association (ICAEA).

Enhancement of MID States' Safety Oversight Capabilities

6.2.32 The meeting noted that the ANS SG/1 meeting analyzed the USOAP results of the 10 MID States audited (as of 31 May 2010) with a special focus on the Aerodrome and ANS fields as at **Appendix 6.2B** to the Report on Agenda Item 6.2.

6.2.33 It was noted that the lack of effective implementation of the eight Critical Elements (CEs) of Safety Oversight for the 10 audited MID States averages 36.81%. The highest lack of effective implementation is related to CE4 (60.63%) which is Qualification and Training of Technical Staff involved in carrying out regulatory functions, while the second highest area is related to CE8 (44.76%) which is the Resolution of Safety Concerns. In this regard, the meeting recalled that the analysis of the most significant root causes for the non-elimination of reported Air Navigation deficiencies with priority "A" or "U" in the MID Region concluded also, that the lack of qualified human resources; is the highest contributing factor.

6.2.34 Based on the analysis of the USOAP audit results of the ten (10) audited MID States in the different ANS fields, the meeting recognized that the separation between the regulatory and service provision functions and the non-establishment of an ANS safety oversight system represent the main reasons for the identified findings.

6.2.35 The meeting noted also the analysis of the audit results of the ten (10) MID States in the area of aerodromes. It was noted that the continuous surveillance of certified aerodromes (CE7), is not effectively implemented. In particular in the following critical areas:

a) lack of separation between the regulatory and service provision functions (CE3);

b) lack of defined duties and responsibilities for aerodrome regulatory positions;

c) minimum qualifications required to carry out certification of aerodromes and wide scope aerodrome safety oversight functions, not defined (CE4);

d) lack of qualified technical staff/aerodrome inspectors to carry out safety oversight functions in the aerodrome area; and

e) technical training programme was not established and training plans were not developed nor implemented (CE4).

6.2.36 The meeting noted that the ANS SG/1 meeting re-iterated MIDANPIRG/11, Conclusion 11/87 "*ENHANCEMENT OF MID STATES' CAPABILITIES FOR SAFETY OVERSIGHT*" and recalled that through this Conclusion MIDANPIRG/11 urged States to cooperate bilaterally and/or jointly as a group of States to make the appropriate arrangements in order to strengthen their safety oversight capabilities. The meeting noted that safety oversight audits and audit follow-ups conducted by ICAO indicated that a number of States have not been able to implement an effective safety oversight system over their aviation activities. The main reason identified for this situation is the lack of adequate resources, specifically in terms of qualified technical expertise. This has led ICAO to conclude that regional or sub-regional safety oversight organizations may be required to overcome this problem through shared objectives, strategies, and activities and, most importantly, that they would enable States to pool resources and thus be able to attract, recruit, and retain appropriately qualified and experienced personnel in the aviation fields.

6.2.37 The meeting agreed that regional safety oversight systems provide economies of scale by allowing for the sharing of required resources and providing administrative savings by sharing costs that would otherwise be prohibitive given an individual State's resources. In addition, it was highlighted that regional programmes can be more effective through joint actions, as they can address external factors and constraints more effectively. Participating States will also increase their capacity to develop harmonized regulations adapted to their local environment and in compliance with ICAO Standards and Recommended Practices (SARPs).

6.2.38 The meeting noted Iran's strong support for the establishment of a MID RSOO and its willingness to host such an Organization in Tehran and to provide all administrative and logistic support for the set up of this MID RSOO.

6.2.39 Based on the above, the meeting agreed that a regional strategy should seek to empower States to determine common priorities and programmes, to solve regional safety-related deficiencies and, eventually, to secure financial support for improving the regional aviation structure and implement procedures for more efficient allocation of resources.

6.2.40 It was highlighted that prior to the establishment of a regional safety oversight system, States willing to participate in this regional project should formulate a strategy that is well-defined in terms of purpose, objectives, activities, output, result indicators, duration and the expected results or outcomes from establishing an effective regional safety oversight system. It was underlined that ICAO can play a significant role in assisting States in the development of such a strategy. The meeting recognized that the reasons for adopting a strategy to establish an RSOO include:

a) eliminate duplication of effort by standardizing regulatory and enforcement provisions over a large area of aviation activities;

b) achieve economies of scale leading to effectiveness and efficiency;

c) pool human and financial resources;

d) institute effective regional programmes through the joint action of States;

e) address external factors and constraints more effectively;

f) develop and implement a safety management system that would allow for the implementation of similar standards and procedures to measure the safety performance of civil aviation organizations in the region;

g) supplement shortfalls in the scope of domestic or bilateral interventions;

h) prove organizational ability by testing activities before making important commitments under national programmes;

i) meet industry expectations by encouraging compliance and providing the support to enable industry to demonstrate compliance with regulations;

j) demonstrate, as a responsible regional organization, improved regional solidarity;

k) improve the objectivity and independence of inspectors; and

l) develop the capability for drafting and amending regulations and procedures as well as for producing clearer standards based on international requirements and adapted to the regional environment and aviation industry needs.

6.2.41 Based on the above, the meeting agreed that the participation of a minimum number of States is required to ensure that the establishment of a RSOO is both realistic and feasible. One of the avenues available for establishing such an organization is to enter into a regional agreement by signing a Memorandum of Understanding (MOU) or a Memorandum of Cooperation (MOC). The agreement document should emphasize the need to coordinate and harmonize the principles, rules, and procedures for conducting effective safety oversight in each of the member States, taking advantage of the opportunities presented by pooling resources and expertise. As a follow up action, the meeting agreed that the ICAO MID Regional Office issue a State Letter in order to ask States about their views/intentions for the establishment of RSOO(s) in the MID Region. The meeting was of the view that the State Letter should seek feedback on the following issues; State preferences for area(s) to be addressed, hosting Sate, membership, financial arrangements and other relevant issues. Accordingly, the meeting agreed to the following Conclusion, which is proposed to replace and supersede MIDANPIRG/11 Conclusion 11/87:

CONCLUSION 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****.*

Universal Safety Oversight Audit Programme Beyond 2010 - Continuous Monitoring Approach (CMA)

6.2.42 The Meeting was provided with information on the implementation of the ICAO Universal Safety Oversight Audit Programme (USOAP) under the Comprehensive Systems Approach (CMA) and Evolution of the ICAO Universal Safety Oversight Audit Programme (USOAP) beyond 2010.

6.2.43 The meeting was informed that the USOAP-CMA was supported by the HLSC-2010 and was endorsed by the 37the Session of the General Assembly.

6.2.44 The CMA will involve the establishment of a system to monitor the safety oversight capability of Contracting States on an ongoing basis. It will also enable safety information sharing between ICAO and other interested stakeholders. A transition period to the CMA has been tentatively set at two years (2011-2012).

6.2.45 The CMA will maintain as core elements the key safety provisions contained in Annex 1 — *Personnel Licensing*, Annex 6 — *Operation of Aircraft*, Annex 8 — *Airworthiness of Aircraft*, Annex 11 — *Air Traffic Services*, Annex 13 — *Aircraft Accident and Incident Investigation*, and Annex 14 — *Aerodromes, and* will incorporate the analysis of safety risk factors and will be applied on a universal basis in order to assess States' oversight capabilities.

6.2.46 ICAO will foster the coordination and cooperation between USOAP and audit programmes of other organizations related to aviation safety; for the sharing of confidential safety information in order to reduce the burden on States caused by repetitive audits or inspections and to decrease the duplication of monitoring activities.

6.2.47 The meeting was informed that CMA will require the establishment of a centralized database and online reporting system to properly manage information received from different sources on an ongoing basis. Under this approach, the USOAP will provide enhanced flexibility by implementing tailored audits and will be capable of identifying when other types of intervention, such as operational or technical assistance, are required. Continuous feedback from the States will be necessary under the CMA in order for ICAO to determine the type of intervention strategy required in each case. Such intervention activities might include both targeted and/or full-scale audits of a State' aviation safety oversight capability.

6.2.48 The meeting acknowledged that all Contracting States are urged to submit to ICAO, in a timely manner, and keep up to date all the information and documentation requested by ICAO for the purpose of ensuring the effective implementation of the USOAP-CMA and to cooperate with ICAO and as much as practicable to accept Continuous Monitoring activities scheduled by the Organization, including audits and validation missions, in order to facilitate the smooth functioning of the USOAP-CMA.

6.2.49 The meeting was informed that ICAO has officially launched an interactive website called the CMA Forum that has been created to assist Member States during the transition to the CMA. This website provides both Member States and the aviation community with up-to-date information on the USOAP CMA as well as a means to seek information and ask questions relating to the any aspect of CMA during the transition period and beyond. The CMA Forum can be accessed through the ICAO Public Website: www.icao.int or directly at www.icao.int/cma.

MIDANPIRG/12
Appendix 6.2A to the Report on Agenda Item 6.2

STATUS OF THE IMPLEMENTATION SAFETY MANAGEMENT SYSTEMS (SMS)

AT AERODROME LISTED IN THE MID REGIONAL AIR NAVIGATION PLAN (ANP) Doc 9708

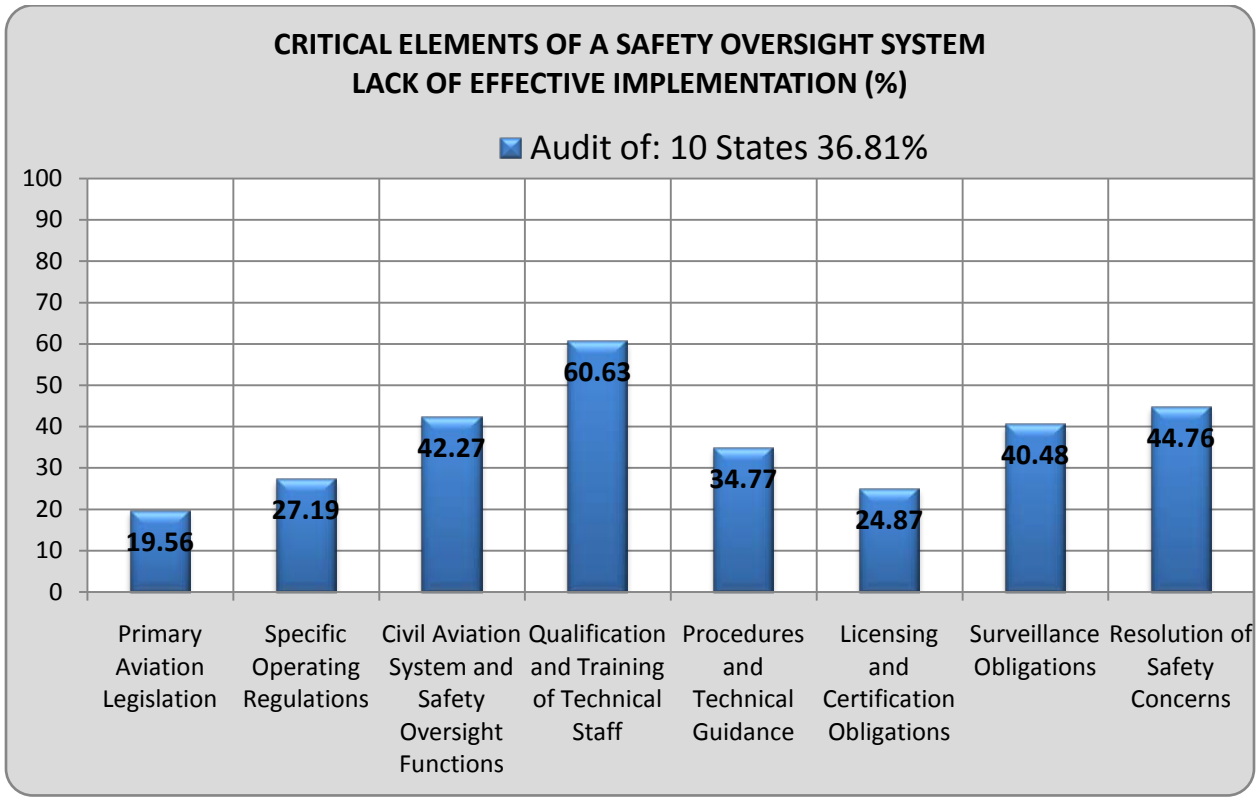
OCTOBER 2010

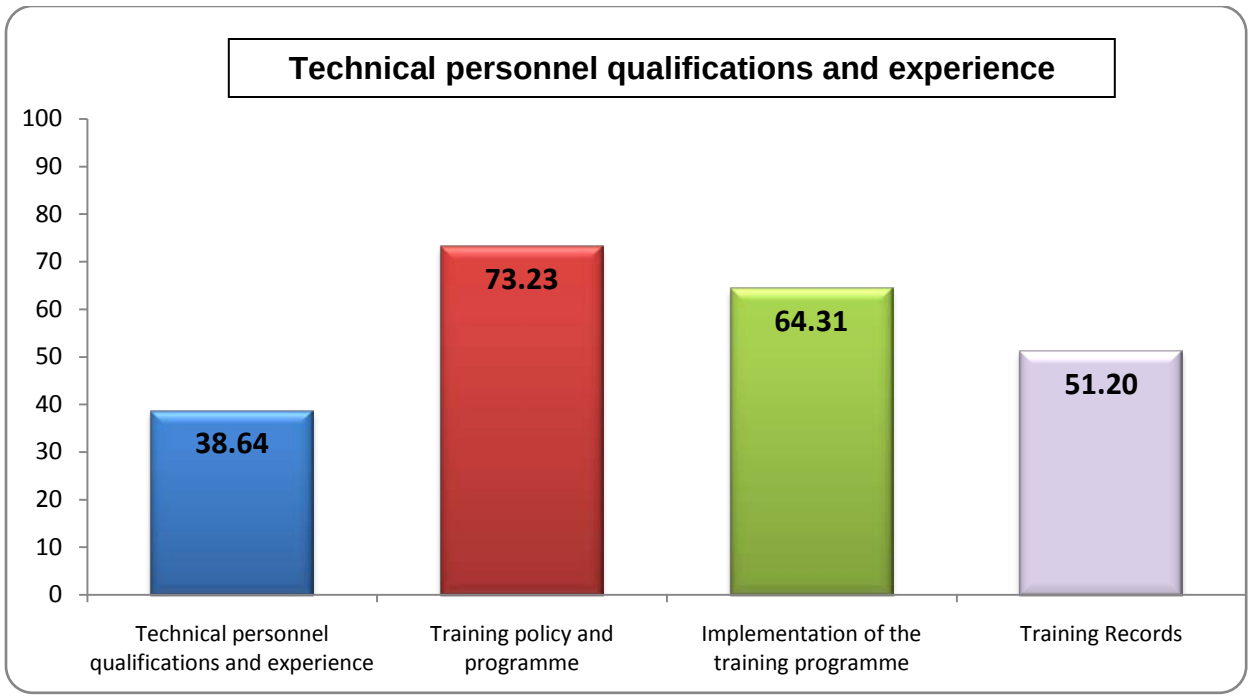
State/Aerodrome			SMS implementation					
			Responsible Agency	Finished	Underway		Future Planned	
State	Number of Aerodromes Open for Inter. Use	Name of Aerodrome		Date of publication	Dates:		Dates:	
					Beginning	Scheduled to finish before end of 2010	Beginning	End
Bahrain	**1**			**1**				
Egypt	**15**			**4**	**7**	**4**		
Iran	**8**						**8 (end of 2011)**	
Iraq	**5**					**3**	**2**	
Israel	**5**					**5**		
Jordan	**3**			**1**		**2**		
Kuwait	**1**			**1**				
Lebanon	**1**				**1**			
Oman	**2**						**2**	
Qatar	**1**						**1**	
Saudi Arabia	**4**			**4**				
Syria	**3**						**3**	
UAE	**6**			**6**				
Yemen	**5**						**5**	
Total	**60**			**17**	**8**	**14**	**21**	

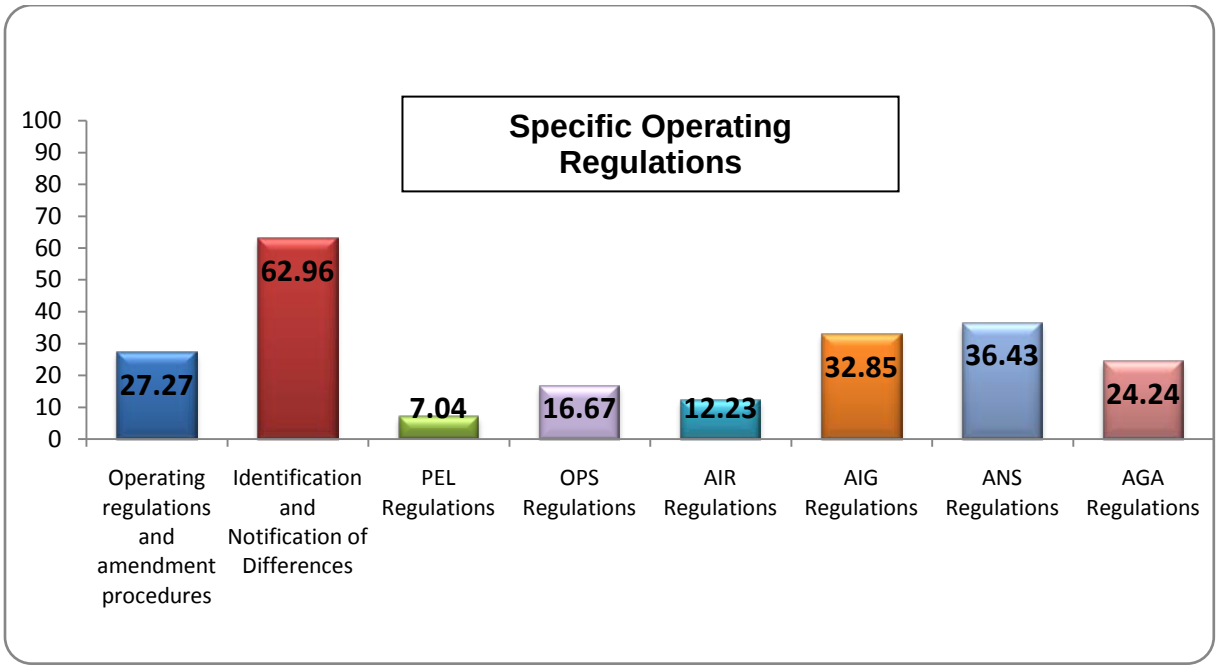
Around 28% of MID Intl Aerodromes have implemented SMS
Around 65% of MID Intl Aerodromes will be implementing SMS before the end of 2010

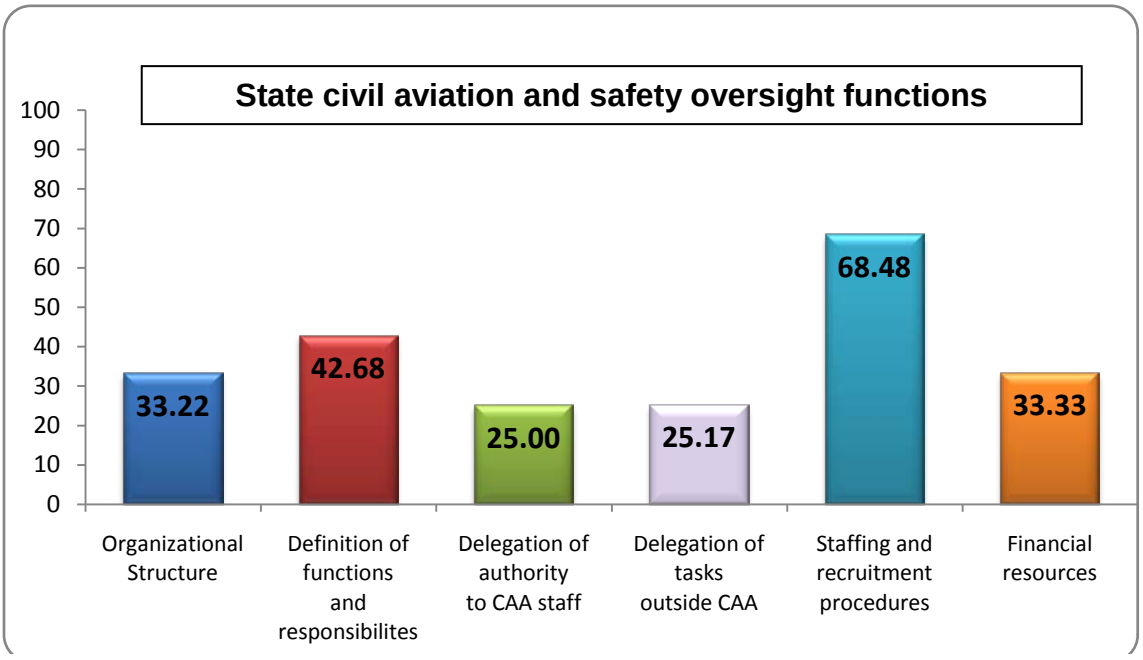
MIDANPIRG/12
Appendix 6.2B to the Report on Agenda Item 6.2

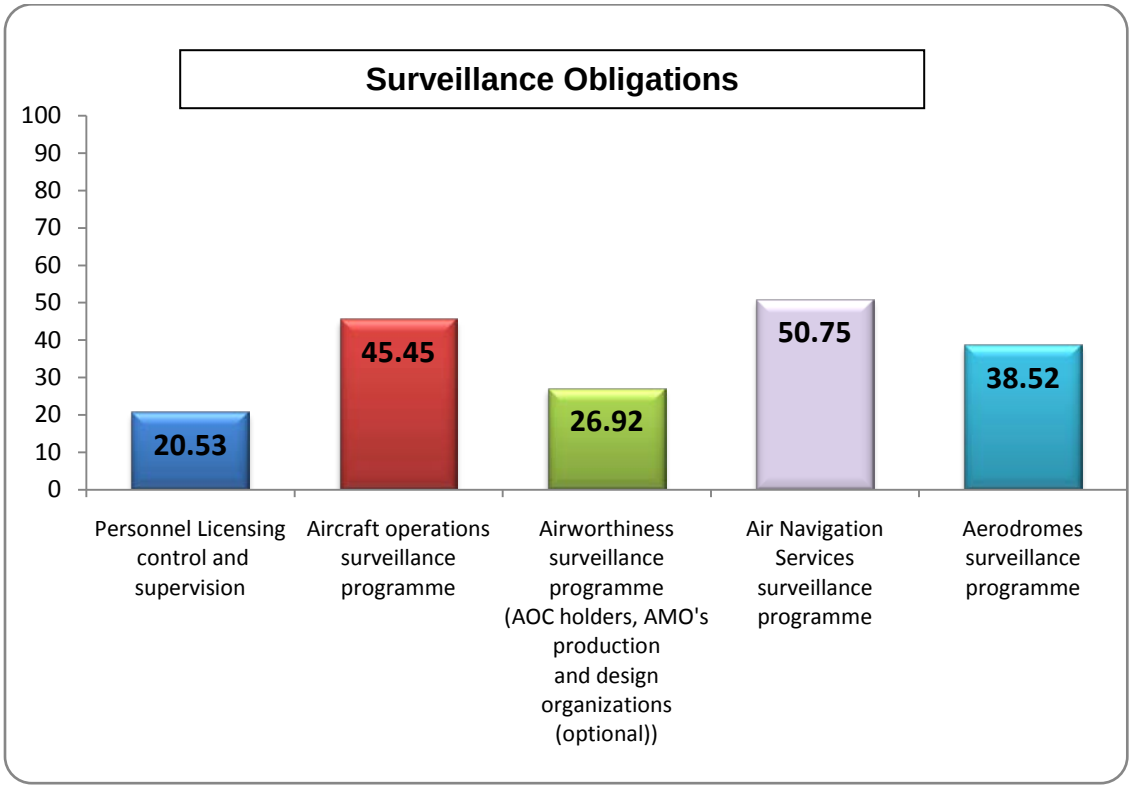
Analysis of the USOAP results of the 10 Audited MID States (as of 31 May 2010)




Technical personnel qualifications and experience
100
90
80
70
60
50
40
30
20
10
0
38.64
73.23
64.31
51.20
Technical personnel qualifications and experience
Training policy and programme
Implementation of the training programme
Training Records


Specific Operating Regulations
100
90
80
70
60
50
40
30
20
10
0
27.27
62.96
7.04
16.67
12.23
32.85
36.43
24.24
Operating regulations and amendment procedures
Identification and Notification of Differences
PEL Regulations
OPS Regulations
AIR Regulations
AIG Regulations
ANS Regulations
AGA Regulations


State civil aviation and safety oversight functions
100
90
80
70
60
50
40
30
20
10
0
33.22
42.68
25.00
25.17
68.48
33.33
Organizational Structure
Definition of functions and responsibilites
Delegation of authority to CAA staff
Delegation of tasks outside CAA
Staffing and recruitment procedures
Financial resources


Surveillance Obligations
100
90
80
70
60
50
40
30
20
10
0
20.53
45.45
26.92
50.75
38.52
Personnel Licensing control and supervision
Aircraft operations surveillance programme
Airworthiness surveillance programme (AOC holders, AMO's production and design organizations (optional))
Air Navigation Services surveillance programme
Aerodromes surveillance programme

REPORT ON AGENDA ITEM 7: FUTURE WORK PROGRAMME

ICAO MID Office Tentative Schedule of Meetings, Seminars and Workshops

7.1 The meeting was presented with the tentative schedule of meetings, seminars and workshops from January to December 2011as at **Appendix 7A** to the Report on Agenda Item 7. The meeting was also informed that this schedule should be used for planning purposes only. Meetings, seminars and workshops are confirmed only when an invitation letter is sent by the ICAO MID Regional Office. The schedule will be updated as appropriate and posted on the MID Regional Office website (http://www.icao.int/mid).

7.2 The meeting noted with appreciation the offer of Bahrain to host AIS/MAP TF/6 meeting in Bahrain (6-8 June 2011), the offer of UAE to host INFPL SG/3 meeting in Abu Dhabi (13-15 June 2011), the offer of Jordan to host ANR TF/4 in Amman (16-18 May 2011) and the offer from Iran to host two meetings annually as appropriate, effective 2011.

MIDANPIRG/13 Date, Duration & Venue

7.3 The meeting, in accordance with MIDANPIRG Procedural Handbook, Part III, Rules of Procedures for the Conduct of Meetings of MIDANPIRG, paragraph 3.1, agreed that MIDANPIRG/13 meeting, be tentatively scheduled in the first half of 2012, after taking into consideration the MID Regional Office work programme and coordination between the Secretariat and the Chairperson of the MIDANPIRG. The duration would be initially five (05) working days unless otherwise advised.

7.4 ICAO MID Regional Office meetings are normally convened in Cairo, at ICAO Regional Office. However, in accordance with MIDANPIRG Procedural Handbook, Part II, Working Arrangements, paragraph 4.2, States are encouraged to host MIDANPIRG meetings as appropriate.

7.5 The meeting agreed that the third meeting of the MIDANPIRG Steering Group (MSG) will be tentatively held in Tehran, Iran (17-19 October 2011).

Follow-up Action Plan

7.6 In accordance with the ICAO Business plan and the requirements for performance monitoring, the meeting developed a follow-up action plan as at **Appendix 7B** to the Report on Agenda Item 7.

MIDANPIRG/12
Appendix 7A to the Report on Agenda Item 7

ICAO Middle East Regional Office (MID)

Tentative Schedule of Meetings, Seminars and Workshops

"January – December 2011"

DATE	*MEETING/SEMINAR/WORKSHOP*	*SITE*	*REMARKS*
January			
17-20	**State Safety Program (SSP) Implementation Training Course**	**Cairo**	
February			
21-23	**Workshop on the Cooperative Arrangement for the Prevention of Spread of Communicable Disease by Air Transport (CAPSCA).**	**Cairo**	**Joint ICAO/WHO**
March			
14-16	**ATN/IPS WG/3**	**Cairo**	
22-24	**DGCA-MID/1 Meeting**	**Abu Dhabi**	**Hosted by UAE** **High Level Civil Aviation Meeting**
April			
18-20	**Surveillance Workshop**	**Cairo**	
26-28	**MIDRMA Board/11**	**Damascus**	**Hosted by Syria**
May			
9-11	**Traffic Forecasting (TF) SG/4**	**Cairo**	
16-18	**ARN TF/4**	**Jordan**	
22-24	**SADIS OPSG/16**	**Cairo**	**Closing session 24 May, not later than 11:00**
23	**MID OPMET Bulletin Management Group (BMG)/1**	**Cairo**	**In conjunction with the SADISOPSG/16 meeting**
24-26	**MID MET SG/3**	**Cairo**	**Opening Session 24 May, at 11:00 following the closing of the SADISOPSG/16 meeting**
June			
6-8	**AIS/MAP TF/6**	**Bahrain**	
13-15	**ICAO New Flight Plan Format Study Group (INFPL) SG*/3**	**Abu Dhabi**	
19-23	**SMS Training Course**	**Cairo**	
27-29	**ICARD & eANP Workshop**	**Cairo**	**(SIP)**

DATE	*MEETING/SEMINAR/WORKSHOP*	*SITE*	*REMARKS*
July			
4-7	**Training Workshop on State Action Plan - Environment**	**Cairo**	
10-14	**European Co- ordination Centre for Aviation Iincident Reporting Systems (ECCAIRS)**	**Cairo**	
17-19	**CNS SG/4**	**Cairo**	
August			
September			
14-15	**Secondary Surveillance Radar (SSR) Code Allocation Study Group (SSRCA SG/4)**	**Cairo**	
18-21	**Regional Aviation Safety Group-Middle East (RASG-MID/1)**	**Cairo**	
October			
2-4	**PBN/GNSS TF/4**	**Cairo**	
17-19	**MIDANPIRG Steering Group (MSG/3)**	**Tehran**	**Hosted by Iran**
November			
21-24	**ATM/SAR/AIS SG/12**	**Cairo**	
28-1 Dec.	**MID Regional Runway Safety Workshop**	**Cairo**	**(SIP)**
December			
4-6	**Aerodrome Certification Implementation Task Force (ADCI TF/1)**	**Cairo**	

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. *No meetings are planned for the month of August*
4. *The above table will be subject to update when required*

Legend:

SG = Sub-Group, SG = Study Group, TBD = To Be Determined, TF = Task Force, WG = Working Group.*

For more information please contact: icaomid@cairo.icao.int

MIDANPIRG/12
Appendix 7B to the Report on Agenda Item 7

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	
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	
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	January2011	

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, Volume I	Implementation of the Conclusion	ICAO	PANS-Aerodromes	2013	
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	
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	
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	

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	
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	

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	
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	

CONCLUSIONS AND DECISIONS	FOLLOW-UP	TO BE INITIATED BY	DELIVERABLE	TARGET DATE	REMARKS
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; 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;	MIDRMA Board and ICAO to Follow-up implementation with concerned States	MIDANPIRG	Updated funding mechanism approved by MIDANPIRG	October 2010	

CONCLUSIONS AND DECISIONS	FOLLOW-UP	TO BE INITIATED BY	DELIVERABLE	TARGET DATE	REMARKS
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; 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; k) the MIDRMA funding mechanism be revised by the MIDRMA Board when necessary					

CONCLUSIONS AND DECISIONS	FOLLOW-UP	TO BE INITIATED BY	DELIVERABLE	TARGET DATE	REMARKS
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	October 2010	
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	October 2010	

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	
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 x 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 x 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,	Follow up the implementation of the safety objectives	MIDRMA MIDANPIRG	SMR 2012	November 2011	

CONCLUSIONS AND DECISIONS	FOLLOW-UP	TO BE INITIATED BY	DELIVERABLE	TARGET DATE	REMARKS
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					
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	October 2010	
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	

CONCLUSIONS AND DECISIONS	FOLLOW-UP	TO BE INITIATED BY	DELIVERABLE	TARGET DATE	REMARKS
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	
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	
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	
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 to15 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	

CONCLUSIONS AND DECISIONS	FOLLOW-UP	TO BE INITIATED BY	DELIVERABLE	TARGET DATE	REMARKS
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 d) update the ICAO MID Regional Office on their implementation status	Follow-up Implementation of Conclusion	ICAO States	State Letter Data base Beacon upgrades and registration Focal points	2011 2011	
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	
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;	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	

CONCLUSIONS AND DECISIONS	FOLLOW-UP	TO BE INITIATED BY	DELIVERABLE	TARGET DATE	REMARKS
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.					
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	
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	Implement the Conclusion	ICAO States	State Letter Feedback from States	February 2011 June 2011	

CONCLUSIONS AND DECISIONS	FOLLOW-UP	TO BE INITIATED BY	DELIVERABLE	TARGET DATE	REMARKS
c) arrange for the signature of Service Level Agreements (SLA) between AIS and the data originators.					
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	
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	February2011 June 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	
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	

CONCLUSIONS AND DECISIONS	FOLLOW-UP	TO BE INITIATED BY	DELIVERABLE	TARGET DATE	REMARKS
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	
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	
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	

CONCLUSIONS AND DECISIONS	FOLLOW-UP	TO BE INITIATED BY	DELIVERABLE	TARGET DATE	REMARKS
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	
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	
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	

CONCLUSIONS AND DECISIONS	FOLLOW-UP	TO BE INITIATED BY	DELIVERABLE	TARGET DATE	REMARKS
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	
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	
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	
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	
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	

CONCLUSIONS AND DECISIONS	FOLLOW-UP	TO BE INITIATED BY	DELIVERABLE	TARGET DATE	REMARKS
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 c) support Civil Aviation Authorities, aviation spectrum experts to participate in WRC-12 and coordinate with the ICAO delegation to the conference	Follow up with States to support ICAO positions	ICAO States	State Letter CNS SG/4 Report Support ICAO positions	February 2012	
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	
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	

CONCLUSIONS AND DECISIONS	FOLLOW-UP	TO BE INITIATED BY	DELIVERABLE	TARGET DATE	REMARKS
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	
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; 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.	Monitor performance of ANS using the endorsed metrics	MIDANPIRG & subsidiary bodies	Develop performance targets	2011	

CONCLUSIONS AND DECISIONS	FOLLOW-UP	TO BE INITIATED BY	DELIVERABLE	TARGET DATE	REMARKS
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	
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	

CONCLUSIONS AND DECISIONS	FOLLOW-UP	TO BE INITIATED BY	DELIVERABLE	TARGET DATE	REMARKS
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	
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	
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 2012	
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	

CONCLUSIONS AND DECISIONS	FOLLOW-UP	TO BE INITIATED BY	DELIVERABLE	TARGET DATE	REMARKS
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	
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	
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	
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	
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	

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	
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	
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	
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	
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	

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	
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	
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	

CONCLUSIONS AND DECISIONS	FOLLOW-UP	TO BE INITIATED BY	DELIVERABLE	TARGET DATE	REMARKS
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	
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	

CONCLUSIONS AND DECISIONS	FOLLOW-UP	TO BE INITIATED BY	DELIVERABLE	TARGET DATE	REMARKS
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	
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	
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	

CONCLUSIONS AND DECISIONS	FOLLOW-UP	TO BE INITIATED BY	DELIVERABLE	TARGET DATE	REMARKS
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	
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	
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	

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	
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	

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	
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;	Implement the Conclusion	ICAO States	State Letter Complete assessment of pilots & controllers	January 2011 March 2011	

CONCLUSIONS AND DECISIONS	FOLLOW-UP	TO BE INITIATED BY	DELIVERABLE	TARGET DATE	REMARKS
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.					
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	
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	

REPORT ON AGENDA ITEM 8: ANY OTHER BUSINESS

8.1 The meeting was informed of CANSO Middle East activities which were held and the forthcoming series of events that will be held in the MID Region. The meeting was further informed that details of CANSO activities can be found at their website: http://www.canso.org/events.

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