INTERNATIONAL CIVIL AVIATION ORGANIZATION

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

REPORT OF THE FIFTH MEETING OF AIS/MAP TASK FORCE

(Tehran, Iran Islamic Republic of, 5 – 7 May 2009)

The views expressed in this Report should be taken as those of the MIDANPIRG AIS/MAP Task Force and not of the Organization. This Report will, however, be submitted to the MIDANPIRG and any formal action taken will be published in due course as a Supplement to the Report.

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

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PART I – HISTORY OF THE MEETING

1. PLACE AND DURATION

1.1 The Fifth Meeting of the MIDANPIRG AIS/MAP Task Force was held at the Islamic Republic of Iran Broadcasting (IRIB) Int'l Conference Centre (IICC) from 5 to 7 May 2009.

2. OPENING

2.1 Mr. Faramarz Sarvi, Vice President Flight Standards/Civil Aviation Organization (CAO) of Iran welcomed the participants and indicated that such meetings are beneficial to the aviation community and would strengthen the cooperation between MID States. He underlined that the role of AIS has changed significantly with the introduction of RNP, RNAV, PBN and airborne computer based systems, where the quality of AIS data has a direct impact on the safety of air navigation. Mr. Sarvi pointed out that aviation activity in the MID Region is one of the fastest growing in the world and accordingly, the provision of services such as AIS/AIM, ATM and SAR must be compatible with the growth. He provided also an overview of the developments of aviation infrastructure in Iran.

2.2 H.E. Mr. Hashimi, The First Vice Minister of Road & Transportation, welcomed all the participants to Tehran wishing that the AIS/MAP TF/5 meeting would be very successful. He stated that aviation industry is a kind of gift to humanity and a symbol of development of any country in the world. Mr. Hashimi highlighted the importance of human resources in the field of aviation and recognized that investment in aviation, including training of aviation personnel, will improve the services available to the aviation community and overall improve safety. He further pointed out the importance of aeronautical information and the need for the availability of high quality aeronautical information in a timely manner and where needed (in the ground and onboard the aircraft). Mr. Hashimi mentioned that one of the objectives of the AIS/MAP Task Force is to develop procedures and guidance material related to the use of aeronautical information and associated applications and new technology. He mentioned that the participants represent the elite of aviation industry gathered to exchange views and find means to minimize human errors and maximize safety and standardization of AIS data. Mr. Hashimi re-iterated Iran's support to the ICAO MID Regional Office and all regional and international civil aviation activities and cooperation aiming at improving the safety and efficiency of international air navigation.

2.3 Mr. Mo'menirokh, The Chairman of the Board and Chief Executive Officer of the Iranian Airport Company (IAC) welcomed the ICAO MID Regional Office Representatives and all participants to Tehran. He highlighted the important role AIS is playing within the framework of the ATM Operational Concept. He emphasized on the need to transit to the digital world and to use the technology for the provision and exchange of aeronautical information. In this regard, and as part of the Iranian CNS/ATM project, Mr. Mo'menirokh confirmed that Iran has started the process of transition from AIS to AIM, in accordance with the ICAO guidelines. He underlined the need to comply with the current ICAO SARPs as an essential pre-requisite for the transition from AIS to AIM. In particular, Mr. Mo'menirokh highlighted the importance of implementation of Quality Management System (QMS) for AIS and mentioned that Iran AIS has been certified ISO 9001 since January 2009. He further stated that Iran is working hard to conclude an agreement with a contractor for the implementation of an AIS Automation Project. In closing, he thanked the ICAO MID Regional Office and all participants wishing them a fruitful and successful meeting.

2.4 Mr. Jehad Faqir, ICAO MID Regional Office Deputy Regional Director, on behalf of Mr. Mohamed R. M. Khonji, the Regional Director, welcomed the participants and thanked the CAO of Iran and the Iranian Airport Company (IAC) for hosting the fifth meeting of the AIS/MAP Task Force and for their generous hospitality. He highlighted the major objectives of AIS and the need for transition from AIS to AIM to meet the pressing demand of the new navigation and ATM systems which are data-dependent, all requiring access to high quality and timeliness Aeronautical Information. He requested the meeting to include in its work programme the development of an Action Plan/Strategy for the transition from AIS to AIM in the MID Region and to develop associated planning material. In closing, he wished the participants a pleasant stay in Tehran and a fruitful meeting.

3. ATTENDANCE

3.1 The meeting was attended by a total of sixty four (64) participants, including experts from eight (8) States (Bahrain, Egypt, Iran, Jordan, Kuwait, Oman, Saudi Arabia and Syria.). The list of participants is at **Attachment A** to the Report.

4. OFFICERS AND SECRETARIAT

4.1 The meeting was chaired by Mr. Ramezanali Ziaeegravi, Deputy of General Director of ATM, Tehran Mehrabad International Airport, Iranian Airport Company. Mr. Mohamed Smaoui, Regional Officer Aeronautical Information & Charts/Meteorology was the Secretary of the meeting, supported by Mr. Jehad Faqir, Deputy Regional Director, ICAO MID Regional Office.

5. LANGUAGE

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

6. AGENDA

6.1 The following Agenda was adopted:

Agenda Item 1: Adoption of provisional agenda

Agenda Item 2: Follow-up on MIDANPIRG/11 Conclusions and Decisions relevant to the AIS/MAP field

Agenda Item 3: Status of implementation of AIS/MAP requirements in the MID Region

Agenda Item 4: Quality Management System (QMS)

Agenda Item 5: AIS automation

Agenda Item 6: Electronic Terrain and Obstacle Data (eTOD)

Agenda Item 7: Review of air navigation deficiencies in the AIS/MAP field

Agenda Item 8: MID Region AIS/MAP implementation Plan

Agenda Item 9: Aeronautical Information Management (AIM)

Agenda Item 10: MID Region AIS/MAP Performance Objectives
Agenda Item 11: Future Work Programme

Agenda Item 12: Any other business

7. CONCLUSIONS AND DECISIONS – DEFINITION

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

a) **Conclusions** deal with the matters which, in accordance with the Group's terms of reference, merit directly the attention of States on which further action will be initiated by ICAO in accordance with established procedures; and

b) **Decisions** deal with matters of concern only to the MIDANPIRG and its contributory bodies

8. LIST OF DRAFT CONCLUSIONS AND DRAFT DECISIONS

DRAFT DECISION 5/1: DRAFT PROPOSAL FOR AMENDMENT TO THE MID FASID, PART VIII (AIS TABLES)

DRAFT CONCLUSION 5/2: AWARENESS CAMPAIGNS AND TRAINING PROGRAMMES ON QMS

DRAFT DECISION 5/3: TERMS OF REFERENCE OF THE QMS IMPLEMENTATION ACTION GROUP

DRAFT DECISION 5/4: TERMS OF REFERENCE OF THE AIS AUTOMATION ACTION GROUP

DRAFT CONCLUSION 5/5: eTOD CHECKLIST

DRAFT CONCLUSION 5/6: eTOD AWARENESS CAMPAIGNS

DRAFT CONCLUSION 5/7: PROPOSAL FOR AMENDMENT TO THE MID BASIC ANP (DOC 9708) RELATED TO eTOD

DRAFT CONCLUSION 5/9: TRANSITION FROM AIS TO AIM

DRAFT DECISION 5/10: PLANNING FOR THE TRANSITION FROM AIS TO AIM

DRAFT CONCLUSION 5/11: HOSTING OF THE GLOBAL AIM CONGRESS

DRAFT DECISION 5/12: TERMS OF REFERENCE OF THE AIS/MAP TASK FORCE

PART II: REPORT ON AGENDA ITEMS

REPORT ON AGENDA ITEM 1: ADOPTION OF 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 MIDANPIRG/11 CONCLUSIONS AND DECISIONS RELEVANT TO THE AIS/MAP FIELD

2.1 The meeting noted the status of relevant MIDANPIRG/11 Conclusions and Decisions related to the AIS/MAP field and the follow up actions taken by concerned parties as at **Appendix 2A** to the Report on Agenda Item 2.

AIS/MAP TF/5
Appendix 2A to the Report on Agenda Item 2

FOLLOW-UP ACTION PLAN ON MIDANPIRG/11 CONCLUSIONS AND DECISIONS RELEVANT TO THE AIS/MAP FIELD

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	Ongoing

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: 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: 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.	Implement the Conclusion	ICAO States	State Letter (Reminder) List of ICAO FPP	Apr. 2009 Jun. 2009	Ongoing

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	Ongoing
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 TBD	Ref.: Draft Dec.5/1

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	Ongoing
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;	Implement the Conclusion	States	Feed back from States (awareness campaigns, SLAs) Report of the AIS/MAP TF/5 Meeting	May 2009 May 2009	Ongoing

CONCLUSIONS AND DECISIONS	FOLLOW-UP	TO BE INITIATED BY	DELIVERABLE	TARGET DATE	REMARKS
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.					
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	Actioned (Draft Amendment 36 to Annex 15)
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	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	Actioned (State Letter Ref.: AN 8/1.1-09/128 dated 14 April 2009) Ongoing

CONCLUSIONS AND DECISIONS	FOLLOW-UP	TO BE INITIATED BY	DELIVERABLE	TARGET DATE	REMARKS
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.					
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	To be replaced and superseded by Draft Conc. 5/5 & 5/7
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	Ongoing
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	To be replaced and superseded by Draft Dec. 5/8

CONCLUSIONS AND DECISIONS	FOLLOW-UP	TO BE INITIATED BY	DELIVERABLE	TARGET DATE	REMARKS
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.	Follow up with concerned States	ICAO States	State Letter Feed back from States	Jun. 2009 Dec. 2009	Ongoing
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	Ongoing
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	Ongoing
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	Ongoing

CONCLUSIONS AND DECISIONS	FOLLOW-UP	TO BE INITIATED BY	DELIVERABLE	TARGET DATE	REMARKS
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	To be replaced and superseded by Draft Conc. 5/4
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) Feed back from States	Jun. 2009 Sep. 2009	To be replaced and superseded by Draft Conc. 5/9 & 5/10
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	To be replaced and superseded by Draft Conc. 5/9 & 5/10

CONCLUSIONS AND DECISIONS	FOLLOW-UP	TO BE INITIATED BY	DELIVERABLE	TARGET DATE	REMARKS
COC. 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	Ongoing
CONC. 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	To be replaced and superseded by Draft Dec. 5/12
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 ICAO	Action plans for elimination of deficiencies Feedback from Users and States received through MANDD Assistance provided to States, as requested and as appropriate	May 2009 Ongoing Ongoing	Ongoing

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.					

AIS/MAP TF/5
Report on Agenda Item 3

REPORT ON AGENDA ITEM 3: STATUS OF IMPLEMENTATION OF AIS/MAP REQUIREMENTS IN THE MID REGION

3.1 The meeting reviewed the status of implementation of the required AIS/MAP facilities and services in the MID Region.

3.2 With respect to the status of implementation of the AIRAC system, the meeting recalled that MIDANPIRG/11 recognized that late receipt of aeronautical information continued to be a problem for the aviation community in the MID Region. It was also noted that the AIRAC procedures were not fully adhered to by a number of MID States.

3.3 The meeting re-emphasized that the lack of coordination between AIS and the technical departments providing the raw material to the AIS for promulgation represents the main reason for non-compliance with the AIRAC procedures. In this regard, the meeting recalled that the signature of Service Level Agreements (SLA) between AIS and the data originators would, to a large extent, solve this deficiency.

3.4 The meeting recalled that States were encouraged by MIDANPIRG 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. The table below gives details about the use of internet for the publication of aeronautical information by MID States:

	AIS email address	**AIS website**	**Remarks**
Afghanistan	afghanaip@auab.centaf.af.mil	www.motca.gov.af	AIP available on the web
Bahrain	aisadmin@caa.gov.bh	www.bahrainairport.com	AIP available on the web
Egypt	ais@nansceg.org	www.nansceg.org	AIP available on the web
Iran	ais_iran@airport.ir	http://ais.airport.ir	AIP available on the web
Iraq	hisham.icaa@yahoo.com	www.ramcc.dtic.mil	AIP available on the web
Israel			
Jordan	ais.hq@carc.gov.jo	www.carc.gov.jo	AIP available on the web
Kuwait	ais@kuwait-airport.com.kw	www.kuwait-airport.com.kw	AIP available on the web
Lebanon	ais@beirutairport.gov.lb		
Oman	briefing@dgcam.gov.om		
Qatar	doha.ais@caa.gov.qa aisadmin@bahrain.gov.bh	www.caa.gov.qa	(AIP maintained by Bahrain, available on the web)
Saudi Arabia	ais@gaca.gov.sa	www.gaca.gov.sa	NOTAM summary available on the web

	AIS email address	AIS website	Remarks
Syria			
UAE	ais@gcaa.ae briefing@emirates.net.ae	www.gcaa.ae	AICs, SUPs and NOTAM Summaries available on the web
Yemen			

3.5 Based on the above, the meeting re-iterated MIDANPIRG/11 Conclusions 11/39 and 11/40 and agreed to their carry-over as follows:

CONCLUSION 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.

CONCLUSION 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.

3.6 In connection with the above, the meeting recalled that MIDANPIRG/11, through Conclusion 11/4 requested Bahrain, in coordination with ICAO, to 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. The meeting further noted that, as a follow-up action to MIDANPIRG/11 Conclusions 11/4 and 11/39, the ICAO MID Regional Office sent State Letter Ref.: AN 8/4 – 09/133 dated 16 April 2009, inviting States to keep the Office informed of their intentions/suggestions related to the use of the ICAO MID Forum for the posting of the AIS publications. However, no reply was received from States in this respect.

3.7 The meeting was of view that the posting of all AIS publications on the ICAO MID Forum is not feasible/practical, since this would raise a cost-recovery and copy right issue. However, as a first step, the meeting agreed that the following improvements could be implemented in the next version of the ICAO MID Forum:

- the creation of special links to the MID States Civil Aviation Authorities' websites;
- the creation of a special page for AIS/AIM services with a special link to the MID States' AIS websites;
- provide the possibility to States to post on the ICAO MID Forum AIS page, the information/AIS publications that they consider important for the benefit of safety to be posted on this forum;
- manage the restricted access to the Forum by providing a personal username and password to each Member of the Forum, in addition to the usernames and passwords provided to each State and which allow the posting of some AIS publications on the AIS page of the Forum; and
- dissemination of an automatic email to be sent to the different Members of the Forum, whenever a new message, query, information, publication, etc, is posted on the Forum.

3.8 Based on the above, the meeting urged States to send officially to the MID Regional Office their suggestions related to the use of the ICAO MID Forum and to contribute to its improvement. States were also urged to make use and take full benefit of the ICAO MID Forum especially for the exchange of information and sharing of experience related to eTOD, QMS and AIS automation. In this regard, the meeting recognized that the improvement of the Forum would be efficient only if it's based on feedback received from States/users.

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. Accordingly, the meeting re-emphasized that the only way to improve the quality of the services provided by AIS would be the implementation of AIS automation, QMS and the provision of tailored products meeting the user requirements.

3.10 The meeting recalled that, further to the approval of the proposal for amendment of the MID Basic ANP 08/05-AOP, MIDANPIRG/11, through Conclusion 11/13, agreed that 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. Accordingly, the meeting reviewed and updated the MID FASID Tables, AIS 1, AIS 2, AIS 3, AIS 4, AIS 6, AIS 7 and AIS 8 at **Appendix 3A** to the Report on Agenda Item 3, and agreed that the Secretariat consolidate a draft proposal for amendment to the MID FASID, Part VIII, for review by the ATM/SAR/AIS SG/11 meeting before official circulation to States.

DRAFT DECISION 5/1: DRAFT PROPOSAL FOR AMENDMENT TO THE MID FASID, PART VIII (AIS TABLES)

That, based on the feedback from States, the Secretariat consolidate a draft proposal for amendment to the MID FASID, Part VIII (AIS), for review by the ATM/SAR/AIS SG/11 meeting before official circulation to States.

3.11 Based on the above, the meeting developed the following table which summarizes the status of implementation of AIS/MAP requirements related to the IAIP, AIRAC and aeronautical charts in the MID Region:

	AIP	**AIRAC**	**NOTAM**	**Pre-Flight Information**	**Aeronautical Charts**
Afghanistan	– An electronic version of the AIP not fully compliant with Annex 15 requirements is available on the web	– Lack of implementation of the AIRAC system	– Lack of compliance with Annex 15 and Doc 8126 provisions related to NOTAM format and requirements – No monthly summary of NOTAM	– Non provision of pre-flight information service	– A number of Aeronautical charts are not produced or are not compliant with Annex 4 requirements
Bahrain	– Well updated AIP, available on the web	– AIRAC procedures implemented	– No deficiency identified	– Pre-flight information service provided with a Central automated system	– No deficiency identified
Egypt	– Well updated AIP; available on the web and on CD	– AIRAC procedures implemented	– No deficiency identified	– Pre-flight information service provided with a Central automated system	– No deficiency identified

	AIP	AIRAC	NOTAM	Pre-Flight Information	Aeronautical Charts
Iran	– Well updated AIP; available on the web and on CD	– AIRAC procedures implemented	– No deficiency identified	– Non provision of pre-flight information service (in progress)	WAC Chart ICAO 1:1000000 not yet published (in progress)
Iraq	– An electronic version of the AIP not fully compliant with Annex 15 requirements is available on the web	– Lack of implementation of the AIRAC system	– Lack of compliance with Annex 15 and Doc 8126 provisions related to NOTAM format and requirements – No monthly summary of NOTAM	– Non provision of pre-flight information service	– A number of Aeronautical charts are not produced or are not compliant with Annex 4 requirements
Israel	– AIP generally up-to-date, but not available on an electronic means (CD or website)	– Lack of implementation of the AIRAC system	– No deficiency reported except that related to the monthly summary of NOTAM	– Non provision of pre-flight information service	– The Enroute chart-ICAO is not produced
Jordan	– Well updated AIP; available on the web	– AIRAC procedures implemented	– No deficiency identified	– Pre-flight information service provided with a Local automated system	– WAC Chart ICAO 1:1000000 not yet published
Kuwait	– Well updated AIP; available on the web and on CD	– AIRAC procedures implemented	– No deficiency identified	– Pre-flight information service provided with a central automated system	– No deficiency identified

	AIP	AIRAC	NOTAM	Pre-Flight Information	Aeronautical Charts
Lebanon	– AIP generally up-to-date, and available on a CD	– AIRAC procedures not fully implemented	– No deficiency identified	– Pre-flight information service provided with a Central automated system	– WAC Chart ICAO 1:1000000 not yet published
Oman	– AIP generally up-to-date, and available on a CD	– Lack of implementation of the AIRAC system	– No deficiency identified	– Pre-flight information service provided at Muscat airport	– WAC Chart ICAO 1:1000000 not yet published
Qatar	– Published with AIP Bahrain. – Well updated AIP, available on the web	– AIRAC procedures implemented	– No deficiency identified	– Pre-flight information service provided with an automated system	– Aerodrome Chart-ICAO not yet published
Saudi Arabia	– AIP generally up-to-date, and available on an a CD – Some inconsistencies noted	– AIRAC procedures implemented	– No deficiency identified	– AIS Aerodrome Units not established at Int'l Airports – Non provision of pre-flight information service. Lack of AIS automation	– A number of Aeronautical charts are not yet produced
Syria	– AIP not regularly updated; – AIP not available on an electronic means (CD or website). – Some inconsistencies noted	– Lack of implementation of the AIRAC system	– No deficiency identified	– Non provision of pre-flight information service. Lack of AIS automation	– WAC Chart ICAO 1:1000000 not yet published
UAE	– Well updated AIP, but not available on an electronic means (CD or website)	– AIRAC procedures implemented	– No deficiency identified	– Non provision of pre-flight information service. Lack of AIS automation	– No deficiency identified

	AIP	AIRAC	NOTAM	Pre-Flight Information	Aeronautical Charts
Yemen	– AIP generally up-to-date; – AIP not available on an electronic means (CD or website) – Some inconsistencies noted	– Lack of implementation of the AIRAC system	– No deficiency identified	– Non provision of pre-flight information service. Lack of AIS automation	– A number of Aeronautical charts are not produced

3.12 The meeting recognized that although the progress achieved in the implementation of the required AIS/MAP facilities and services in the MID Region, concern is still expressed about a number of issues, mainly:

– number of AIPs are not regularly updated;

– the adherence to the AIRAC system is still below expectations; and

– pre-flight briefings are even not available or provided in a way which is not meeting the user requirements.

WGS-84 implementation

3.13 The meeting highlighted the requirements for the implementation of WGS-84 and reviewed the status of its implementation in the MID Region. It was noted in this regard that although the implementation of WGS-84 should have been completed since 1998, some MID States have still not fully completed the implementation of the system.

3.14 The meeting reviewed and updated the FASID Table AIS-5 as at **Appendix 3B** to the Report on Agenda Item 3. A simplified Status report of WGS-84 implementation in the MID Region is also presented at **Appendix 3C** to the Report on Agenda Item 3.

3.15 The Status of implementation of WGS-84 in the MID Region can be summarized as follows:

a) six (6) States have fully implemented WGS-84 including the geoid undulation;

b) seven (7) States have implemented the majority of WGS-84 requirements; however, one or two elements (geoid undulation, quality system) are not yet implemented;

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

d) one (1) State has not yet implemented WGS-84.

3.16 The meeting recalled that, taking into consideration the status of implementation of WGS-84 in the MID Region, MIDANPIRG/11 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. Accordingly, MIDANPIRG/11 agreed to the following Conclusion:

CONCLUSION 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; 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.

3.17 The meeting noted that, as a follow-up action to the above MIDANPIRG/11 Conclusion, the ICAO MID Regional Office sent State Letter Ref.: AN 8/1.1 – 09/128 dated 14 April 2009 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 agreed by MIDANPIRG/11 for the achievement of a full implementation of the WGS-84 system in the MID Region.

3.18 Based on the above, the meeting re-iterated the above MIDANPIRG/11 Conclusion 11/42 and agreed to its carry-over.

FASID TABLE AIS-1 – ESTABLISHMENT OF AERODROME AIS UNITS

STATE OR TERRITORY	AIS AERODROME UNITS REQUIRED AT CITY
AFGHANISTAN	KABUL/Kabul Int'l
	KANDAHAR/Kandahar Int'l
BAHRAIN	BAHRAIN/Bahrain Int'l
EGYPT	ALEXANDRIA/Alexandria Int'l
	ALEXANDRIA/Borg El Arab Int'l
	El-ARISH/El-Arish Int'l
	ASWAN/Aswan Int'l
	ASYUT/Asyut Int'l
	CAIRO/Cairo Int'l
	HURGHADA/Hurghada Int'l
	LUXOR/Luxor
	SHARM-EL-SHEIKH/Sharm El Sheikh Int'l
	~~ST. CATHERINE/St. Catherine Int'l~~
	~~Taba/Taba Int'l~~
IRAN, ISLAMIC REPUBLIC OF	BANDAR ABBAS/Bandar Abbas Int'l
	ESFAHAN/Shahid Beheshti Int'l
	MASHHAD/Shahid Hashemi Nejad Int'l
	SHIRAZ/ Shahid Dastghaib Int'l
	TABRIZ/Tabriz Int'l
	TEHRAN/Mehrabad Int'l
	TEHRAN/Imam Khomaini Int'l
	ZAHEDAN/Zahedan Int'l
IRAQ	BAGHDAD/ Baghdad Int'l
	BASRAH/ Basrah Int'l
	ERBIL/ Erbil Int'l
	SULYMANIYAH/ Sulymaniyah Int'l
	AL NAJAF/ Al Najaf Int'l (non operational).
ISRAEL	EILAT/Eilat
	HAIFA/Haifa

STATE OR TERRITORY	AIS AERODROME UNITS REQUIRED AT CITY
	OVDA/Ovda Int'l
	TEL AVIV/Ben Gurion
	TEL AVIV/ Sde-Dov
JORDAN	AMMAN/Marka Int'l
	AMMAN/Queen Alia Int'l
	AQABA/ King Hussein Int'l
	JERUSALEM/Jerusalem (non operational)
KUWAIT	KUWAIT/Kuwait Int'l
LEBANON	BEIRUT/R. B. H – Beirut Int'l
OMAN	Muscat/Muscat Int'l
	SALALAH/Salalah
QATAR	DOHA/Doha Int'l
	DOHA/New Doha Int'l (Future)
SAUDI ARABIA	DAMMAM/King Fahd Int'l
	JEDDAH/King Abdulaziz Int'l
	MADINAH/Prince Mohammad Bin Abdulaziz
	RIYADH/King Khalid Int'l
SYRIAN ARAB REPUBLIC	ALEPPO/Aleppo Int'l
	LATTAKIA/Bassel Al-Assad
	DAMASCUS/Damascus Int'l
UNITED ARAB EMIRATES	ABU DHABI/Abu Dhabi Int'l
	AL AIN/Al Ain Int'l
	DUBAI/Dubai Int'l
	FUJAIRAH/Fujairah Int'l
	RAS AL KHAIMAH/Ras Al Khaimah Int'l
	SHARJAH/Sharjah Int'l
	DUBAI/ Jabel Ali Int'l (Future)
YEMEN	ADEN/Aden Int'l
	HODEIDAH / Hodeidah Int'l
	SANA'A / Sana'a Int'l
	TAIZ /Taiz Int'l

APPENDIX 3A2

FASID TABLE AIS 2 AERONAUTICAL INFORMATION SERVICES REQUIRED AT AERODROMES

EXPLANATION OF THE TABLE

Column

1 Name of the aerodrome or location where aeronautical information services are required

2 Designation of the aerodrome:

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

3 ICAO location indicator of the aerodrome.

4 Name of the AIS office responsible for the provision of aeronautical information service at the aerodrome concerned indicated in column 1.

5 ICAO AFTN address of the responsible AIS office.

6 AIS information to be available at the aerodrome:

AIP+:Includes AIP and Amendments, AIP Supplements, NOTAM, AIC
L - country in which the aerodrome is located
S - surrounding countries
FIL – all countries up to and including the aerodrome of first intended landing

PIB: Pre-flight Information Bulletins
P1 – Aerodrome (AD) format
P2 – Area format, AD format
P3 – Route format, Area format, AD format

PREP: Preparation method of PIB
C – Centralized preparation
L – Local preparation (at the aerodrome concerned)

7 Area of coverage by AFTN routing areas for which aeronautical information/flight documentation is required to be available.
Note.-The AFTN routing areas are shown on FASID Chart MET 1

8 Availability of Post-Flight Reporting Forms

9 Remarks
(Indicate where processing of aeronautical information is automated/database).
A - Automated

Aerodrome where service is required			**Responsible AIS Office**		**AIS information to be provided**					**Area of coverage By AFTN routing areas**	**Post Flight Report**	**Remarks**
					AIP+			**PIB**				
Name	Use	ICAO Loc. Ind.	Name	ICAO loc. Ind.	L	S	F I L	P1 P2 P3	P R E P			
1	**2**	**3**	**4**	**5**	**6**					**7**	**8**	**9**
AFGHANISTAN												
KABUL/Kabul Int'l	RS	OAKB										
KANDAHAR/Kandahar Int'l	AS	OAKN										
BAHRAIN												
BAHRAIN/Bahrain Int'l	RS	OBBI	Bahrain AIS	OBBBYNYX			X	P3	L	O, H, D, L, E, K, U, F, V, Z, Y, R, W, A, N, G	NIL	A
EGYPT												
ALEXANDRIA/Alexandria Int'l	RS	HEAX	Alexandria	HEAXZIZX	X			P3	C		X	A
ALEXANDRIA/Borg El Arab Int'l	RS	HEBA										
EL-ARISH/El-Arish Int'l	RS	HEAR										
ASWAN/Aswan Int'l	RS	HESN	Aswan	HESNZIZX	X			P3	C	H, L, U	X	A
ASYUT/Asyut Int'l	RS	HEAT	Cairo	HECAZPZX	X			P3		H, L, U	X	
CAIRO/Cairo Int'l	RS	HECA	Cairo	HECAZPZX HECAZIZX	X	X	X	P3	C	D, E, G, H, L, O, U, V	X	A
HURGHADA/Hurghada	RS	HEGN	Hurghada	HEGNZIZX	X			P3	C	E, L, O, U	X	A
LUXOR/Luxor	RS	HELX	Luxor	HELXZIZX	X			P3	C	E, F, H, L	X	A
SHARM-EL-SHEIKH/Sharm El Sheikh	RS	HESH	Sharm El Sheikh	HESHZIZX	X			P3	C	E, L, O, U	X	A

Aerodrome where service is required			Responsible AIS Office		AIS information to be provided					Area of coverage By AFTN routing areas	Post Flight Report	Remarks
					AIP+			PIB				
Name	Use	ICAO Loc. Ind.	Name	ICAO loc. Ind.	L	S	FIL	P1 P2 P3	PREP			
1	2	3	4	5	6					7	8	9
ST. CATHERINE/St. Catherine Int'l	RS	HESC	Cairo	HECAZPZX	X					D, E, G, H, L, O, U, V	X	
TABA/Taba Int'l	RS	HETB	Cairo	HECAZPZX	X					D, E, G, H, L, O, U, V	X	
IRAN, ISLAMIC REPUBLIC OF												
BANDAR ABBAS/Bandar Abbas Int'l	RS	OIKB	Tehran AIS/NOF	OIIIYNYX	X							
ESFAHAN/ Shahid Beheshti Int'l	RS	OIFM	Tehran AIS/NOF	OIIIYNYX	X							
MASHHAD/Shahid Hashemi Nejad Int'l	RS	OIMM	Tehran AIS/NOF	OIIIYNYX	X							
SHIRAZ/ Shahid Dastghaib Int'l	RS	OISS	Tehran AIS/NOF	OIIIYNYX	X							
TABRIZ/Tabriz Int'l	RNS	OITT	Tehran AIS/NOF	OIIIYNYX	X							
TEHRAN/Mehrabad Int'l	RS	OIII	Tehran AIS/NOF	OIIIYNYX	X	X	X			B, C, D, E, F, G, H, L, M, O, P, S, T, U, V, Z	X	A
TEHRAN/Imam Khomaini Int'l	RS	OIIE	Tehran AIS/NOF	OIIIYNYX	X						X	
ZAHEDAN/Zahedan Int'l	RS	OIZH	Tehran AIS/NOF	OIIIYNYX	X							
IRAQ												
BAGHDAD/Baghdad Int'l	RS	ORBI										
BASRAH/Basrah Int'l	RS	ORMM										
ERBIL/Erbil Int'l	RS	ORER										
SULYMANIYAH/	RS	ORSU										

Aerodrome where service is required			**Responsible AIS Office**		**AIS information to be provided**					**Area of coverage**	**Post**	**Remarks**
					AIP+			**PIB**				
Name	Use	ICAO Loc. Ind.	Name	ICAO loc. Ind.	L	S	FIL	P1 P2 P3	PREP	**By AFTN routing areas**	**Flight Report**	
1	**2**	**3**	**4**	**5**	**6**					**7**	**8**	**9**
Sulymaniyah Int'l												
AL NAJAF/ Al Najaf Int'l (non operational).	RS	ORNI										
ISRAEL												
EILAT/Eilat	RNS	LLET										
HAIFA/Haifa	RS	LLHA										
OVDA/Ovda Int'l	RS	LLOV										
TEL AVIV/Ben Gurion	RS	LLBG										
TEL AVIV/Sde-Dov	RNS	LLSD										
JORDAN												
AMMAN/Marka Int'l	AS	OJAM	AMMAN Marka AIS Unit	OJAMYOYX	X	X	X	P3	L	O,E,L,D,G,W,R,V, U,K,Y,C,H, Z	X	A
AMMAN/Queen Alia Int'l	RS	OJAI	AMMAN Queen Alia NOF	OJAIYNYX	X	X	X	P3	L	O,E,L,D,G,W,R,V, U,K,Y,C,H, Z	X	A
AQABA/King Hussein Int'l	RNS	OJAQ	AQABA/Aqaba AIS Unit	OJAQYOYX	X	X		P3	L	O,E,L,D,G,W,R,V, U,K,Y,C,H, Z	X	A
JERUSALEM/Jerusalem (non operational)	RS	OJJR										
KUWAIT												
KUWAIT/Kuwait Int'l	RS	OKBK	Kuwait - AIS	OKNOYNYX OKNOYOYX	X	X	X	P3	L	O, E, L, H, K, V, W, R, U, Z.		A

Aerodrome where service is required			Responsible AIS Office		AIS information to be provided					Area of coverage By AFTN routing areas	Post Flight Report	Remarks
					AIP+			PIB				
Name	Use	ICAO Loc. Ind.	Name	ICAO loc. Ind.	L	S	FIL	P1 P2 P3	PREP			
1	2	3	4	5	6					7	8	9
LEBANON												
BEIRUT/ R. B. H – Beirut Int'l	RS	OLBA	BEIRUT	OLBAYNYX	X	X	X	P3	C	O, H, D, L, E, K, U, F, V, Z, Y, R, W, A, N, G	X	A
OMAN												
MUSCAT/ Muscat Int'l	RS	OOMS	Muscat Int'l NOF	OOMSYNYX	X	X	X	P3	L	E, H, K, L, O, V		
SALALAH/ Salalah	AS	OOSA										
QATAR												
DOHA/Doha Int'l	RS	OTBD										
DOHA/New Doha Int'l (Future)	RS	OTxx										
SAUDI ARABIA												
DAMMAM/King Fahd Int'l	RS	OEDF	Jeddah NOF	OEJDYNYX	X			P3	C	D, E, F, G, H, K, L, O, R, V, W		
JEDDAH/King Abdulaziz Int'l	RS	OEJN	Jeddah NOF	OEJDYNYX	X	X	X	P3	C	D, E, F, G, H, K, L, O, R, V, W		A
MADINAH/Prince Mohammad Bin Abdulaziz	RS	OEMA	Jeddah NOF	OEJDYNYX	X			P3	C	D, E, F, G, H, K, L, O, R, V, W		
RIYADH/King Khalid Int'l	RS	OERK	Jeddah NOF	OEJDYNYX	X			P3	C	D, E, F, G, H, K, L, O, R, V, W		

Aerodrome where service is required			**Responsible AIS Office**		**AIS information to be provided**					**Area of coverage By AFTN routing areas**	**Post Flight Report**	**Remarks**
					AIP+			**PIB**				
Name	Use	ICAO Loc. Ind.	Name	ICAO loc. Ind.	L	S	FIL	P1 P2 P3	PREP			
1	**2**	**3**	**4**	**5**	**6**					**7**	**8**	**9**
SYRIAN ARAB REPUBLIC												
ALEPPO/Aleppo Int'l	RS	OSAP	Aleppo AIS	OSAPZPZX								
LATTAKIA/Bassel Al-Assad	RS	OSLK	Bassel AIS	OSLKZPZX								
DAMASCUS/Damascus Int'l	RS	OSDI	Damascus NOF	OSDIYNYX	X			P3	C	O, H, E, L, U, D, G, F, R, W, V, Z	X	
UNITED ARAB EMIRATES												
ABU DHABI/Abu Dhabi Int'l	RS	OMAA	Abu Dhabi Briefing Office	OMAAYOYX	X			P3	L	O, H, D, L, E, U, F, V, Z, R, W, G	NIL	
AL AIN/Al Ain Int'l	RS	OMAL	Al Ain	OMALZTZX	X	X		P3	C	H, O, U, V	X	A
DUBAI/Dubai Int'l	RS	OMDB	Dubai AIS	OMDBYOYX OMDBZPZX			X	P3	L	O, H, E, U, V, Z, R, W		
FUJAIRAH/Fujairah Int'l	RS	OMFJ	Fujairah AIS	OMFJZPZX		X		P3	L	O, H, D, L, E, U, V, W, K, Y, G, C, B	NIL	A
RAS AL KHAIMAH/Ras Al Khaimah Int'l	RS	OMRK	Ras Al Khaimah	OMRKYNYX	X	X	X	P1	L	O	X	NIL
SHARJAH/Sharjah Int'l	RS	OMSJ	Sharjah AIS	OMSJYOYX			X	P3	C	O, H, E, U, V, Z, R, W		
DUBAI/Jabel Ali Int'l (Future)	RS	OMJA										
YEMEN												
ADEN/Aden Int'l	RS	OYAA	Aden AIS	OYAAZPZX	L		X				NIL	
HODEIDAH/Hodeidah Int'l	RS	OYHD	Hodeidah AIS	OYHDYFYX	L	X					NIL	

Aerodrome where service is required			**Responsible AIS Office**		**AIS information to be provided**					**Area of coverage By AFTN routing areas**	**Post Flight Report**	**Remarks**
					AIP+			**PIB**				
Name	Use	ICAO Loc. Ind.	Name	ICAO loc. Ind.	L	S	FIL	P1 P2 P3	PREP			
1	**2**	**3**	**4**	**5**	**6**					**7**	**8**	**9**
SANA'A/Sana'a Int'l	RS	OYSN	Sana'a AIS	OYSNZPZX	L		X	P3	C	O,H,E,U,V,W	NIL	NIL
TAIZ/ Taiz Int'l	RS	OYTZ		OYTZYFYX	L							

APPENDIX 3A3

FASID TABLE AIS-3 – DESIGNATED INTERNATIONAL NOTAM OFFICES (NOF) IN THE MID REGION

NOF	*Areas of Responsibility by FIR*	*Remarks*
ABU DHABI	ABU DHABI	
AMMAN	AMMAN	
BAGHDAD	BAGHDAD	
BAHRAIN	BAHRAIN	
BEIRUT	BEIRUT	
CAIRO	CAIRO	
DAMASCUS	DAMASCUS	
JEDDAH	JEDDAH	
KABUL	KABUL	
KUWAIT	KUWAIT	
MUSCAT	MUSCAT	
SANA'A	SANA'A	
TEHRAN	TEHRAN	
TEL AVIV	TEL AVIV	

APPENDIX 3A4

FASID TABLE AIS-4
AVAILABILITY OF AERONAUTICAL INFORMATION

EXPLANATION OF THE TABLE

FASID Table AIS-4 sets out the requirement for the integrated aeronautical information package from foreign Aeronautical Information Services (AIS) to be available at aerodrome/heliport AIS Units in the MID region, for pre-flight briefing.

The table consists of three parts. Table AIS-4A covers the requirements for the integrated aeronautical information package from States and Territories in the MID region, Table AIS-4B includes the requirements from the EUR region and Table AIS-4C includes the requirements from the ASIA, CAR, NAM, SAM and AFI regions.

For each aerodrome/heliport in the MID region, the requirement is shown by an ‘’X’’ against the State or Territory from which the integrated aeronautical information package is required.

For each aerodrome/heliport the location indicator and designator of aerodrome/heliport use are listed.

Aerodrome/Heliport use Designation:

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.

AIS-4-A			**From MID**														
Integrated Aeronautical Information Package **TO BE AVAILABLE IN**			**Afghanistan**	**Bahrain**	**Egypt**	**Iran**	**Iraq**	**Israel**	**Jordan**	**Kuwait**	**Lebanon**	**Oman**	**Qatar**	**Saudi Arabia**	**Syria Arab Rep**	**United Arab Emirates**	**Yemen**
City/Aerodrome	Use	ICAO Loc. Ind.															
AFGHANISTAN																	
KABUL/Kabul Int'l	RS	OAKB															
KANDAHAR/Kandahar Int'l	AS	OAKN															
BAHRAIN																	
BAHRAIN/Bahrain Int'l	RS	OBBI			X	X			X	X	X	X	X	X	X	X	X
EGYPT																	
ALEXANDRIA/Alexandria Int'l	RS	HEAX															
ALEXANDRIA/Borg El Arab Int'l	RS	HEBA															
EL-ARISH/El-Arish Int'l	AS	HEAR															
ASWAN/Aswan Int'l	RS	HESN															
ASYUT/Asyut Int'l	RS	HEAT															
CAIRO/Cairo Int'l	RS	HECC	X	X		X	X	X	X	X	X	X		X	X	X	X
HURGHADA/Hurghada	RS	HEGN															
LUXOR/Luxor	RS	HELX															
SHARM-EL-SHEIKH/Sharm El Sheikh	RS	HESH															
ST. CATHERINE/St. Catherine Int'l	RS	HESC															
TABA/Taba Int'l	RS	HETB															

AIS-4-A			**From MID**														
Integrated Aeronautical Information Package **TO BE AVAILABLE IN**			**Afghanistan**	**Bahrain**	**Egypt**	**Iran**	**Iraq**	**Israel**	**Jordan**	**Kuwait**	**Lebanon**	**Oman**	**Qatar**	**Saudi Arabia**	**Syria Arab Rep**	**United Arab Emirates**	**Yemen**
City/Aerodrome	Use	ICAO Loc. Ind.															
IRAN, ISLAMIC REPUBLIC OF																	
BANDAR ABBAS/Bandar Abbas Int'l	RS	OIKB				X											
ESFAHAN/ Shahid Beheshti Int'l	RS	OIFM				X											
MASHHAD/Shahid Hashemi Nejad Int'l	RS	OIMM				X											
SHIRAZ/ Shahid Dastghaib Int'l	RS	OISS				X											
TABRIZ/Tabriz Int'l	RNS	OITT				X											
TEHRAN/Mehrabad Int'l	RS	OIII	X	X	X	X	X		X	X	X	X	X	X	X	X	X
TEHRAN/Imam Khomaini Int'l	RS	OIIE				X											
ZAHEDAN/Zahedan Int'l	RS	OIZH				X											
IRAQ																	
BAGHDAD/Baghdad Intl	RS	ORBI															
BASRAH/Basrah Intl	RS	ORMM															
ERBIL/Erbil Int'l	RS	ORER															
SULYMANIYAH/ Sulymaniyah Int'l	RS	ORSU															
AL NAJAF/ Al Najaf Int'l (non operational).	RS	ORNI															
ISRAEL																	

AIS-4-A			**From MID**														
Integrated Aeronautical Information Package **TO BE AVAILABLE IN**			**Afghanistan**	**Bahrain**	**Egypt**	**Iran**	**Iraq**	**Israel**	**Jordan**	**Kuwait**	**Lebanon**	**Oman**	**Qatar**	**Saudi Arabia**	**Syria Arab Rep**	**United Arab Emirates**	**Yemen**
City/Aerodrome	Use	ICAO Loc. Ind.															
EILAT/Eilat	RNS	LLET															
HAIFA/Haifa	RS	LLHA															
OVDA/Ovda Int'l	RS	LLOV															
TEL AVIV/Ben Gurion	RS	LLBG															
TEL AVIV/Sde-Dov	RNS	LLSD															
JORDAN																	
AMMAN/Marka Int'l	AS	OJAM		X	X			X	X	X	X	X		X	X	X	
AMMAN/Queen Alia Int'l	RS	OJAI		X	X	X	X	X	X	X	X	X	X	X	X	X	X
AQABA/King Hussein Int'l	RNS	OJAQ			X			X	X					X	X		
JERUSALEM/Jerusalem (non operational)	RS	OJJR															
KUWAIT																	
KUWAIT/Kuwait Int'l	RS	OKBK		X	X	X			X		X	X	X	X	X	X	X
LEBANON																	
BEIRUT/R.B.H-Beirut Int'l	RS	OLBA									X						
OMAN																	
MUSCAT/ Muscat Int'l	RS	OOMS		X	X	X			X	X			X	X		X	X
SALALAH/Salalah	AS	OOSA															

AIS-4-A			From MID														
Integrated Aeronautical Information Package **TO BE AVAILABLE IN**			**Afghanistan**	**Bahrain**	**Egypt**	**Iran**	**Iraq**	**Israel**	**Jordan**	**Kuwait**	**Lebanon**	**Oman**	**Qatar**	**Saudi Arabia**	**Syria Arab Rep**	**United Arab Emirates**	**Yemen**
City/Aerodrome	Use	ICAO Loc. Ind.															
QATAR																	
DOHA/Doha Intl	RS	OTBD															
DOHA/New Doha Int'l (Future)	RS	OTxx															
SAUDI ARABIA																	
DAMMAM/King Fahd Int'l	RS	OEDF	X	X	X	X	X		X	X	X	X	X		X	X	X
JEDDAH/King Abdulaziz Int'l	RS	OEJN	X	X	X	X	X		X	X	X	X	X		X	X	X
MADINAH/Prince Mohammad Bin Abdulaziz	RS	OEMA	X	X	X	X	X		X	X	X	X	X		X	X	X
RIYADH/King Khalid Int'l	RS	OERK	X	X	X	X	X		X	X	X	X	X		X	X	X
SYRIAN ARAB REPUBLIC																	
ALEPPO/Aleppo Int'l	RS	OSAP															
LATTAKIA/Bassel Al-Assad	RS	OSLK															
DAMASCUS/Damascus Intl'	RS	OSDI		X	X	X	X		X	X	X	X	X	X		X	X
UNITED ARAB EMIRATES																	
ABU DHABI/Intl	RS	OMAA		X	X	X			X	X	X	X		X	X	X	X
AL AIN/Al Ain Intl	RS	OMAL		X	X	X			X			X	X	X			
DUBAI/Dubai Intl	RS	OMDB		X	X	X			X	X	X	X		X	X	X	

AIS-4-A			**From MID**														
Integrated Aeronautical Information Package **TO BE AVAILABLE IN**			**Afghanistan**	**Bahrain**	**Egypt**	**Iran**	**Iraq**	**Israel**	**Jordan**	**Kuwait**	**Lebanon**	**Oman**	**Qatar**	**Saudi Arabia**	**Syria Arab Rep**	**United Arab Emirates**	**Yemen**
City/Aerodrome	Use	ICAO Loc. Ind.															
FUJAIRAH/Fujairah Intl	RS	OMFJ		X	X	X	X		X	X	X	X	X	X	X	X	
RAS AL KHAIMAH/Ras al Khaima Intl	RS	OMRK		X								X	X			X	
SHARJAH/Sharjah Intl	RS	OMSJ		X	X	X			X	X	X	X		X	X	X	
DUBAI/Jabel Ali Int'l (Future)	RS	OMJA															
YEMEN																	
ADEN/Aden Int'l	RS	OYAA															
HODEIDAH/Hodeidah Int'l	RS	OYHD															
SANA'A/Sana'a Int'l	RS	OYSN	X	X	X	X			X	X	X	X	X	X	X	X	
TAIZ/Taiz Int'l	RS	OYTZ															

AIS-4-B			**From EUR**																												
Integrated Aeronautical Information Package **TO BE AVAILABLE IN**			**AUSTRIA**	**Belgium**	**Bulgaria**	**Croitia**	**Cyprus**	**Czech Rep**	**Denmark**	**Finland**	**France**	**Germany**	**Greece**	**Hungary**	**Ireland**	**Italy**	**Luxembourg**	**Malta**	**Netherlands, Kingdom Of**	**Norway**	**Poland**	**Portugal**	**Romania**	**Russian Federation**	**Slovakia**	**Spain**	**Sweden**	**Swizerland**	**Turkey**	**Ukraine**	**United Kingdom**
Name	Use	ICAO Loc. Ind.																													
AFGHANISTAN																															
KABUL/Kabul	RS	OAKB																													
KANDAHAR/Kandahar	AS	OAKN																													
BAHRAIN																															
BAHRAIN/Bahrain Intl	RS	OBBI	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
EGYPT																															
ALEXANDRIA/Alexandria Int'l	RS	HEAX																													
ALEXANDRIA/Borg El Arab Int'l	RS	HEBA																													
EL-ARISH/El-Arish Int'l	AS	HEAR																													
ASWAN/Aswan Int'l	RS	HESN																													
ASYUT/Asyut Int'l	RS	HEAT																													
CAIRO/Cairo Int'l	RS	HECA	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
HURGHADA/Hurghada	RS	HEGN																													

AIS-4-B			**From EUR**																														
Integrated Aeronautical Information Package **TO BE AVAILABLE IN**			**AUSTRIA**	**Belgium**	**Bulgaria**	**Croitia**	**Cyprus**	**Czech Rep**	**Denmark**	**Finland**	**France**	**Germany**	**Greece**	**Hungary**	**Ireland**	**Italy**	**Luxembourg**	**Malta**	**Netherlands, Kingdom Of**	**Norway**	**Poland**	**Portugal**	**Romania**	**Russian Federation**	**Slovakia**	**Spain**	**Sweden**	**Swizerland**	**Turkey**	**Ukraine**	**United Kingdom**
Name	Use	ICAO Loc. Ind.																															
LUXOR/Luxor	RS	HELX																															
SHARM-EL-SHEIKH/Sharm El Sheikh	RS	HESH																															
ST. CATHERINE/St. Catherine Int'l	RS	HESC																															
TABA/Taba Int'l	RS	HETB																															
IRAN, ISLAMIC REPUBLIC OF																																	
BANDAR ABBAS/Bandar Abbas Int'l	RS	OIKB																															
ESFAHAN/ Shahid Beheshti Int'l	RS	OIFM																															
MASHHAD/Shahid Hashemi Nejad Int'l	RS	OIMM																															
SHIRAZ/ Shahid Dastghaib Int'l	RS	OISS																															
TABRIZ/Tabriz Int'l	RNS	OITT																															
TEHRAN/Mehrabad Int'l	RS	OIII	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X
TEHRAN/Imam Khomaini Int'l	RS	OIIE																															
ZAHEDAN/Zahedan Int'l	RS	OIZH																															

AIS-4-B			**From EUR**																													
Integrated Aeronautical Information Package **TO BE AVAILABLE IN**			**AUSTRIA**	**Belgium**	**Bulgaria**	**Croitia**	**Cyprus**	**Czech Rep**	**Denmark**	**Finland**	**France**	**Germany**	**Greece**	**Hungary**	**Ireland**	**Italy**	**Luxembourg**	**Malta**	**Netherlands, Kingdom Of**	**Norway**	**Poland**	**Portugal**	**Romania**	**Russian Federation**	**Slovakia**	**Spain**	**Sweden**	**Swizerland**	**Turkey**	**Ukraine**	**United Kingdom**
Name	Use	ICAO Loc. Ind.																														
IRAQ																																
BAGHDAD/Baghdad Int'l	RS	ORBI																														
BASRAH/Basrah Int'l	RS	ORMM																														
ERBIL/Erbil Int'l	RS	ORER																														
SULYMANIYAH/ Sulymaniyah Int'l	RS	ORSU																														
AL NAJAF/ Al Najaf Int'l (non operational).	RS	ORNI																														
ISRAEL																																
EILAT/Eilat	RNS	LLET																														
HAIFA/Haifa	RS	LLHA																														
OVDA/Ovda Int'l	RS	LLOV																														
TEL AVIV/Ben Gurion	RS	LLBG																														
TEL AVIV/Sde-Dov	RNS	LLSD																														
JORDAN																																

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Integrated Aeronautical Information Package **TO BE AVAILABLE IN**			**AUSTRIA**	**Belgium**	**Bulgaria**	**Croitia**	**Cyprus**	**Czech Rep**	**Denmark**	**Finland**	**France**	**Germany**	**Greece**	**Hungary**	**Ireland**	**Italy**	**Luxembourg**	**Malta**	**Netherlands, Kingdom Of**	**Norway**	**Poland**	**Portugal**	**Romania**	**Russian Federation**	**Slovakia**	**Spain**	**Sweden**	**Swizerland**	**Turkey**	**Ukraine**	**United Kingdom**
Name	Use	ICAO Loc. Ind.																														
AMMAN/Marka Int'l	AS	OJAM	X				X		X	X		X	X	X	X	X									X		X	X	X		X
AMMAN/Queen Alia Int'l	RS	OJAI	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X		X	X	X	X	X	X	X		X
AQABA/King Hussein Int'l	RNS	OJAQ	X							X		X				X													X	X		X
JERUSALEM/Jerusalem (non operational)	RS	OJJR																														
KUWAIT																																
KUWAIT/Kuwait Int'l	RS	OKBK	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
LEBANON																																
BEIRUT/R.B.H-Beirut Int'l	RS	OLBA	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
OMAN																																
MUSCAT/Muscat Int'l	RS	OOMS	X	X			X					X	X			X	X		X										X	X		X
SALALAH/Salalah	AS	OOSA																														
QATAR																																

AIS-4-B			**From EUR**																												
Integrated Aeronautical Information Package **TO BE AVAILABLE IN**			**AUSTRIA**	**Belgium**	**Bulgaria**	**Croitia**	**Cyprus**	**Czech Rep**	**Denmark**	**Finland**	**France**	**Germany**	**Greece**	**Hungary**	**Ireland**	**Italy**	**Luxembourg**	**Malta**	**Netherlands, Kingdom Of**	**Norway**	**Poland**	**Portugal**	**Romania**	**Russian Federation**	**Slovakia**	**Spain**	**Sweden**	**Swizerland**	**Turkey**	**Ukraine**	**United Kingdom**
Name	Use	ICAO Loc. Ind.																													
DOHA/Doha Int'l	RS	OTBD																													
DOHA/New Doha Int'l (Future)	RS	OTxx																													
SAUDI ARABIA																															
DAMMAM/King Fahd Int'l	RS	OEDF																													
JEDDAH/King Abdulaziz Int'l	RS	OEJN	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
MADINAH/Prince Mohammad Bin Abdulaziz	RS	OEMA																													
RIYADH/King Khalid Int'l	RS	OERK																													
SYRIAN ARAB REPUBLIC																															
ALEPPO/Aleppo Int'l	RS	OSAP																													
LATTAKIA/Bassel Al-Assad	RS	OSLK																													
DAMASCUS/Damascus Int'l	RS	OSDI		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
UNITED ARAB EMIRATES																															

AIS-4-B			**From EUR**																												
Integrated Aeronautical Information Package **TO BE AVAILABLE IN**			**AUSTRIA**	**Belgium**	**Bulgaria**	**Croitia**	**Cyprus**	**Czech Rep**	**Denmark**	**Finland**	**France**	**Germany**	**Greece**	**Hungary**	**Ireland**	**Italy**	**Luxembourg**	**Malta**	**Netherlands, Kingdom Of**	**Norway**	**Poland**	**Portugal**	**Romania**	**Russian Federation**	**Slovakia**	**Spain**	**Sweden**	**Swizerland**	**Turkey**	**Ukraine**	**United Kingdom**
Name	Use	ICAO Loc. Ind.																													
ABU DHABI/Abu Dhabi Int'l	RS	OMAA	X	X	X		X				X	X	X	X		X	X	X	X				X		X			X	X		X
AL AIN/Al Ain Int'l	RS	OMAL																													
DUBAI/Dubai Int'l	RS	OMDB																						X				X	X		X
FUJAIRAH/Fujairah Int'l	RS	OMFJ				X	X											X					X	X		X			X	X	
RAS AL KHAIMAH/Ras Al Khaimah Int'l	RS	OMRK																													
SHARJAH/Sharjah Int'l	RS	OMSJ																													
DUBAI/Jabel Ali Int'l (Future)	RS	OMJA																													
YEMEN																															
ADEN/Aden Int'l	RS	OYAA																													
HODEIDAH/Hodeidah Int'l	RS	OYHD																													
SANA'A/Sana'a Int'l	RS	OYSN				X	X				X	X	X			X			X				X	X				X	X	X	X
TAIZ/Taiz Int'l	RS	OYTZ																													

AIS-4-C			FROM/DE																																										
			AFI																								ASIA													CAR		NAM		SAM	
Integrated Aeronautical Information Package **TO BE AVAILABLE IN**			**Algeria**	**Asecna**	**Burundi**	**Djibouti**	**Eritrea**	**Ethiopia**	**Gambia**	**Ghana**	**Kenya**	**Libya**	**Morocco**	**Mozambique**	**Nigeria**	**Rwanda**	**Seychelles**	**Sierra Leone**	**Somalia**	**South Africa**	**Sudan**	**Tanzania**	**Tunisia**	**Uganda**	**Zambia**	**Zimbabwe**	**Bangladesh**	**China**	**Hong Kong**	**India**	**Indonesia**	**Japan**	**Malaysia**	**Maldive**	**Pakistan**	**Philippines**	**Singapour**	**Srilanka**	**Thailand**			**Canada**	**U.S.A**	**Brasil**	**Cuba**
Name	Use	ICAO Loc. Ind.																																											
AFGHANISTAN																																													
KABUL/Kabul	RNS	OAKB																																											
KANDAHAR/Kandahar	AS	OAKN																																											
BAHRAIN																																													
BAHRAIN/Bahrain Int'l	RS	OBBI	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X		X		X			X	X		
EGYPT																																													
ALEXANDRIA/Alexandria Int'l	RS	HEAX																																											
ALEXANDRIA/Borg El Arab Int'l	RS	HEBA																																											
EL-ARISH/El-Arish Int'l	AS	HEAR																																											
ASWAN/Aswan Int'l	RS	HESN																																											
ASYUT/Asyut Int'l	RS	HEAT																																											
CAIRO/Cairo Int'l	RS	HECA	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X	X			X				X			X	X	X	

AIS-4-C			FROM/DE																																									
			AFI																								ASIA													CAR		NAM		SAM	
Integrated Aeronautical Information Package **TO BE AVAILABLE IN**			**Algeria**	**Asecna**	**Burundi**	**Djibouti**	**Eritrea**	**Ethiopia**	**Gambia**	**Ghana**	**Kenya**	**Libya**	**Morocco**	**Mozambique**	**Nigeria**	**Rwanda**	**Seychelles**	**Sierra Leone**	**Somalia**	**South Africa**	**Sudan**	**Tanzania**	**Tunisia**	**Uganda**	**Zambia**	**Zimbabwe**	**Bangladesh**	**China**	**Hong Kong**	**India**	**Indonesia**	**Japan**	**Malaysia**	**Maldive**	**Pakistan**	**Philippines**	**Singapour**	**Srilanka**	**Thailand**			**Canada**	**U.S.A**	**Brasil**	**Cuba**
Name	Use	ICAO Loc. Ind.																																											
HURGHADA/Hurghada	RS	HEGN																																											
LUXOR/Luxor	RS	HELX																																											
SHARM-EL-SHEIKH/Sharm El Sheikh	RS	HESH																																											
ST. CATHERINE/St. Catherine Int'l	RS	HESC																																											
TABA/Taba Int'l	RS	HETB																																											
IRAN, ISLAMIC REPUBLIC OF																																													
BANDAR ABBAS/Bandar Abbas Int'l	RS	OIKB																																											
ESFAHAN/ Shahid Beheshti Int'l	RS	OIFM																																											
MASHHAD/Shahid Hashemi Nejad Int'l	RS	OIMM																																											
SHIRAZ/ Shahid Dastghaib Int'l	RS	OISS																																											

AIS-4-C			**FROM/DE**																																									
			AFI																								**ASIA**													**CAR**		**NAM**		**SAM**	
Integrated Aeronautical Information Package TO BE AVAILABLE IN			**Algeria**	**Asecna**	**Burundi**	**Djibouti**	**Eritrea**	**Ethiopia**	**Gambia**	**Ghana**	**Kenya**	**Libya**	**Morocco**	**Mozambique**	**Nigeria**	**Rwanda**	**Seychelles**	**Sierra Leone**	**Somalia**	**South Africa**	**Sudan**	**Tanzania**	**Tunisia**	**Uganda**	**Zambia**	**Zimbabwe**	**Bangladesh**	**China**	**Hong Kong**	**India**	**Indonesia**	**Japan**	**Malaysia**	**Maldive**	**Pakistan**	**Philippines**	**Singapour**	**Srilanka**	**Thailand**			**Canada**	**U.S.A**	**Brasil**	**Cuba**
Name	Use	ICAO Loc. Ind.																																											
TABRIZ/Tabriz Int’l	RNS	OITT																																											
TEHRAN/Mehrabad Int’l	RS	OIII	X								X												X				X	X	X		X	X		X	X		X	X	X						X
TEHRAN/Imam Khomaini Int’l	RS	OIIE																																											
ZAHEDAN/Zahedan Int’l	RS	OIZH																																											
IRAQ																																													
BAGHDAD/Baghdad Int’l	RS	ORBI																																											
BASRAH/Basrah Int’l	RS	ORMM																																											
ERBIL/Erbil Int’l	RS	ORER																																											
SULYMANIYAH/ Sulymaniyah Int’l	RS	ORSU																																											
AL NAJAF/ Al Najaf Int’l (non operational).	RS	ORNI																																											
ISRAEL																																													
EILAT/Eilat	RNS	LLET																																											

AIS-4-C			FROM/DE																																										
Integrated Aeronautical Information Package **TO BE AVAILABLE IN**			**AFI**																								**ASIA**													**CAR**		**NAM**		**SAM**	
Name	Use	ICAO Loc. Ind.	**Algeria**	**Asecna**	**Burundi**	**Djibouti**	**Eritrea**	**Ethiopia**	**Gambia**	**Ghana**	**Kenya**	**Libya**	**Morocco**	**Mozambique**	**Nigeria**	**Rwanda**	**Seychelles**	**Sierra Leone**	**Somalia**	**South Africa**	**Sudan**	**Tanzania**	**Tunisia**	**Uganda**	**Zambia**	**Zimbabwe**	**Bangladesh**	**China**	**Hong Kong**	**India**	**Indonesia**	**Japan**	**Malaysia**	**Maldive**	**Pakistan**	**Philippines**	**Singapour**	**Srilanka**	**Thailand**			**Canada**	**U.S.A**	**Brasil**	**Cuba**
HAIFA/Haifa	RS	LLHA																																												
OVDA/Ovda Int'l	RS	LLOV																																												
TEL AVIV/Ben Gurion	RS	LLBG																																												
TEL AVIV/Sde-Dov	RNS	LLSD																																												
JORDAN																																														
AMMAN/Marka Int'l	AS	OJAM	X									X	X										X										X										X		
AMMAN/Queen Alia Int'l	RS	OJAI	X								X	X	X										X				X	X	X	X			X									X	X		
AQABA/King Hussein Int'l	RNS	OJAQ																					X																						
JERUSALEM/Jerusalem (non operational)	RS	OJJR																																												
KUWAIT																																														
KUWAIT/Kuwait Int'l	RS	OKBK	X			X	X	X			X	X	X	X					X	X	X	X	X			X	X	X	X	X	X	X	X		X	X	X	X	X			X	X		
LEBANON																																														
BEIRUT/R.B.H-Beirut Intl'	RS	OLBA	X					X		X		X	X		X			X			X		X							X		X			X										

AIS-4-C			FROM/DE																																										
			AFI																								ASIA													CAR		NAM		SAM	
Integrated Aeronautical Information Package **TO BE AVAILABLE IN**			**Algeria**	**Asecna**	**Burundi**	**Djibouti**	**Eritrea**	**Ethiopia**	**Gambia**	**Ghana**	**Kenya**	**Libya**	**Morocco**	**Mozambique**	**Nigeria**	**Rwanda**	**Seychelles**	**Sierra Leone**	**Somalia**	**South Africa**	**Sudan**	**Tanzania**	**Tunisia**	**Uganda**	**Zambia**	**Zimbabwe**	**Bangladesh**	**China**	**Hong Kong**	**India**	**Indonesia**	**Japan**	**Malaysia**	**Maldive**	**Pakistan**	**Philippines**	**Singapour**	**Srilanka**	**Thailand**			**Canada**	**U.S.A**	**Brasil**	**Cuba**
Name	Use	ICAO Loc. Ind.																																											
OMAN																																													
MUSCAT/ Muscat Int'l	RS	OOMS				X					X						X					X					X		X	X	X		X	X	X	X	X	X	X						
SALALAH/Salalah	AS	OOSA																																											
QATAR																																													
DOHA/Doha Int'l	RS	OTBD																																											
DOHA/New Doha Int'l (Future)	RS	OTxx																																											
SAUDI ARABIA																																													
DAMMAM/King Fahd Int'l	RS	OEDF																																											
JEDDAH/King Abdulaziz Int'l	RS	OEJN	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X		X		X			X	X	X	
MADINAH/Prince Mohammad Bin Abdulaziz	RS	OEMA																																											
RIYADH/King Khalid Int'l	RS	OERK																																											

AIS-4-C

FROM/DE

Integrated Aeronautical Information Package

TO BE AVAILABLE IN

AFI

Name	Use	ICAO Loc. Ind.	Algeria	Asecna	Burundi	Djibouti	Eritrea	Ethiopia	Gambia	Ghana	Kenya	Libya	Morocco	Mozambique	Nigeria	Rwanda	Seychelles	Sierra Leone	Somalia	South Africa	Sudan	Tanzania	Tunisia	Uganda	Zambia	Zimbabwe
SYRIAN ARAB REPUBLIC																										
ALEPPO/Aleppo Int'l	RS	OSAP																								
LATTAKIA/Bassel Al-Assad	RS	OSLK																								
DAMASCUS/Damascus Int'l	RS	OSDI																								
UNITED ARAB EMIRATES																										
ABU DHABI/Abu Dhabi Int'l	RS	OMAA					X					X					X									
AL AIN/Al Ain Int'l	RS	OMAL																			X					
DUBAI/Dubai Int'l	RS	OMDB																								
FUJAIRAH/Fujairah Int'l	RS	OMFJ	X								X	X	X		X		X		X		X	X	X			
RAS AL KHAIMAH/Ras Al Khaimah Int'l	RS	OMRK																								

ASIA / CAR / NAM / SAM

Name	Use	ICAO Loc. Ind.	Bangladesh	China	Hong Kong	India	Indonesia	Japan	Malaysia	Maldive	Pakistan	Philippines	Singapour	Srilanka	Thailand	CAR	CAR	Canada (NAM)	U.S.A (NAM)	Brasil (SAM)	Cuba (SAM)
SYRIAN ARAB REPUBLIC																					
ALEPPO/Aleppo Int'l	RS	OSAP																			
LATTAKIA/Bassel Al-Assad	RS	OSLK																			
DAMASCUS/Damascus Int'l	RS	OSDI																			
UNITED ARAB EMIRATES																					
ABU DHABI/Abu Dhabi Int'l	RS	OMAA	X			X					X										
AL AIN/Al Ain Int'l	RS	OMAL				X					X										
DUBAI/Dubai Int'l	RS	OMDB				X			X	X	X	X	X		X						
FUJAIRAH/Fujairah Int'l	RS	OMFJ	X			X				X	X										
RAS AL KHAIMAH/Ras Al Khaimah Int'l	RS	OMRK																			

AIS-4-C			FROM/DE																							
			AFI																							
Integrated Aeronautical Information Package **TO BE AVAILABLE IN**			**Algeria**	**Asecna**	**Burundi**	**Djibouti**	**Eritrea**	**Ethiopia**	**Gambia**	**Ghana**	**Kenya**	**Libya**	**Morocco**	**Mozambique**	**Nigeria**	**Rwanda**	**Seychelles**	**Sierra Leone**	**Somalia**	**South Africa**	**Sudan**	**Tanzania**	**Tunisia**	**Uganda**	**Zambia**	**Zimbabwe**
Name	Use	ICAO Loc. Ind.																								
SHARJAH/Sharjah Int'l	RS	OMSJ																								
DUBAI/Jabel Ali Int'l (Future)	RS	OMJA																								
YEMEN																										
ADEN/Aden Int'l	RS	OYAA																								
HODEIDAH/Hodeidah Int'l	RS	OYHD																								
SANA'A/Sana'a Int'l	RS	OYSN		X		X	X	X			X						X		X	X	X	X				
TAIZ/Taiz Int'l	RS	OYTZ																								

AIS-4-C			FROM/DE																			
			ASIA													CAR		NAM		SAM	
Integrated Aeronautical Information Package **TO BE AVAILABLE IN**			**Bangladesh**	**China**	**Hong Kong**	**India**	**Indonesia**	**Japan**	**Malaysia**	**Maldive**	**Pakistan**	**Philippines**	**Singapour**	**Srilanka**	**Thailand**			**Canada**	**U.S.A**	**Brasil**	**Cuba**
Name	Use	ICAO Loc. Ind.																			
SHARJAH/Sharjah Int'l	RS	OMSJ				X				X	X			X							
DUBAI/Jabel Ali Int'l (Future)	RS	OMJA																			
YEMEN																					
ADEN/Aden Int'l	RS	OYAA																			
HODEIDAH/Hodeidah Int'l	RS	OYHD																			
SANA'A/Sana'a Int'l	RS	OYSN	X	X		X	X		X	X	X		X								
TAIZ/Taiz Int'l	RS	OYTZ																			

APPENDIX 3A5

FASID TABLE AIS-6 — AERONAUTICAL CHART REQUIREMENTS

EXPLANATION OF THE TABLE

Column

1 Name of the State, territory or aerodrome for which aeronautical chart is 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 Enroute Chart - ICAO (ENRC), shown by an ‘‘X’’ against the State or territory to be covered.

5 Requirement for the Instrument Approach Chart –ICAO (IAC), shown by an ‘‘X’’ against the runway designation to be covered.

6 Requirement for the Aerodrome/Heliport Chart – ICAO (ADC), shown by an ‘‘X’’ against the aerodrome to be covered.

7 Requirement for the Aerodrome Obstacle Chart – ICAO Type A (AOC-A), shown by an ‘‘X’’ against the runway designation to be covered.

8 Requirement for the Precision Approach Terrain Chart – ICAO (PATC), shown by an ‘‘X’’ against the runway designation to be covered.

9 Requirement for the Area Chart – ICAO (ARC), shown by an ‘‘X’’ against the aerodrome to be covered.

10 Requirement for the Standard Departure Chart-Instrument – ICAO (SID), shown by an ‘‘X’’ against the runway designation to be covered.

11 Requirement for the Standard Arrival Chart-Instrument – ICAO (STAR), shown by an ‘‘X’’ against the runway designation to be covered.

12 Requirement for the Visual Approach Chart – ICAO (VAC), shown by an ‘‘X’’ against the aerodrome or runway designation to be covered.

13 Requirement for the Aerodrome Obstacle Chart – ICAO Type C (AOC-C), shown by an ‘‘X’’ against the aerodrome to be covered.

14 Remarks.

Note.- For Columns 4 to 13 use the following symbols:

X- Required but not implemented
XI- Required and implemented

STATE, TERRITORY OR AERODROME FOR WHICH THE CHART IS REQUIRED			MANDATORY CHARTS					CONDITIONALLY MANDATORY CHARTS					REMARKS
CITY/AERODROME/	RWY No	RWY TYPE	ENRC	IAC	ADC	AOC-A	PATC	ARC	SID	STAR	VAC	AOC-C	
1	2	3	4	5	6	7	8	9	10	11	12	13	14
AFGHANISTAN			X										
(OAKB) KABUL/Kabul Int'l					X								
RS	11 29	NPA PA1		X X		X X							
(OAKN) KANDAHAR/Kandahar Int'l					X								
AS	05 23	NPA NPA		X X		X X							
BAHRAIN			XI										
(OBBI) Bahrain/Bahrain Int'l.					XI			XI			XI		
RS	12L 30R	PA2 PA2		XI XI		XI XI							
	12R 30L	NPA NPA		XI XI		XI XI							
EGYPT			XI										
(HEAR) EL-ARISH/El-Arish Int'l					XI								
AS	16 34	NPA NPA		XI		XI XI							
(HEAT) ASYUT/Asyut Int'l					XI								No significant obstacles for RWY 13/31
AS	13 31	NPA NPA		XI		- -							
(HEAX) ALEXANDRIA/Alexandria Int'l					XI								
RS	18 36	NPA NPA		XI		XI XI							
	04 22	NPA NPA		XI		XI XI							

STATE, TERRITORY OR AERODROME FOR WHICH THE CHART IS REQUIRED			MANDATORY CHARTS					CONDITIONALLY MANDATORY CHARTS					REMARKS
CITY/AERODROME/	RWY No	RWY TYPE	ENRC	IAC	ADC	AOC-A	PATC	ARC	SID	STAR	VAC	AOC-C	
1	2	3	4	5	6	7	8	9	10	11	12	13	14
(HEAZ) CAIRO/Almaza Int'l					XI								
ANS	18 36 05 23	NPA NPA NINST NINST		XI		X X X X							
(HEBA) ALEXANDRIA/Borg El-Arab Int'l					XI								
RS	14 32	PA1 NPA		XI		- -							No significant obstacles for RWY 14/32
(HECA) CAIRO/Cairo Int'l					XI								
RS	05L 23R 05R 23L 16 34	PA2 PA2 PA2 PA2 NINST NINST		XI XI XI XI		XI XI XI XI XI XI	X X X X						
(HEGN) HURGADA/Hurghada Int'l					XI								
RS	16 34	NPA PA1		XI		- -							No significant obstacles for RWY 16/34
(HELX) LUXOR/Luxor Int'l					XI								
RS	02 20	NPA PA1		XI XI		- -							No significant obstacles for RWY 02/20
(HEMA) MARSA ALAM/ Marsa Alam Int'l					XI								No significant obstacles for RWY 15/33
RNS	15 33	NPA NPA		XI XI		- -							
(HEOW) SHARK EL OWEINAT/Shark El-Oweinat Int'l					XI								
AS	01 19	NPA NINST		XI		X X							
(HEPS) PORT SAID/Port Said Int'l					XI								
AS	10 28	NPA NPA		XI		XI XI							
(HESC) ST. CATHERINE/ St. Catherine Int'l					XI								
RS	17 35	NPA NINST				XI XI							

STATE, TERRITORY OR AERODROME FOR WHICH THE CHART IS REQUIRED			MANDATORY CHARTS					CONDITIONALLY MANDATORY CHARTS					REMARKS
CITY/AERODROME/	RWY No	RWY TYPE	ENRC	IAC	ADC	AOC-A	PATC	ARC	SID	STAR	VAC	AOC-C	
1	2	3	4	5	6	7	8	9	10	11	12	13	14
(HESH) SHARM-EL-SHEIKH/ Sharm-El-Sheikh Int'l					XI								
RS	04L 22R 04R 22L	PA1 NPA NPA NPA		XI XI 		X X X X							
(HESN) ASWAN/Aswan Int'l					XI								
RS	17 35	NPA PA1		XI XI		- -							No significant obstacles for RWY 17/35
(HETB) TABA/Taba Int'l					XI								
AS	04 22	NPA NINST		XI 		XI XI							
IRAN			XI										
(OIKB) BANDAR ABBASS/					XI			X					
Bandar Abbas Int'l RS	03R 21L 03L 21R	NPA PA1 NINST NINST		XI XI 		X X X X			XI XI 	XI XI 			
(OIFM) Esfahan/ Shahid Beheshti Int'l					XI			X					
RS	08L 26R 08R 26L	NPA PA1 NPA NPA		XI XI XI XI		X X X X			XI XI XI XI	 XI XI			
(OIMM) Mashhad/ Shahid Hashemi Nejad Int'l					XI			XI					
RS	13L 31R 13R 31L	NPA PA1 NPA NPA		XI XI XI XI		X X X X			XI XI XI XI	XI XI XI XI			
(OISS) Shiraz/Shahid Dastghaib Int'l					XI			X					
RS	11R 29L 11L 29R	NPA PA1 NPA NPA		X XI X XI		X X X X			XI XI XI XI	 XI XI			

STATE, TERRITORY OR AERODROME FOR WHICH THE CHART IS REQUIRED			MANDATORY CHARTS					CONDITIONALLY MANDATORY CHARTS					REMARKS
CITY/AERODROME/	RWY No	RWY TYPE	ENRC	IAC	ADC	AOC-A	PATC	ARC	SID	STAR	VAC	AOC-C	
1	2	3	4	5	6	7	8	9	10	11	12	13	14
(OITT) Tabriz/Tabriz Int'l					XI								
RNS	12L 30R 12R 30L	NPA PA1 NINST NINST		XI XI		X X X X			XI XI	XI XI			
(OIII) Tehran/ Mehrabad Int'l					XI			XI					
RS	11R 29L 11L 29R	NPA PA1 NPA NPA		XI XI XI XI		X X X X			XI XI XI XI	XI XI XI XI			
(OIIE) TEHRAN/Imam Khomaini Int'l					XI			XI					
RS	11 29	PA1 PA2		XI XI		X X	 XI		XI XI	XI XI			
(OIZH) ZAHEDAN/Zahedan					XI								
Int'l RS	17 35	NPA PA1		X XI		X X			XI XI	X XI			
IRAQ			X										
(ORBI) BAGHDAD/Baghdad					XI								The existing charts should be updated.
Int'l. RS	15L 33R	NINST NINST		X X		XI XI							
	15R 33L	NINST NINST		X X		XI XI							
(ORMM) BASRAH/Basrah Int'l.					X								
RS	14 32	NINST NINST		X X		XI XI							
(ORER) ERBIL/Erbil Int'l													
RS													
(ORSU) SULYMANIYAH/ Sulymaniyah Int'l													
RS													

STATE, TERRITORY OR AERODROME FOR WHICH THE CHART IS REQUIRED			MANDATORY CHARTS					CONDITIONALLY MANDATORY CHARTS					REMARKS
CITY/AERODROME/	RWY No	RWY TYPE	ENRC	IAC	ADC	AOC-A	PATC	ARC	SID	STAR	VAC	AOC-C	
1	2	3	4	5	6	7	8	9	10	11	12	13	14
(ORNI) AL NAJAF/ Al Najaf Int'l (non operational).													
RS													
ISRAEL			X										
(LLET) EILAT/Eilat					XI						XI		
RNS	03 21	NPA NINST		XI		XI XI			XI XI				
(LLHA) HAIFA/Haifa					XI								
RNS	16 34	NINST NINST				X X							
(LLOV) OVDA/Ovda Int'l					XI								
RNS	02L 20R	NINST NPA		XI		XI XI							
(LLBG) TEL AVIV/ Ben Gurion					XI			XI					
RS	03 21 08 26 12 30	NPA NINST NPA PA1 PA1 NPA		 XI XI XI		XI XI XI XI XI XI			XI XI XI XI XI XI		 XI		
(LLSD) TEL AVIV/ Sde-Dov					XI								
RNS	03 21	NINST NINST				X X			XI XI				
JORDAN			XI										
(OJAI) Amman/					XI								
Queen Alia Int'l RS	08R 26L 08L 26R	NPA PA2 PA2 PA2		XI XI		XI XI			XI XI	XI XI			

STATE, TERRITORY OR AERODROME FOR WHICH THE CHART IS REQUIRED			MANDATORY CHARTS					CONDITIONALLY MANDATORY CHARTS					REMARKS
CITY/AERODROME/	RWY No	RWY TYPE	ENRC	IAC	ADC	AOC-A	PATC	ARC	SID	STAR	VAC	AOC-C	
1	2	3	4	5	6	7	8	9	10	11	12	13	14
(OJAM) Amman/Marka Int'l					XI								
AS	06	NPA		XI		XI			XI	XI			
	24	PA1		XI		XI	X		XI	XI			
				XI		XI	X		XI	XI			
				XI		XI	X		XI	XI			
(OJAQ) AQABA/King					XI						XI		
Hussein Int'l	01	PA1		XI		XI			XI				
RS	19	NPA		XI		XI			XI				
(OJJR) JERUSALEM/ Jerusalem (Non operational)													
RS	12	PA1											
	30	NPA											
KUWAIT			XI										
OKBK KUWAIT/Kuwait Int'l.					XI								
RS	33L	PA2		XI		XI	XI		XI	XI			
	15R	PA2		XI		XI	XI		XI	XI			
	33R	PA2		XI		XI	XI		XI	XI			
	15L	PA2		XI		XI	XI		XI	XI			
LEBANON			XI										
(OLBA) BEIRUT/ R.B.H-Beirut Int'l					XI								
RS	17	PA1		XI		XI			XI	XI			
	35	NINST				XI							
	16	PA1				XI				XI			
	34	NINST				XI							
	03	PA1		XI		XI			XI	XI			
	21	PA1				XI			XI		XI		
OMAN			X										
(OOMS) Muscat/ Muscat Int'l					XI								
RS	08	PA1		XI		XI			XI	XI			
	26	PA1		XI		XI			XI	XI			
(OOSA) SALALAH/Salalah Int'l					XI						XI		
AS	07	NPA		XI		-			XI	XI			No significant obstacle for RWY 07/25
	25	PA1		XI		-			XI	XI			

STATE, TERRITORY OR AERODROME FOR WHICH THE CHART IS REQUIRED			MANDATORY CHARTS					CONDITIONALLY MANDATORY CHARTS					REMARKS
CITY/AERODROME/	RWY No	RWY TYPE	ENRC	IAC	ADC	AOC-A	PATC	ARC	SID	STAR	VAC	AOC-C	
1	2	3	4	5	6	7	8	9	10	11	12	13	14
QATAR			XI										
(OTBD) DOHA/Doha Int'l					X						XI		
RS	34	PA2		XI		XI							
	16	PA1		XI		XI	XI						
(OTxx) DOHA/New Doha Int'l (Future)													
RS													
SAUDI ARABIA			X										
(OEDF) DAMMAM/King Fahd Int'l					XI			XI					
RS	16L	PA1		XI		XI	XI		XI				
	34R	PA1		XI		XI	XI		XI				
	16R	PA1		XI		XI	XI		XI				
	34L	PA1		XI		XI	XI		XI				
(OEJN) JEDDAH/King Abdulaziz Int'l					XI			XI					
RS	16R	PA2		XI		XI	XI		XI				
	34L	PA2		XI		XI	XI		XI				
	16C	PA2		XI		XI	XI		XI				
	34C	PA2		XI		XI	XI		XI				
	16L	PA1		XI		X			XI				
	34R	PA1		XI		X			XI				
(OEMA)MADINAH/Prince Mohammad Bin Abdulaziz					XI			XI					
RS	17	PA1		XI		X			XI				
	35	PA1		XI		X			XI				
	18	NPA		XI		X			XI				
	36	PA1		XI		X			XI				
(OERK) RIYADH/King Khalid Int'l					XI			XI					
RS	15L	PA1		XI		XI	XI		XI				
	33R	PA1		XI		XI	XI		XI				
	15R	PA1		XI		XI	XI		XI				
	33L	PA1		XI		XI	XI		XI				
SYRIA			X										
(OSAP) ALEPPO/Aleppo Int'l.					XI								
RS	09	PA2				X							
	27	PA2		XI		X							

STATE, TERRITORY OR AERODROME FOR WHICH THE CHART IS REQUIRED			MANDATORY CHARTS					CONDITIONALLY MANDATORY CHARTS					REMARKS
CITY/AERODROME/	RWY No	RWY TYPE	ENRC	IAC	ADC	AOC-A	PATC	ARC	SID	STAR	VAC	AOC-C	
1	2	3	4	5	6	7	8	9	10	11	12	13	14
(OSLK) LATTAKIA/Bassel Al-Assad					XI								
RS	17 35	NPA PA1		XI		X X							
(OSDI) DAMASCUS/Damascus Int'l					XI						XI		
RS	05L 23R	PA2 PA2		XI XI		XI XI	XI XI		XI XI				
	05R 23L	PA2 PA2		XI XI		X X	XI XI		XI XI				
UNITED ARAB EMIRATES			XI										
(OMAA) ABU DHABI/ Abu Dhabi Int'l					XI								
RS	13R 31L 13L 31R	PA1 PA3 PA3 PA3		XI XI XI XI		- - - -	XI XI XI XI		XI XI XI XI				Obstacles depicted on the ADC and PATC
(OMAL) AL AIN/ Al Ain Int'l					XI								
RS	01 19	PA1 NPA		XI XI		X X							
(OMDB) DUBAI/ Dubai Int'l					XI								
RS	12L 30R 12R 30L	PA3 PA3 PA1 PA1		XI XI XI XI		XI XI XI XI	XI XI XI XI		XI XI XI XI	XI XI XI XI			
(OMFJ) FUJAIRAH/Fujairah Int'l					XI								
RS	11 29	NPA PA1		XI		XI XI			XI				
(OMRK) RAS AL KHAIMAH/ Ras Al Khaimah Int'l					XI								
RS	16 34	NPA PA1		XI XI		X X			XI				
(OMSJ) SHARJAH/ Sharjah Int'l					XI								Obstacles depicted on the ADC and PATC
RS	12 30	PA1 PA2		XI XI		- -	XI		XI XI	XI XI			

STATE, TERRITORY OR AERODROME FOR WHICH THE CHART IS REQUIRED			MANDATORY CHARTS					CONDITIONALLY MANDATORY CHARTS					REMARKS
CITY/AERODROME/	RWY No	RWY TYPE	ENRC	IAC	ADC	AOC-A	PATC	ARC	SID	STAR	VAC	AOC-C	
1	2	3	4	5	6	7	8	9	10	11	12	13	14
(OMJA) DUBAI/ Jabel Ali Int'l (Future)													
RS	12L 30R 12R 30L	PA3 PA3 PA3 PA3											
YEMEN			X										
(OYAA) ADEN/ Aden Int'l					XI			XI					
RS	08 26	NPA PA1		XI XI		XI XI							
(OYHD) HODEIDAH/ Hodeidah Int'l					XI			XI			XI		AOC-A issued in AIP AMDT 02/06
RS	03 21	NPA NPA		XI XI		XI XI							
(OYRN) MUKALLA/Riyan					XI			XI					AOC-A issued in AIP AMDT 02/06
RS	06 24	NPA NPA		XI		XI XI							
(OYSN) SANA'A/Sana'a Int'l					XI			XI					
RS	18 36	PA1 NPA		XI		XI XI			XI XI	XI XI			
(OYTZ) TAIZ/ Taiz Int'l					XI						XI		AOC-A issued in AIP AMDT 02/06
RS	01 19	NPA NPA		X X		XI XI							

APPENDIX 3A6

FASID Table AIS-7

PRODUCTION RESPONSIBILITY FOR SHEETS OF THE WORLD AERONAUTICAL CHART - ICAO 1:1 000 000

EXPLANATION OF THE TABLE

Column

1. Name of the State accepting production responsibility

2. World Aeronautical Chart — ICAO 1:1 000 000 sheet number(s) for which production responsibility is accepted.

3. Remarks.

State	Sheet number(s)	Remarks
Afghanistan	2336, 2337, 2430, 2431, 2442	
Bahrain	2547	
Egypt	2447, 2448, 2543, 2544	
Iran, Islamic Republic of	2338, 2339, 2428, 2429, 2443, 2444, 2548	
Iraq	2427, 2445	
Israel		
Jordan	2426, 2446, 2447	*Note: Jordan to cover its own territory within Amman FIR*
Kuwait	2445	*Note: Kuwait to cover its own territory within Kuwait FIR*
Lebanon	2426	*Note: Lebanon to cover its own territory within Beirut FIR*
Oman	2563, 2670	
Qatar		
Saudi Arabia	2446, 2545, 2546, 2564, 2565, 2566, 2668, 2669	
Syrian Arab Republic	2426	*Note: Syria to cover its own territory within Damascus FIR*
United Arab Emirates		
Yemen	2686, 2687	

Notes. *- In those instances where the production responsibility for certain sheets has been accepted by more than one State, these States by mutual agreement should define limits of responsibility for those sheets.*
- The responsibility for the production of the WAC sheets: 2548, 2563, and 2670 is not yet assigned to any States.

APPENDIX 3A7

FASID TABLE AIS-8 — REQUIREMENTS OF THE INTEGRATED AERONAUTICAL INFORMATION PACKAGE

EXPLANATION OF THE TABLE

Column

1	Name of the State or territory
2	Availability of AIP (see Remarks)
3	AIP Amendment issued at regular intervals or publication date
4	AIP Amendment - issued in accordance with AIRAC procedures
5	AIP Amendment – NIL notification issued when Amendment not published
6	AIP Supplement – issued regularly
7	AIP Supplement - issued in accordance with AIRAC procedures
8	NIL notification when AIP Supplement not issued on the AIRAC effective date previously published
9	AIC published as required
10	NOTAM issued on regular basis in accordance with the NOTAM format
11	Trigger NOTAM issued as required (Annex 15, paragraph 5.1.1.2)
12	Checklist of NOTAM issued as required (Annex 15, paragraphs 5.2.8, 5.2.8.1, 5.2.8.2)
13	Monthly printed plain language summary of NOTAM issued as required (Annex 15, paragraph 5.2.8.3)
14	AIRAC system implemented as required
15	NIL notifications issued as required
16	Remarks (Indicate if AIP is available in the restructured format and if not, expected date of implementation)

State/Territory	AIP	AIP AMENDMENT			AIP SUPPLEMENT			AIC	NOTAM				AIRAC		REMARKS
		REG	AIRAC	NIL	REG	AIRAC	NIL		REG	TRIGGER	CHKLIST	SUMMARY	REG	NIL	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
AFGHANISTAN															
BAHRAIN	X	X	X	X		X		X	X	X	X	X	X	X	
EGYPT	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
IRAN ISLAMIC REPUBLIC	X	X	X	X	X	X		X	X	X	X	X	X	X	
IRAQ															
ISRAEL	X	X						X	X						
JORDAN	X	X	X	X	X			X	X	X	X	X		X	
KUWAIT	X	X	X		X	X	X	X	X	X	X	X			
LEBANON	X	X	X	X				X	X		X	X	X		
OMAN	X	X						X	X		X				
QATAR	X	X	X	X		X		X	X	X	X	X	X	X	
SAUDI ARABIA	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
SYRIAN ARAB REPUBLIC	X							X	X		X	X			
UNITED ARAB EMIRATES	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
YEMEN	X	X			X	X		X	X	X	X	X			

AIS/MAP TF/5
Appendix 3B to the Report on Agenda Item 3

FASID TABLE AIS-5 — WGS-84 REQUIREMENTS

EXPLANATION OF THE TABLE

Column

1 Name of the State, territory or aerodrome for which WGS-84 coordinates 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 WGS-84 coordinates for FIR, shown by an ‘‘X’’ against the State or territory to be covered.

5 Requirement for the WGS-84 coordinates for Enroute points, shown by an ‘‘X’’ against the State or territory to be covered.

6 Requirement for the WGS-84 coordinates for the Terminal Area, shown by an ‘‘X’’ against the aerodrome to be covered.

7 Requirement for the WGS-84 coordinates for the Approach points, shown by an ‘‘X’’ against the runway designation to be covered.

8 Requirement for the WGS-84 coordinates for runways, shown by an ‘‘X’’ against the runway designation to be covered.

9 Requirement for the WGS-84 coordinates for Aerodrome/Heliport points (e.g. aerodrome/heliport reference point, taxiway, parking position, etc.), shown by an ‘‘X’’ against the aerodrome to be covered.

10 Requirement for geoid undulation shown by an ‘‘X’’ against the runway threshold to be covered.

11 Requirement for the WGS-84 Quality System, shown by an ‘‘X’’ against the State or territory to be covered.

12 Requirement for publication of WGS-84 coordinates in the AIP shown by an ‘‘X’’ against the State or territory 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

WGS-84 Requirements (MID FASID Table AIS-5)

STATE, TERRITORY OR AERODROME FOR WHICH WGS-84 IS REQUIRED			WGS-84 REQUIRED									REMARKS
CITY/AERODROME/	RWY No	RWY TYPE	FIR	ENR	TMA CTA CTZ	APP	RWY	AD/ HEL	GUND	QUALITY SYSTEM	AIP	
1	2	3	4	5	6	7	8	9	10	11	12	13
AFGHANISTAN			X	X						X	X	
(OAKB) KABUL/Kabul Int'l					X			X				
RS	11 29	NPA PA1				X X	X X		X X			
(OAKN) KANDAHAR/Kandahar Int'l					X			X				
AS	05 23	NPA NPA				X X	X X		X X			
BAHRAIN			XI	XI						XI	XI	
(OBBI) Bahrain/Bahrain Int'l.					XI			XI				
RS	12L 30R	PA2 PA2				XI XI	XI XI		XI XI			
	12R 30L	NPA NPA				XI XI	XI XI		XI XI			
EGYPT			XI	XI						XI	XI	
(HEAR) EL-ARISH/El-Arish Int'l					XI			XI				
AS	16 34	NPA NPA				XI XI	XI XI		XI XI			
(HEAT) ASYUT/Asyut Int'l					X			XI				
AS	13 31	NPA NPA				XI	XI XI		XI			
(HEAX) ALEXANDRIA/Alexandria Int'l					XI			XI				
RS	18 36	NPA NPA				XI	XI XI		XI			
	04 22	NPA NPA				XI	XI XI		XI			
(HEAZ) CAIRO/Almaza Int'l					XI			XI				

STATE, TERRITORY OR AERODROME FOR WHICH WGS-84 IS REQUIRED			WGS-84 REQUIRED									REMARKS
CITY/AERODROME/	RWY No	RWY TYPE	FIR	ENR	TMA CTA CTZ	APP	RWY	AD/ HEL	GUND	QUALITY SYSTEM	AIP	
1	2	3	4	5	6	7	8	9	10	11	12	13
ANS	18	NPA				XI	XI		XI			
	36	NPA				XI	XI		XI			
	05	NINST					XI					
	23	NINST					XI					
(HEBA) ALEXANDRIA/Borg El-Arab Int'l					X			X				
RS	14	PA1				X	XI		XI			
	32	NPA				XI	XI		XI			
(HECA) CAIRO/Cairo Int'l					XI			XI				
RS	05L	PA2				XI	XI		XI			
	23R	PA2				XI	XI		XI			
	05R	PA2				XI	XI		XI			
	23L	PA2				XI	XI		XI			
	16	NINST				XI	XI		XI			
	34	NINST				XI	XI		XI			
(HEGN) HURGADA/Hurghada Int'l					XI			XI				
RS	16	NPA				XI	XI		XI			
	34	PA1				XI	XI		XI			
(HELX) LUXOR/Luxor Int'l					XI			XI				
RS	02	NPA				XI	XI		XI			
	20	PA1				XI	XI		XI			
(HEMA) MARSA ALAM/ Marsa Alam Int'l					XI			XI				
RNS	15	NPA				XI	XI		XI			
	33	NPA				XI	XI		XI			
(HEOW) SHARK EL OWEINAT/Shark					XI			XI				
El-Oweinat Int'l	01	NPA				XI	XI		XI			
AS	19	NINST					XI					
(HEPS) PORT SAID/Port Said Int'l					XI			XI				
AS	10	NPA				XI	XI		XI			
	28	NPA				XI	XI		XI			
(HESC) ST. CATHERINE/ St. Catherine Int'l								XI				
RS	17	NPA					XI					
	35	NINST					XI					

STATE, TERRITORY OR AERODROME FOR WHICH WGS-84 IS REQUIRED			WGS-84 REQUIRED									REMARKS
CITY/AERODROME/	RWY No	RWY TYPE	FIR	ENR	TMA CTA CTZ	APP	RWY	AD/ HEL	GUND	QUALITY SYSTEM	AIP	
1	2	3	4	5	6	7	8	9	10	11	12	13
(HESH) SHARM-EL-SHEIKH/ Sharm-El-Sheikh Int'l					XI			XI				
RS	04L 22R 04R 22L	PA1 NPA NPA NPA				XI XI 	XI XI XI XI		XI XI 			
(HESN) ASWAN/Aswan Int'l					XI			XI				
RS	17 35	NPA PA1				XI 	XI XI		XI XI			
(HETB) TABA/Taba Int'l					XI	XI		XI				
AS	04 22	NPA NINST					XI XI		XI 			
IRAN			XI	XI						XI	XI	
(OIKB) BANDAR ABBASS/					XI			XI				
Bandar Abbas Int'l RS	03R 21L 03L 21R	NPA PA1 NINST NINST				X X X X	XI XI XI XI		XI XI XI XI 			
(OIFM) Esfahan/ Shahid Beheshti Int'l					XI			XI				
RS	08L 26R 08R 26L	NPA PA1 NPA NPA				X X X X	XI XI XI XI		XI XI XI XI			
(OIMM) Mashhad/ Shahid Hashemi Nejad Int'l					XI			XI				
RS	13L 31R 13R 31L	NPA PA1 NPA NPA				X X X X	XI XI XI XI		XI XI XI XI			
(OISS) Shiraz/Shahid Dastghaib Int'l					XI			XI				
RS	11R 29L 11L 29R	NPA PA1 NPA NPA				X X X X	XI XI XI XI		XI XI XI XI			
(OITT) Tabriz/Tabriz Int'l					XI			XI				
RNS	12L 30R 12R 30L	NPA PA1 NINST NINST				X X X X	XI XI XI XI		XI XI XI XI			

STATE, TERRITORY OR AERODROME FOR WHICH WGS-84 IS REQUIRED			WGS-84 REQUIRED									REMARKS
CITY/AERODROME/	RWY No	RWY TYPE	FIR	ENR	TMA CTA CTZ	APP	RWY	AD/ HEL	GUND	QUALITY SYSTEM	AIP	
1	2	3	4	5	6	7	8	9	10	11	12	13
(OIII) Tehran/ Mehrabad Int'l					XI			XI				
RS	11R 29L 11L 29R	NPA PA1 NPA NPA				X X X X	XI XI XI XI		XI XI XI XI			
(OIIE) TEHRAN/Imam Khomaini Int'l					XI			XI				
RS	11 29	NPA PA2				X X	XI XI		XI XI			
(OIZH) ZAHEDAN/Zahedan					XI			XI				
Int'l RS	17 35	PA1 PA1				X X	XI XI		XI XI			
IRAQ			X	X						X	X	
(ORBI) BAGHDAD/Baghdad					X			X				
Int'l. RS	15L 33R	NINST NINST				X X	X X		X X			
	15R 33L	NINST NINST				X X	X X		X X			
(ORMM) BASRAH/Basrah Int'l.					X			X				
RS	14 32	NINST NINST				X X	X X		X X			
(ORER) ERBIL/Erbil Int'l												
RS												
(ORSU) SULYMANIYAH/ Sulymaniyah Int'l												
RS												
(ORNI) AL NAJAF/ Al Najaf Int'l (non operational).												
RS												
ISRAEL			X	X						X	X	
(LLET) EILAT/Eilat					X			X				
RNS	03 21	NPA NINST				X	X X		X			
(LLHA) HAIFA/Haifa					X			X				
RNS	16 34	NINST NINST					X X					

STATE, TERRITORY OR AERODROME FOR WHICH WGS-84 IS REQUIRED			WGS-84 REQUIRED									REMARKS
CITY/AERODROME/	RWY No	RWY TYPE	FIR	ENR	TMA CTA CTZ	APP	RWY	AD/ HEL	GUND	QUALITY SYSTEM	AIP	
1	2	3	4	5	6	7	8	9	10	11	12	13
(LLOV) OVDA/Ovda Int'l					X			X				
RNS	02L 20R	NINST NPA				X	X X		X			
(LLBG) TEL AVIV/ Ben Gurion					X			X				
RS	03 21 08 26 12 30	NPA NINST NPA PA1 PA1 NPA				X X X X X	X X 		X X X X X			
(LLSD) TEL AVIV/ Sde-Dov					X			X				
RNS	03 21	NINST NINST					X X					
JORDAN			XI	XI						XI	XI	
(OJAI) Amman/					XI			XI				
Queen Alia Int'l RS	08R 26L 08L 26R	NPA PA2 PA2 PA2				XI XI XI XI	XI XI XI XI		XI XI XI XI			
(OJAM) Amman/Marka Int'l					XI			XI				
AS	06 24	NPA PA1				XI XI	XI XI		XI			
(OJAQ) AQABA/King					XI			XI				
Hussein Int'l RS	01 19	PA1 NPA				XI XI	XI XI		XI XI			
(OJJR) JERUSALEM/ Jerusalem (Non operational)												
RS	12 30	PA1 NPA										
KUWAIT			XI	XI						XI	XI	
(OKBK) KUWAIT/ Kuwait Int'l.					XI			XI				
RS	15R 33R 15L 33R	PA2 PA2 PA2 PA2				XI XI XI XI	XI XI XI XI		XI XI XI XI			

STATE, TERRITORY OR AERODROME FOR WHICH WGS-84 IS REQUIRED			WGS-84 REQUIRED									REMARKS
CITY/AERODROME/	RWY No	RWY TYPE	FIR	ENR	TMA CTA CTZ	APP	RWY	AD/ HEL	GUND	QUALITY SYSTEM	AIP	
1	2	3	4	5	6	7	8	9	10	11	12	13
LEBANON			XI	XI						X	XI	
(OLBA) BEIRUT/ R.B.H-Beirut Int'l					XI			XI				
RS	17 35 16 34 03 21	PA1 NINST PA1 NINST PA1 PA1				XI XI XI XI XI XI	XI XI XI XI XI XI		X X X			 RWY 35 not used for landing RWY 36 no Land during night
OMAN			XI	XI						XI	XI	
(OOMS) Muscat/ Muscat Int'l					XI			XI				
RS	08 26	PA1 PA1				XI XI	XI XI		XI XI			
(OOSA) SALALAH/Salalah Int'l					XI			XI				
AS	07 25	NPA PA1				XI XI	XI XI		XI XI			
QATAR			XI	XI						X	XI	
(OTBD) DOHA/Doha Int'l					XI			XI				
RS	34 16	PA2 PA1				XI XI	XI XI		X X			
(OTxx) DOHA/New Doha Int'l (Future)												
RS												
SAUDI ARABIA			XI	XI						X	XI	
(OEDF) DAMMAM/King Fahd Int'l					XI			XI				
RS	16L 34R 16R 34L	PA1 PA1 PA1 PA1				XI XI XI XI	XI XI XI XI		X X X X			
(OEJN) JEDDAH/King Abdulaziz Int'l					XI			XI				
RS	16R 34L 16C 34C 16L 34R	PA2 PA2 PA2 PA2 PA1 PA1				XI XI XI XI XI XI	XI XI XI XI XI XI		X X X X X X			

STATE, TERRITORY OR AERODROME FOR WHICH WGS-84 IS REQUIRED			WGS-84 REQUIRED									REMARKS
CITY/AERODROME/	RWY No	RWY TYPE	FIR	ENR	TMA CTA CTZ	APP	RWY	AD/ HEL	GUND	QUALITY SYSTEM	AIP	
1	2	3	4	5	6	7	8	9	10	11	12	13
(OEMA)MADINAH/Prince Mohammad Bin Abdulaziz					XI			XI				
RS	17	PA1				XI	XI		X			
	35	PA1				XI	XI		X			
	18	NPA				XI	XI		X			
	36	PA1				XI	XI		X			
(OERK) RIYADH/King Khalid Int'l					XI			XI				
RS	15L	PA1				XI	XI		X			
	33R	PA1				XI	XI		X			
	15R	PA1				XI	XI		X			
	33L	PA1				XI	XI		X			
SYRIA			XI	XI						X	XI	
(OSAP) ALEPPO/Aleppo Int'l.					XI			XI				
RS	09	PA2				XI	XI		X			
	27	PA2				XI	XI		X			
(OSLK) LATTAKIA/Bassel Al-Assad					XI			XI				
RS	17	NPA				XI	XI					
	35	PA1					XI		X			
(OSDI) DAMASCUS/Damascus Int'l					XI			XI				
RS	05L	PA2				XI	XI		X			
	23R	PA2				XI	XI		X			
	05R	PA2				XI	XI		X			
	23L	PA2				XI	XI		X			
UNITED ARAB EMIRATES			XI	XI						XI	XI	
(OMAA) ABU DHABI/ Abu Dhabi Int'l					XI			XI				
RS	13R	PA1				XI	XI		XI			
	31L	PA3				XI	XI		XI			
	13L	PA3				XI	XI		XI			
	31R	PA3				XI	XI		XI			
(OMAL) AL AIN/ Al Ain Int'l					XI			XI				
RS	01	PA1				XI	XI		XI			
	19	NPA				XI	XI		XI			

STATE, TERRITORY OR AERODROME FOR WHICH WGS-84 IS REQUIRED			WGS-84 REQUIRED									REMARKS
CITY/AERODROME/	RWY No	RWY TYPE	FIR	ENR	TMA CTA CTZ	APP	RWY	AD/ HEL	GUND	QUALITY SYSTEM	AIP	
1	2	3	4	5	6	7	8	9	10	11	12	13
(OMDB) DUBAI/ Dubai Int'l					XI			XI				
RS	12L 30R 12R 30L	PA3 PA3 PA1 PA1				XI XI XI XI	XI XI XI XI		XI XI XI XI			
(OMFJ) FUJAIRAH/Fujairah Int'l					XI			XI				
RS	11 29	NPA PA1				XI XI	XI XI		XI XI			
(OMRK) RAS AL KHAIMAH/ Ras Al Khaimah Int'l					XI			XI				
RS	16 34	NPA PA1				XI XI	XI XI		XI XI			
(OMSJ) SHARJAH/ Sharjah Int'l					XI			XI				
RS	12 30	PA1 PA2				XI XI	XI XI		XI XI			
(OMJA) DUBAI/ Jabel Ali Int'l (Future)					XI			XI				
RS	12L 30R 12R 30L	PA3 PA3 PA3 PA3										
YEMEN			XI	XI						X	XI	
(OYAA) ADEN/ Aden Int'l					XI			XI				
RS	08 26	NPA PA1				XI XI	XI XI		XI XI			
(OYHD) HODEIDAH/ Hodeidah Int'l					XI			XI				
RS	03 21	NPA NPA				XI XI	XI XI		XI XI			
(OYRN) MUKALLA/Riyan					XI			XI				
RS	06 24	NPA NPA				XI XI	XI XI		XI XI			
(OYSN) SANA'A/Sana'a Int'l					XI			XI				
RS	18 36	PA1 NPA				XI XI	XI XI		XI XI			
(OYTZ) TAIZ/ Int'l					XI			XI				
RS	01 19	NPA NPA				XI XI	XI XI		XI XI			

AIS/MAP TF/5
Appendix 3C to the Report on Agenda Item 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
AFGHANISTAN	N	N	N	N	N	N	N	N	N	
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	
ISRAEL	F	F	F	F	P	F	F	N	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	N	N	F	
SAUDI ARABIA	F	F	F	F	F	F	N	F	F	GUND implementation under process
SYRIA	F	F	F	F	F	F	N	N	F	
UNITED ARAB EMIRATES	F	F	F	F	F	F	F	F	F	
YEMEN	F	F	F	F	F	F	F	N	F	

Legend:	**F: Fully implemented**	**P: Partly implemented**	**N: Not implemented**

AIS/MAP TF/5
Report on Agenda Item 4

REPORT ON AGENDA ITEM 4: QUALITY MANAGEMENT SYSTEM (QMS)

4.1 The meeting recalled that MIDANPIRG/11 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.

4.2 It was recognized that, while the importance and need for the provision of high quality aeronautical information is gaining momentum, the implementation of QMS by the MID States' AISs is far below expectations. The status of implementation of QMS in the MID Region is summarized as follows:

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

4.3 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).

4.4 In connection with the above, the meeting noted that MIDANPIRG/11 urged those States that have not yet done so, to implement the required QMS in accordance with the guidance provided by both the Methodology for the implementation of QMS at **Appendix 4A** to the Report on Agenda Item 4 and the CHAIN deliverables. Accordingly, MIDANPIRG/11 agreed to the following Conclusion:

CONCLUSION 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.

4.5 The meeting reviewed and updated the Terms of Reference (TOR) of the QMS Implementation Action Group (QMS AG) as at **Appendix 4B** to the Report on Agenda Item 4. 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 already implemented a QMS or are in an advance phase of implementation. 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.

4.6 Based on the above, the meeting agreed to the following Draft Conclusion and Decision:

DRAFT CONCLUSION 5/2: AWARENESS CAMPAIGNS AND TRAINING PROGRAMMES ON QMS

That, MID States, with the support of ICAO and the QMS Implementation Action Group (QMS AG), organize, at the National level, awareness campaigns and training programmes to promote and expedite the process of implementation of QMS for AIS.

DRAFT DECISION 5/3: 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 4B*** *to the Report on Agenda Item 4.*

4.7 The meeting was informed that Amendment 36 to Annex 15 would introduce new provisions related to QMS. It was highlighted in this regard that the proposal for amendment which was issued on 23 April 2009 through State Letter Ref.: AN 2/2.2-09/13 clarifies the scope of the QMS to encompass all organizations involved in the data processing chain, from the point of origin/survey, through to the AIS and distribution of the data to the intended user. The part of draft Amendment 36 to Annex 15 related to QMS attached as **Appendix 4C** to the Report on Agenda Item 4 was reviewed and supported by the meeting. However, it was highlighted that comments on the proposal for amendment to Annex 15 are expected to reach Montreal before 6 August 2009 and accordingly, the meeting urged States to further study the proposal for amendment and send their comments to ICAO Headquarters before the set deadline. Furthermore, the meeting was informed that during its preliminary review, the Air Navigation Commission (ANC) requested that States be consulted regarding the status of implementation of QMS. In this regard, States were requested to reply to the questionnaire at Attachment G of the State Letter giving information on their Action Plan for the implementation of QMS and the associated cost.

4.8 The meeting considered that an ICAO AIS Quality Manual was required to support the consistent implementation of QMS. In this regard, the meeting noted that the AIS-AIM SG/1 meeting held in Montreal 2-4 December 2008 addressed this issue and agreed to the establishment of an ad-hoc group to develop a draft AIS Quality Manual and present it to the AIS-AIM SG/2 meeting (November 2009) for review. It was also highlighted that in order to meet the Annex 15 requirements related to data integrity, States would require clear guidance on the means to measure integrity throughout the data supply chain. Accordingly, the ad-hoc group was tasked to develop guidance material on the means for measuring integrity to be included in the AIS Quality Manual.

4.9 Based on the above, the meeting reiterated MIDANPIRG/11 Conclusion 11/46 and urged States that have not yet done so, to implement/complete the implementation of a QMS within their AIS, before December 2010 as requested by MIDANPIRG, taking into consideration the new requirements which would be introduced by Amendment 36 to Annex 15.

Licensing of the AIS/MAP Personnel

4.10 The meeting recalled that, recognizing the importance of AIS as an essential foundation block of the future ATM operational concept 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/skills of the AIS staff, MIDANPIRG/10 was of view that AIS/MAP personnel should be licensed and through Conclusion 10/53, invited ICAO to consider the introduction of the licensing of the AIS/MAP personnel as a Recommended Practice in Annex 1.

4.11 The meeting noted that the ANC during its review of the MIDANPIRG/10 report and especially Conclusion 10/53 recognized that the competency of personnel involved in safety critical activities was paramount, but that such competencies could be achieved without licensing.

4.12 The meeting noted that MIDANPIRG/11 was informed that the AIS/MAP personnel in Iran and Saudi Arabia are licensed; however, this was a misunderstanding, since the AIS/MAP personnel in these two States are not licensed and only the requirements for the evaluation and maintenance of the competence/skills of the AIS staff are met.

4.13 The meeting further noted that MIDANPIRG/11 was of view that, notwithstanding the decision of the ANC, States could include in their national legislations/regulations provisions related to the licensing of the AIS/MAP personnel. Accordingly, MIDANPIRG/11 agreed to the following Conclusion, which replaces and supersedes MIDANPIRG/10 Conclusion 10/53:

CONCLUSION 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 regulations provisions related to the licensing of the AIS/MAP personnel.

4.14 Based on the above, the meeting reiterated MIDANPIRG/11 Conclusion 11/47 and agreed to its carry-over.

AIS/MAP TF/5
Appendix 4A to the Report on Agenda Item 4

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.

AIS/MAP TF/5
Appendix 4B to the Report on Agenda Item 4

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

A) 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.

B) 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**	Fax: (973) 17 32 181 Tel: (973) 17322 182 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** AIS Officer	Tel: +968 24518350 Fax: +968 24519850 Mobile: +968 99316040 Email: alibinali@hotmail.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

C) 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).

AIS/MAP TF/5
Appendix 4C to the Report on Agenda Item 4

ATTACHMENT A to State letter AN 2/2.2-09/13

PROPOSED AMENDMENT TO

INTERNATIONAL STANDARDS AND RECOMMENDED PRACTICES

AERONAUTICAL INFORMATION SERVICES

ANNEX 15
TO THE CONVENTION ON INTERNATIONAL CIVIL AVIATION

NOTES ON THE PRESENTATION OF THE PROPOSED AMENDMENT

The text of the amendment is arranged to show deleted text with a line through it and new text highlighted with grey shading, as shown below:

1. ~~Text to be deleted is shown with a line through it.~~	text to be deleted
2. New text to be inserted is highlighted with grey shading.	new text to be inserted
3. ~~Text to be deleted is shown with a line through it~~ followed by the replacement text which is highlighted with grey shading.	new text to replace existing text

TEXT OF A PROPOSED AMENDMENT TO THE

INTERNATIONAL STANDARDS AND RECOMMENDED PRACTICES

AERONAUTICAL INFORMATION SERVICES

ANNEX 15 TO THE CONVENTION ON INTERNATIONAL CIVIL AVIATION

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CHAPTER 3. GENERAL

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3.2 Quality management system

3.2.1 Each Contracting State shall ~~take all necessary measures to introduce a properly organized quality system containing procedures, processes and resources necessary to implement quality management at each function stage~~ ensure that quality management systems are implemented and maintained encompassing all functions of an aeronautical information service, as outlined in 3.1.7 above. The execution of such quality management systems shall be made demonstrable for each function stage, when required.

3.2.2 **Recommendation.**— *The quality management system should evolve to be applicable to the whole data supply chain from data origination to distribution to the next intended user, taking into consideration the intended use of data.*

~~3.2.2~~ 3.2.3 **Recommendation.—** *The quality management system established in accordance with 3.2.1 should ~~be in conformity with~~ follow the International Organization for Standardization (ISO) 9000 series of quality assurance standards, and be certified by an approved organization.*

Note 1.— An ISO 9000 certificate, issued by an accredited certification body would be considered an acceptable means of compliance.

Note 2.— International Organization for Standardization (ISO) 9000 series of quality assurance standards provide a basic framework for the development of a quality assurance programme and define the term "accredited certification body". The details of a successful programme are to be formulated by each State and in most cases are unique to the State organization.

Note 3.— Supporting material in respect to the processing of aeronautical data is contained in RTCA Document DO-200A and European Organization for Civil Aviation Equipment (EUROCAE) Document ED-76 — Standards for Processing Aeronautical Data. *These standards support the development and application of aeronautical databases.*

~~3.2.3~~ 3.2.4 Within the context of ~~a~~ the established quality management system, the skills and knowledge required for each function shall be identified and personnel assigned to perform those functions shall be appropriately trained. States shall ensure that personnel possess the skills and competencies required to perform specific assigned functions, and appropriate records shall be maintained so that the qualifications of personnel can be confirmed. Initial and periodic assessments shall be established that require personnel to demonstrate the required skills and competencies. Periodic assessments of personnel shall be used as a means to detect and correct shortfalls.

~~3.2.4~~ 3.2.5 States shall ensure that ~~established procedures exist in order that aeronautical data at any moment is traceable to its origin so as to allow any data anomalies or errors, detected during the production/maintenance phases or in operational use, to be corrected~~ the quality management system includes the necessary policies, processes and procedures to assure and verify that aeronautical data is traceable to its origin so as to allow any data anomalies or errors detected in use to be identified by root cause, corrected and communicated to affected users.

~~3.2.5~~ 3.2.6 The established quality management system shall provide users with the necessary assurance and confidence that distributed aeronautical information/data ~~satisfy stated requirements for data quality~~ is adequate for its intended use and of required quality (accuracy, resolution and integrity) ~~and for data traceability by the use of appropriate procedures in every stage of data production or data modification process~~. The system shall also provide assurance of the applicability period of intended use of aeronautical data as well as that the agreed distribution dates will be met.

3.2.7 States shall take all necessary measures to monitor compliance with the quality management system in place.

~~3.2.6~~ 3.2.8 The order of accuracy for aeronautical data, based upon a 95 per cent confidence level, shall be as specified in Annex 11, Chapter 2, and Annex 14, Volumes I and II, Chapter 2. In that respect, three types of positional data shall be identified: surveyed points (runway thresholds, navigation aid positions, etc.), calculated points (mathematical calculations from the known surveyed points of points in space/fixes) and declared points (e.g. flight information region boundary points).

~~3.2.7~~ 3.2.9 States shall ensure that the order of publication resolution of aeronautical data shall be that as specified in Appendices 1 and 7.

~~3.2.8~~ 3.2.10 Contracting States shall ensure that the integrity of aeronautical data is maintained throughout the data process from survey/origin to distribution to the next intended user (the entity that receives the aeronautical information from the aeronautical information service provider). Aeronautical data integrity requirements shall be based upon the potential risk resulting from the corruption of data and upon the use to which the data item is put. Consequently, the following classifications and data integrity levels shall apply:

a) critical data, integrity level 1×10^{-8}: there is a high probability when using corrupted critical data that the continued safe flight and landing of an aircraft would be severely at risk with the potential for catastrophe;

b) essential data, integrity level 1×10^{-5}: there is a low probability when using corrupted essential data that the continued safe flight and landing of an aircraft would be severely at risk with the potential for catastrophe; and

c) routine data, integrity level 1×10^{-3}: there is a very low probability when using corrupted routine data that the continued safe flight and landing of an aircraft would be severely at risk with the potential for catastrophe.

Note 1.— Distribution to the next intended user will differ in the delivery method applied which may either be:

Physical distribution. The means by which aeronautical information/data distribution is achieved through the delivery of a physical package, such as postal services.

or

Direct electronic distribution. The means by which aeronautical information/data distribution is achieved automatically through the use of a direct electronic connection between the AIS and the next intended user.

Note 2.— Different delivery methods and data media may require different procedures to ensure the required data quality.

~~3.2.9~~ 3.2.11 Aeronautical data quality requirements related to classification and data integrity shall be as provided in Tables A7-1 to A7-5 of Appendix 7.

~~3.2.10~~ 3.2.12 ~~Protection of electronic~~ Electronic aeronautical data sets, while stored ~~or in transit~~ shall be ~~totally monitored~~ protected by ~~the~~ a 32-bit cyclic redundancy check (CRC) implemented by the application dealing with the data sets. ~~To achieve protection of the integrity level of critical and essential aeronautical data as classified in 3.2.8, a 32- or 24-bit CRC algorithm shall apply respectively.~~

Note 1.— The requirement in 3.2.12 does not apply to the communications systems used for the transfer of data sets.

Note 2.— Guidance material on the use of a 32-bit CRC algorithm to implement a protection of electronic aeronautical data sets is contained in the Aeronautical Information Services Manual *(Doc 8126).*

~~3.2.11 **Recommendation.** — *To achieve protection of the integrity level of routine aeronautical data as classified in 3.2.8, a 16-bit CRC algorithm should apply.*~~

~~3.2.12~~ 3.2.13 Material to be issued as part of the Integrated Aeronautical Information Package shall be thoroughly checked and coordinated with the services responsible ~~services~~ before it is submitted to the aeronautical information service, in order to make certain that all necessary information has been included and that it is correct in detail prior to distribution. Validation and verification procedures shall be established which ensure that quality requirements (accuracy, resolution, integrity) and traceability of aeronautical data are met.

Note.— Guidance material on the liaison with other related services is contained in ~~the~~ ~~Aeronautical Information Services Manual *(Doc 8126)*~~*.*

~~3.2.13~~ 3.2.14 Demonstration of compliance of the quality management system applied shall be by audit. If nonconformity is identified, initiating action to correct its cause shall be determined and taken. All audit observations and remedial actions shall be evidenced and properly documented.

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3.6 General specifications

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3.6.5 Use of automation

Recommendation.— *Automation ~~in AIS~~ enabling digital data exchange should be introduced with the objective of improving the speed, ~~accuracy,~~ quality, efficiency and cost-effectiveness of aeronautical information services.*

Note.— Guidance material on an aeronautical conceptual and data exchange model for the development of databases and the establishment of data exchange services is contained in Doc 8126.

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3.6.7 Human Factors considerations

3.6.7.1 The organization of the aeronautical information services as well as the design, contents, processing and distribution of aeronautical information/data shall take into consideration Human Factors principles which facilitate their optimum utilization.

3.6.7.2 Due consideration shall be given to the integrity of information where human interaction is required and mitigating steps taken where risks are identified.

Note.— This may be accomplished through the design of systems, through operating procedures or through improvements in the operating environment.

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3.8 Metadata

3.8.1 Each Contracting State shall collect metadata for aeronautical information/data processes and/or exchange points. This metadata collection shall be applied throughout the data supply chain, from survey/origin to distribution to the next intended user by the aeronautical information service.

Note.— ISO Standard 19115 specifies requirements for geographic information metadata.

3.8.2 The metadata to be collected shall include, as a minimum:

a) the name of the organization or entity performing the function;

b) the function performed; and

c) the date and time of operation.

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CHAPTER 4. AERONAUTICAL INFORMATION PUBLICATIONS (AIP)

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4.3 Specifications for AIP Amendments

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4.3.4 Each AIRAC AIP Amendment page, including the cover sheet, shall display an effective date. When an effective time other than 0000 UTC is used, the effective time shall also be displayed on the cover sheet.

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AIS/MAP TF/5
Report on Agenda Item 5

REPORT ON AGENDA ITEM 5: AIS AUTOMATION

5.1 The meeting recalled that MIDANPIRG/11 highlighted the importance of AIS automation, which will provide not only timely and accurate aeronautical information but also will contribute to improved safety, increased efficiency and greater cost-effectiveness to users.

5.2 The meeting recognized that the level of introduction of automation by the MID States' AISs is still far below expectations. With a view to enhance the level of automation within MID States AISs, and in order to overcome the deficiencies related to aeronautical information/data still processed manually, the meeting urged States to accord high priority to the implementation of AIS automation in compliance with the MID Basic ANP/FASID provisions and MIDANPIRG requirements, taking into account the experience and implementation strategies/techniques being adopted in adjacent States and Regions.

5.3 The status of implementation of AIS automation in the MID Region is summarized as follows:

	AIS Database	**NOTAM System (NOF)**	**Briefing (AIS AD Units)**	**AIP Production (Text)**	**Charts Production**	**eAIP**
Afghanistan	– No			– Semi-automated	– Semi-automated	– No eAIP is available
Bahrain	– No	– Automated	– Automated	– Semi-automated	– Semi-automated	– No eAIP is available
Egypt	– Yes (AIXM 4.5)	– Automated	– Automated	– Automated	– Semi-automated	– No eAIP is available
Iran	– No	– Semi-automated	– No	– Semi-automated	– Semi-automated	– No eAIP is available
Iraq	– No			– Semi-automated	– Semi-automated	– No eAIP is available
Israel	– No	– Automated	– Automated System in Ben – Gurion Int'l Airport	– Semi-automated	– External company	– No eAIP is available
Jordan	– No	– Semi-automated	– Semi-automated	– Semi-automated	– Semi-automated	– No eAIP is available
Kuwait	– No	– Automated	– Automated	– Semi-automated	– Semi-automated	– No eAIP is available
Lebanon	– No	– Automated	– Automated	– Semi-automated	– Semi-automated	– No eAIP is available
Oman	– No	– Semi-automated	– Semi-automated	– Semi-automated	– Semi-automated	– No eAIP is available
Qatar	– No	– Automated	– Automated	– Semi-automated	– Semi-automated	– No eAIP is available
Saudi Arabia	– Yes (AIXM 3.3)	– Automated	– Automated System (not yet fully operational)	– Automated	– Automated (not yet fully operational)	– eAIP available (official publication on 30 Jul 09)
Syria	– No	– Semi-automated	– Semi-automated	– Semi-automated	– Semi-automated	– No eAIP is available

	AIS Database	NOTAM System (NOF)	Briefing (AIS AD Units)	AIP Production (Text)	Charts Production	eAIP
UAE	– No	– Semi-automated	– Semi-automated	– Semi-automated	– Semi-automated	– No eAIP is available
Yemen	– No	– Semi-automated	– Semi-automated	– Semi-automated	– Semi-automated	– No eAIP is available

5.4 It was highlighted that a fully automated system should be built on an AIS database, based on Aeronautical Information Conceptual and Exchange Models.

5.5 The meeting recalled that it was found that the EUROCONTROL eAIP specification is compatible with the ICAO requirements for AIP content and structure, as laid down in Annex 15, and enforces a strict application of these requirements. The meeting recalled that the AIS/MAP TF/4 meeting was apprised of the eAIP advantages for both producers and users. It was further noted that a series of eAIP Manuals and proof of concept tools are available on the EUROCONTROL website at: www.eurocontrol.int/eaip. Accordingly, MIDANPIRG/11 encouraged States to use this documentation for the development of their eAIPs by agreeing to the following Conclusion:

CONCLUSION 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.

5.6 The meeting noted that Amendment 36 to Annex 15 would introduce some changes related to AIS automation. The part of draft Amendment 36 to Annex 15 related to AIS automation is attached as **Appendix 5A** to the Report on Agenda Item 5. In this regard, it was highlighted that the provision of automated pre-flight information systems would be upgraded to a Standard. It was noted 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 in States.

5.7 The meeting recognized that the proposal supports the progressive transition from a manual, paper-product environment to a digital environment that would contribute to the provision of timely, high-quality digital information and improve the efficiency and cost-effectiveness of AIS. It was reiterated that the capability to provide digital information will provide the basis for the transition to AIM, and thus allow for the establishment of new services that directly support current and future ATM service requirements.

5.8 The meeting further noted that the proposal to amend Annex 15 includes a recommendation for the provision of an electronic aeronautical information publication (eAIP) which is based on a format that allows for digital data exchange. It is considered that clear provisions and guidance are necessary to prevent proliferation of eAIP formats and that a standard layout would simplify access by users. Accordingly, the proposal specifies that when the eAIP is provided, the information contained in the eAIP product shall follow the content and structure of the paper AIP product which is specified by 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.

5.9 The meeting recalled that the AIS/MAP TF/4 meeting was apprised of the functionalities, capabilities and advantages of the European AIS Database (EAD). It was particularly noted that two migration scenarios are possible:

- direct connection to EAD system; and
- regional replica of the EAD.

5.10 The meeting noted that the AIS/MAP TF/4 meeting was informed about the Europe-Middle East ATM Coordination (EMAC) mechanism/activities. The meeting recalled that within the framework of EMAC the exchange of aeronautical information was considered as a potential area of cooperation.

5.11 The meeting was informed about the actions carried out by Jordan, in coordination with Eurocontrol, in order to be connected to the EAD. It was noted in this regard that through the EMAC and EUROMED Aviation projects, Jordan was invited, as well as other EUROMED Beneficiary States, to be connected to the EAD as a data provider and/or data user.

5.12 The meeting noted that Jordan decided to plan the migration to the EAD in three phases:

- Phase 1: implementation of the EAD integrated AIS office solution by maintaining INO, SDO and PAMS information and disseminating relevant data via the EAD terminal (EADPRO);

- Phase 2: implementation of the Briefing Facility at the different ATS reporting offices; and

- Phase 3: evaluation of the feasibility to implement the eAIP and Chart production according to the Jordanian Civil Aviation Regulatory Commission (CARC) requirements and EUROCONTROL specifications.

5.13 The meeting was apprised of the migration steps undertaken/planned by Jordan to migrate to the EAD. The meeting was also informed about the cost estimate of the project.

5.14 Based on the above, the meeting thanked Jordan for sharing this information and encouraged other States to do so.

5.15 The meeting further noted that Egypt is in the process of coordination with EUROCONTROL for the development of a migration and transition plan with a view to be connected to the EAD.

5.16 The meeting was informed also about Iran activities and plans related to AIS automation.

5.17 Based on the above, the meeting re-iterated MIDANPIRG/11 Conclusion 11/49 as follows:

CONCLUSION 11/49: EXTENSION OF THE EAD TO THE EMAC STATES

That, the EMAC States (Egypt, Jordan, Lebanon and Syria) are encouraged to initiate formal coordination with EUROCONTROL and take appropriate actions in order to be connected to the European AIS Database (EAD).

5.18 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 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).

5.19 Based on the above, the meeting reviewed and updated the TOR of the AISA AG as at **Appendix 5B** to the Report on Agenda Item 5 and agreed accordingly to the following Draft Decision, which is proposed to replace and supersede MIDANPIRG/11 Decision 11/50:

DRAFT DECISION 5/4: 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 5B** to the Report on Agenda Item 5.*

Direct electronic distribution. The means by which aeronautical information/data distribution is achieved automatically through the use of a direct electronic connection between the AIS and the next intended user.

Note 2.— Different delivery methods and data media may require different procedures to ensure the required data quality.

~~3.2.9~~ 3.2.11 Aeronautical data quality requirements related to classification and data integrity shall be as provided in Tables A7-1 to A7-5 of Appendix 7.

~~3.2.10~~ 3.2.12 ~~Protection of electronic~~ Electronic aeronautical data sets, while stored ~~or in transit~~ shall be ~~totally monitored~~ protected by ~~the~~ a 32-bit cyclic redundancy check (CRC) implemented by the application dealing with the data sets. ~~To achieve protection of the integrity level of critical and essential aeronautical data as classified in 3.2.8, a 32- or 24-bit CRC algorithm shall apply respectively.~~

Note 1.— The requirement in 3.2.12 does not apply to the communications systems used for the transfer of data sets.

Note 2.— Guidance material on the use of a 32-bit CRC algorithm to implement a protection of electronic aeronautical data sets is contained in the Aeronautical Information Services Manual *(Doc 8126).*

~~3.2.11 **Recommendation.** — *To achieve protection of the integrity level of routine aeronautical data as classified in 3.2.8, a 16-bit CRC algorithm should apply.*~~

~~3.2.12~~ 3.2.13 Material to be issued as part of the Integrated Aeronautical Information Package shall be thoroughly checked and coordinated with the services responsible ~~services~~ before it is submitted to the aeronautical information service, in order to make certain that all necessary information has been included and that it is correct in detail prior to distribution. Validation and verification procedures shall be established which ensure that quality requirements (accuracy, resolution, integrity) and traceability of aeronautical data are met.

Note.— Guidance material on the liaison with other related services is contained in ~~the~~ ~~Aeronautical Information Services Manual *(Doc 8126)*~~*.*

~~3.2.13~~ 3.2.14 Demonstration of compliance of the quality management system applied shall be by audit. If nonconformity is identified, initiating action to correct its cause shall be determined and taken. All audit observations and remedial actions shall be evidenced and properly documented.

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3.6 General specifications

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3.6.5 Use of automation

Recommendation.— *Automation ~~in AIS~~ enabling digital data exchange should be introduced with the objective of improving the speed, ~~accuracy,~~ quality, efficiency and cost-effectiveness of aeronautical information services.*

Note.— Guidance material on an aeronautical conceptual and data exchange model for the development of databases and the establishment of data exchange services is contained in Doc 8126.

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3.6.7 Human Factors considerations

3.6.7.1 The organization of the aeronautical information services as well as the design, contents, processing and distribution of aeronautical information/data shall take into consideration Human Factors principles which facilitate their optimum utilization.

3.6.7.2 Due consideration shall be given to the integrity of information where human interaction is required and mitigating steps taken where risks are identified.

Note.— This may be accomplished through the design of systems, through operating procedures or through improvements in the operating environment.

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3.8 Metadata

3.8.1 Each Contracting State shall collect metadata for aeronautical information/data processes and/or exchange points. This metadata collection shall be applied throughout the data supply chain, from survey/origin to distribution to the next intended user by the aeronautical information service.

Note.— ISO Standard 19115 specifies requirements for geographic information metadata.

3.8.2 The metadata to be collected shall include, as a minimum:

a) the name of the organization or entity performing the function;

b) the function performed; and

c) the date and time of operation.

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CHAPTER 4. AERONAUTICAL INFORMATION PUBLICATIONS (AIP)

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4.3 Specifications for AIP Amendments

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4.3.4 Each AIRAC AIP Amendment page, including the cover sheet, shall display an effective date. When an effective time other than 0000 UTC is used, the effective time shall also be displayed on the cover sheet.

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4.4 Specifications for AIP Supplements

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4.4.4 When an error occurs in an AIP Supplement or when the period of validity of an AIP Supplement is changed, a new AIP Supplement shall be published as a replacement.

Editorial Note.— Renumber subsequent paragraphs accordingly.

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4.6 Electronic AIP (eAIP)

4.6.1 **Recommendation**.— *The AIP, AIP Amendment, AIP Supplement and AIC should also be published in a format that allows for displaying on a computer screen and printing on paper.*

Note 1.— This composite electronic document is named "Electronic AIP" (eAIP) and is based on a format that allows for digital data exchange.

Note 2.— Guidance material for the production and provision of the eAIP is contained in Doc 8126.

4.6.2 When provided, the information content of the eAIP and the structure of chapters, sections and sub-sections shall follow the content and structure of the paper AIP. The eAIP shall include files that allow for printing a paper AIP.

4.6.3 **Recommendation**.— *When provided, the eAIP should be available on a physical distribution media (CD, DVD, etc.) and online on the Internet.*

Note.— Guidance material on the use of the Internet is contained in Guidelines on the Use of the Public Internet for Aeronautical Applications *(Doc 9855).*

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CHAPTER 5. NOTAM

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5.2 General specifications

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5.2.2 Text of NOTAM shall be composed of the significations/uniform abbreviated phraseology assigned to the ICAO NOTAM Code complemented by ICAO abbreviations, indicators, identifiers, designators, call signs, frequencies, figures and plain language.

Note.— Detailed guidance material covering NOTAM, SNOWTAM, ASHTAM and PIB production is contained in Doc 8126.

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5.2.6 When errors occur in a NOTAM, a NOTAM with a new number to replace the erroneous NOTAM shall be issued or the erroneous NOTAM shall be cancelled and a new NOTAM issued.

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5.2.13 A checklist of valid NOTAM shall be issued as a NOTAM over the Aeronautical Fixed Service (AFS) at intervals of not more than one month using the NOTAM Format specified in Appendix 6. One NOTAM shall be issued for each series.

Note.— Omitting a NOTAM from the checklist does not serve to cancel a NOTAM.

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CHAPTER 6. AERONAUTICAL INFORMATION REGULATION AND CONTROL (AIRAC)

6.1 General specifications

6.1.1 Information concerning the circumstances listed in Appendix 4, Part 1, shall be distributed under the regulated system (AIRAC), i.e. basing establishment, withdrawal or significant changes upon a series of common effective dates at intervals of 28 days, including ~~29 January 1998~~ 14 January 2010. The information notified therein shall not be changed further for at least another 28 days after the effective date, unless the circumstance notified is of a temporary nature and would not persist for the full period.

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6.2 Provision of information in paper copy form

6.2.1 In all instances, information provided under the AIRAC system shall be published in paper copy form and shall be distributed by the AIS unit at least 42 days in advance of the effective date with the objective of reaching recipients at least 28 days in advance of the effective date.

6.2.2 **Recommendation.—** *Whenever major changes are planned and where advance notice is desirable and practicable, information published in paper copy form should be distributed by the AIS unit at least 56 days in advance of the effective date. This should be applied to the establishment of, and premeditated major changes in, the circumstances listed in Appendix 4, Part 3, and other major changes if deemed necessary.*

Note.— Guidance on what constitutes a major change is included in Doc 8126.

6.3 Provision of information in electronic form

6.3.1 States that have established an aeronautical database shall, when updating its contents concerning the circumstances listed in Appendix 4, Part 1, ensure that the effective dates of data coincide with the established AIRAC effective dates used for the provision of information in paper copy form.

6.3.2 Information provided in electronic form, concerning the circumstances listed in Appendix 4, Part 1, shall be distributed/made available by the AIS unit so as to reach recipients at least 28 days in advance of the AIRAC effective date.

6.3.3 **Recommendation.—** *Whenever major changes are planned and where advance notice is desirable and practicable, information provided in electronic form should be distributed/made available at least 56 days in advance of the effective date. This should be applied to the establishment of, and*

premeditated major changes in, the circumstances listed in Appendix 4, Part 3, and other major changes if deemed necessary.

Note.— Guidance on what constitutes a major change is included in Doc 8126.

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CHAPTER 8. PRE-FLIGHT AND POST-FLIGHT INFORMATION/DATA

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8.2 Automated aeronautical information systems

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8.2.1 ~~Where the~~ The civil aviation authority or the agency to which the authority to provide service has been delegated in accordance with 3.1.1 c) ~~uses~~ shall use automated pre-flight information systems to make aeronautical information/data available to operations personnel including flight crew members for self-briefing, flight planning and flight information service purposes. ~~, the~~ The information/data made available shall comply with the provisions of 8.1.2 and 8.1.3.

~~8.2.4~~ 8.2.2 Self-briefing facilities of an automated pre-flight information system shall provide ~~for~~ access ~~by~~ to operations personnel, including flight crew members and other aeronautical personnel concerned, ~~to~~ for consultation as necessary with the aeronautical information service by telephone or other suitable telecommunications means. The human/machine interface of such facilities shall ensure easy access in a guided manner to all relevant information/data.

~~8.2.5~~ 8.2.3 **~~Recommendation.~~** — Automated pre-flight information systems for the supply of aeronautical information/data for self-briefing, flight planning and flight information service ~~should~~ shall:

a) provide for continuous and timely updating of the system database and monitoring of the validity and quality of the aeronautical ~~information~~ data stored;

b) permit access to the system by operations personnel including flight crew members, aeronautical personnel concerned and other aeronautical users through suitable telecommunications means;

c) ensure provision, in paper copy form, of the aeronautical information/data accessed, as required;

d) use access and interrogation procedures based on abbreviated plain language and ICAO location indicators, as appropriate, or based on a menu-driven user interface or other appropriate mechanism as agreed between the civil aviation authority and operator concerned; and

e) provide for rapid response to a user request for information.

Note.— ICAO abbreviations and codes and location indicators are given respectively in the Procedures for Air Navigation Services — ICAO Abbreviations and Codes *(PANS-ABC, Doc 8400) and* Location Indicators *(Doc 7910).*

~~8.2.2~~ 8.2.4 **Recommendation.—** *Automated pre-flight information systems providing a harmonized, common point of access by operations personnel, including flight crew members and other aeronautical personnel concerned, to aeronautical information in accordance with 8.2.1 and meteorological information in accordance with 9.5.1 of Annex 3 —* Meteorological Service for International Air Navigation, *should be established by an agreement between the civil aviation authority or the agency to which the authority to provide service has been delegated in accordance with 3.1.1 c) and the relevant meteorological authority.*

~~8.2.3~~ 8.2.5 Where automated pre-flight information systems are used to provide the harmonized, common point of access by operations personnel, including flight crew members and other aeronautical personnel concerned, to aeronautical information/ data and meteorological information, the civil aviation authority or the agency to which the authority to provide service has been delegated in accordance with 3.1.1 c) shall remain responsible for the quality and timeliness of the aeronautical information/ data provided by means of such a system.

Note.— The meteorological authority concerned remains responsible for the quality of the meteorological information provided by means of such a system in accordance with 9.5.1 of Annex 3.

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CHAPTER 10. ELECTRONIC TERRAIN AND OBSTACLE DATA

10.1 Function

Sets of electronic terrain and obstacle data used in combination with aeronautical data, as appropriate, shall ~~satisfy user requirements necessary to~~ support the following air navigation applications:

. . .

10.2 Coverage and terrain and obstacle data numerical requirements

10.2.1 ~~To satisfy requirements necessary to accommodate air navigation systems or functions specified in 10.1, sets of electronic~~ Electronic terrain and obstacle data shall be collected and recorded in ~~databases~~ data sets in accordance with the following coverage areas:

— Area 1: entire territory of a State;

— Area 2: terminal control area;

— Area 3: aerodrome/heliport area; and

— Area 4: Category II or III operations area.

Note.— See Appendix 8 for graphical illustrations of the defined coverage areas.

. . .

10.2.3 Area 2 data shall be provided for all aerodromes regularly used by international civil aviation.

10.2.4 **Recommendation.—** *Area 3 data should be provided at those aerodromes/heliports where it is considered to be beneficial, e.g. where it is supported by the availability of aerodrome mapping data.*

AIS/MAP TF/5
Appendix 5B to the Report on Agenda Item 5

MID REGION AIS AUTOMATION ACTION GROUP (AISA AG)

A) 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.

B) 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
	Mr. Ahmed Allam AIS Specialist	Email: ahmedallam71@hotmail.com Tel: +2010 16 95 200 Fax: +20 2 22 67 88 82

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
	Mrs. Narges Assari **AIS Expert**	Email: n.assari@airport.ir ais_iran@airport.ir Tel : +9821 66025108 Fax : +9821 44649269 Mobile: +98910102005738
	Mr. Javad Pashaie Deputy D.G of ATS	Email: ais_iran@airport.ir Tel: +982 1 445 441 03 Fax: +982 1 445 441 02
Jordan	**Mrs. Hanan Qabartai** Chief AIS HQ	Email: ais.hq@carc.gov.jo Tel: (962) 6 4892282 ext. 3525 Fax: (962) 6 4891266 Mobile: (962)796768012
	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
Oman	**Dr. Shobber Sharaf Al-Moosawi** Chief AIS	Email: shobber@dgcam.gov.om omanysweet@hotmail.com Tel: (968) 24 519 507 Fax: (968) 24 519 523
Saudi Arabia	**Mr. Abdulrahman Batouk** Communication & Computer Engineer (Automation Engineering Branch, GACA)	Email: arbatouk@gmail.com Tel: (966) 555664381 Fax: (966-2) 671 9041
	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	

C) 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).

REPORT ON AGENDA ITEM 6: ELECTRONIC TERRAIN AND OBSTACLE DATA (eTOD)

6.1 The meeting was apprised of the outcome of the eTOD WG/2 meeting held in Tehran, Iran, Islamic Republic of, from 3 to 4 May 2009.

6.2 The meeting reviewed and analysed the numerical requirements for terrain and obstacle data for areas 1, 2, 3 and 4 as defined in Annex 15, Appendix 8, Tables A8-1 and A8-2.

6.3 The meeting noted that the eTOD WG/2 meeting was apprised of the outcome of the EUROCONTROL Terrain and Obstacle Data Working Group (TOD WG) and the European proposal for amendment to Annex 15 provisions contained in Chapter 10 related to eTOD. The meeting noted that an agreement was initially reached regarding the required changes/minor refinements for Area 1, Area 3 and Area 4, as well as some general changes affecting all areas.

6.4 The meeting further noted that the eTOD WG/2 was apprised of the outcome of the AIS-AIM SG/1 meeting held in Montreal, 2-4 December 2008 related to eTOD.

6.5 The meeting recalled that the ANC on 12 March 2009 carried out a preliminary review of draft Amendment 36 to Annex 15 and consequential amendments to Annexes 4, 11 and 14 and the PANS-ABC (Doc 8400) and that State Letter Ref.: AN 2/2.2-09/13 dated 23 April 2009 has been issued. It was highlighted that comments on the proposal for amendment to Annex 15 are expected to reach Montreal before 6 August 2009. Accordingly, the meeting urged States to study the proposal for amendment and send their comments to ICAO Headquarters before the set deadline. The part of draft Amendment 36 to Annex 15 related to eTOD is attached as **Appendix 6A** to the Report on Agenda Item 6.

6.6 The meeting was informed about the most important changes which would be introduced to Annex 15, Chapter 10 related to eTOD. The meeting particularly noted that in the proposed Draft Amendment 36 to Annex 15, 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.

6.7 Accordingly, obstacles shall be collected if they:

- are located within Area 2a and their height exceeds 3m above ground level;

- penetrate the surface in Area 2b and their height exceeds 3m above ground level;

- penetrate the surface in Area 2c and their height exceeds 15m above ground level; and

- are located within Area 2d and their height exceeds 100m above ground level.

6.8 The meeting supported the proposal to postpone the applicability date related to eTOD provisions for Area 2 and Area 3, from 18 November 2010 to 15 November 2012.

6.9 The meeting highlighted 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.

6.10 The meeting reviewed and endorsed the eTOD checklist at **Appendix 6B** to the Report on Agenda Item 6, in order to assist States in the process of planning and implementation of eTOD provisions and agreed accordingly to the following Draft Conclusion:

DRAFT CONCLUSION 5/5: eTOD CHECKLIST

*That, MID States be encouraged to use the eTOD checklist at **Appendix 6B** to the Report on Agenda Item 6 in order to assist them in the process of planning and implementation of the eTOD provisions.*

6.11 The meeting highlighted that the implementation of eTOD provisions is a challenge for all concerned. It was also recognized that some of those who should be 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.

6.12 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 CAA 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 Draft Conclusion:

DRAFT CONCLUSION 5/6: eTOD AWARENESS CAMPAIGNS

That, for the sake of an efficient and harmonized implementation of eTOD, MID States at the National Level and, to the extent possible co-operatively, organize awareness campaigns and training programmes (seminars, workshops, etc) to promote and expedite the process of eTOD implementation.

6.13 In connection with the above, the meeting agreed that a State Letter is to be issued by the ICAO MID Regional Office with a view to encourage States to use the eTOD checklist in the process of planning and implementation of eTOD and invite them to organize eTOD awareness campaigns and training events in compliance with the above Draft Conclusion.

6.14 The meeting reviewed and updated the MID Region AIS/MAP Timelines related to eTOD as at **Appendix 6C** to the Report on Agenda Item 6. It was noted in this regard that no State from the MID Region has notified ICAO of a difference to the provisions of Annex 15, Chapter 10. It was also noted that the majority of States will not be able to implement the eTOD provisions related to Area 2 and Area 3 before November 2012.

6.15 The meeting exchanged views and shared experience regarding the implementation of eTOD provisions. In this regard, the meeting encouraged States to register into the EUROCONTROL eTOD Forum and follow up all the discussions posted on this forum which proved to be very informative. The meeting urged States also to use the ICAO MID Forum to post any query or useful information related to eTOD on this Forum.

6.16 The meeting recalled that the MID Region eTOD Implementation Strategy at **Appendix 6D** to the Report on Agenda Item 6 was reviewed and endorsed by MIDANPIRG/11 through Conclusion 11/43. The meeting urged States to comply with the MID Region eTOD Implementation Strategy. It was further recalled that MIDANPIRG/11, based on a Recommendation from the First Meeting of the MIDANPIRG Steering Group (MSG/1) held in Dubai, 1-3 July 2008, agreed that the MIDANPIRG Conclusions and Decisions which are of general nature and their status of implementation would be "Ongoing" for many years are more suitable for inclusion in the Air Navigation Plan, Handbooks, Manuals, Guidelines, etc, as appropriate.

6.17 Based on the above, the meeting reviewed the draft proposal for amendment to the MID Basic ANP at **Appendix 6E** to the Report on Agenda Item 6, with a view to introduce a new part related to eTOD based on the MID Region eTOD Implementation Strategy and agreed accordingly to the following Draft Conclusion:

DRAFT CONCLUSION 5/7: PROPOSAL FOR AMENDMENT TO THE MID BASIC ANP (DOC 9708) RELATED TO eTOD

That,

*a) MID States review the draft proposal for amendment to the MID Basic ANP (Part VIII) at **Appendix 6E** to the Report on Agenda Item 6 and send their comments to the ICAO MID Regional Office before **15 August 2009**; and*

b) the ATM/SAR/AIS Sub-Group further review and refine, as necessary, the proposal and propose to MIDANPIRG its inclusion in the MID Basic ANP, in accordance with standard procedure.

6.18 In connection with the above, the meeting agreed that a State Letter is to be issued by the ICAO MID Regional Office inviting States to comment on the draft proposal for amendment to the MID Basic ANP (Part VIII).

6.19 The meeting recalled that MIDANPIRG/11, through Conclusion 11/44, invited ICAO to consider the inclusion of a Draft FASID Table related to the implementation of eTOD into the MID FASID, Part VIII (AIS), with necessary amendments, as appropriate.

6.20 The meeting noted that, further to the approval of the proposal for amendment of the MID Basic ANP 08/05-AOP, MIDANPIRG/11, through Conclusion 11/13, agreed that 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.

6.21 Based on the above, the meeting reviewed and updated the Draft MID FASID Table AIS 9 as at **Appendix 6F** to the Report on Agenda Item 6 and agreed to its inclusion as part of the Proposal for Amendment of the MID FASID (AIS Tables) (Draft Decision 5/1 refers).

6.22 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.

6.23 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 Draft Decision:

DRAFT DECISION 5/8: 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.

~~8.2.2~~ 8.2.4 **Recommendation.—** *Automated pre-flight information systems providing a harmonized, common point of access by operations personnel, including flight crew members and other aeronautical personnel concerned, to aeronautical information in accordance with 8.2.1 and meteorological information in accordance with 9.5.1 of Annex 3 —* Meteorological Service for International Air Navigation, *should be established by an agreement between the civil aviation authority or the agency to which the authority to provide service has been delegated in accordance with 3.1.1 c) and the relevant meteorological authority.*

~~8.2.3~~ 8.2.5 Where automated pre-flight information systems are used to provide the harmonized, common point of access by operations personnel, including flight crew members and other aeronautical personnel concerned, to aeronautical information/ data and meteorological information, the civil aviation authority or the agency to which the authority to provide service has been delegated in accordance with 3.1.1 c) shall remain responsible for the quality and timeliness of the aeronautical information/ data provided by means of such a system.

Note.— The meteorological authority concerned remains responsible for the quality of the meteorological information provided by means of such a system in accordance with 9.5.1 of Annex 3.

. . .

CHAPTER 10. ELECTRONIC TERRAIN AND OBSTACLE DATA

10.1 Function

Sets of electronic terrain and obstacle data used in combination with aeronautical data, as appropriate, shall ~~satisfy user requirements necessary to~~ support the following air navigation applications:

. . .

10.2 Coverage and terrain and obstacle data numerical requirements

10.2.1 ~~To satisfy requirements necessary to accommodate air navigation systems or functions specified in 10.1, sets of electronic~~ Electronic terrain and obstacle data shall be collected and recorded in ~~databases~~ data sets in accordance with the following coverage areas:

— Area 1: entire territory of a State;

— Area 2: terminal control area;

— Area 3: aerodrome/heliport area; and

— Area 4: Category II or III operations area.

Note.— See Appendix 8 for graphical illustrations of the defined coverage areas.

. . .

10.2.3 Area 2 data shall be provided for all aerodromes regularly used by international civil aviation.

10.2.4 **Recommendation.—** *Area 3 data should be provided at those aerodromes/heliports where it is considered to be beneficial, e.g. where it is supported by the availability of aerodrome mapping data.*

~~10.2.3~~ 10.2.5 ~~At IFR aerodromes/heliports,~~ When provided, Area 3 shall cover the area that extends from the edge(s) of the runway(s) to 90 m from the runway centre line(s) and for all other parts of aerodrome/heliport movement area(s), 50 m from the edge(s) of the defined area(s).

~~10.2.4~~ 10.2.6 Area 4 shall be restricted to those runways where precision approach Category II or III operations have been established and where detailed terrain and appropriate obstacle information is required by operators to enable them to assess, by use of radio altimeters, the effect of terrain and obstacles on decision height determination. The width of the area shall be 60 m on either side of the extended runway centre line while the length shall be 900 m from the runway threshold measured along the extended runway centre line.

Note.— Area 4 terrain data and Area 2 obstacle data are normally sufficient to support the production of the Precision Approach Terrain Chart — ICAO. When more detailed obstacle data is required for Area 4, this may be provided in accordance with the Area 4 obstacle data requirements specified in Appendix 8, Table A8-2. Guidance on appropriate obstacles for this chart is given in the Aeronautical Chart Manual *(Doc 8697).*

10.2.7 **Recommendation**.— *Where the terrain at a distance greater than 900 m (3 000 ft) from the runway threshold is mountainous or otherwise significant, Area 4 should be extended to a distance not exceeding 2 000 m from the runway threshold.*

~~10.2.5~~ 10.2.8 ~~According to the air navigation applications listed in 10.1 and areas of coverage, sets~~ Sets of electronic terrain data shall satisfy the numerical requirements specified in Appendix 8, Table A8-1 while obstacle data shall satisfy the numerical requirements specified in ~~Appendix 8,~~ Table A8-2.

Note 1.— Numerical terrain and obstacle data requirements for Area 2 provided in ~~Appendix 8,~~ Table A8-1 and Table A8-2, respectively, are defined on the basis of the most stringent application requirement (application listed under 10.1 b)).

Note 2.— It is recognized that some applications listed in 10.1 could be adequately accommodated with terrain and obstacle data sets that are of lower requirements than those specified in ~~Appendix 8,~~ Table A8-1 and Table A8-2, respectively. Consequently, careful evaluation of available data sets by data users is necessary in order to determine if the products are fit for their intended use.

10.3 Terrain ~~database~~ data set — content and structure

10.3.1 A terrain ~~database~~ data set shall contain digital sets of data representing terrain surface in the form of continuous elevation values at all intersections (points) of a defined grid, referenced to common datum. A terrain grid shall be angular or linear and shall be of regular or irregular shape.

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10.3.3 Terrain data shall be collected according to the areas specified in 10.2, terrain data collection surfaces and criteria specified in ~~Appendix 8, Figure~~ Figures A8-1, A8-3 and A8-4, and in accordance with the terrain data numerical requirements provided in Table A8-1 ~~of Appendix 8~~. In terrain ~~databases~~ data sets, only one feature type, i.e. terrain, shall be recorded. Feature attributes describing terrain shall be those listed in ~~Appendix 8,~~ Table A8-3. The terrain feature attributes listed in Table A8-3 represent the minimum set of terrain attributes, and those annotated as mandatory shall be recorded in the terrain ~~database~~ data set.

10.4 Obstacle ~~database~~ data set — content and structure

10.4.1 ~~One obstacle database~~ Obstacle data sets shall contain ~~a~~ digital ~~set of~~ obstacle data and shall include all obstacles that penetrate the collection surfaces defined in Figure A8-2 ~~those features having vertical significance in relation to adjacent and surrounding features that are considered hazardous to air navigation~~. Obstacle data shall comprise the digital representation of the vertical and horizontal extent of man-made objects. Obstacles shall not be included in terrain ~~databases~~ data sets. Obstacle data elements are features that shall be represented in the ~~database~~ data sets by points, lines or polygons.

10.4.2 Obstacles, which in accordance with the definition, can be fixed (permanent or temporary) or mobile shall be identified within the areas defined in 10.2, on the basis of the obstacle data collection surfaces and criteria specified in ~~Appendix 8, Figure~~ Figures A8-2, A8-3 and A8-4, and collected in accordance with obstacle data numerical requirements provided in Table A8-2 ~~of Appendix 8~~. In an obstacle ~~database~~ data set, all defined obstacle feature types shall be recorded and each of them shall be described according to the list of mandatory attributes provided in Table A8-4 ~~of Appendix 8~~.

Note.— Specific attributes associated with mobile (feature operations) and temporary types of obstacles are annotated in ~~Appendix 8, Table A8-4,~~ as optional attributes. If these types of obstacles are to be recorded in the ~~database~~ data set, appropriate attributes describing such obstacles are also required.

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10.6 Availability

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10.6.1.1 States shall ensure that ~~as of 20 November 2008,~~ electronic terrain and obstacle data are made available in accordance with Area 1 specifications and terrain data in accordance with Area 4 specifications.

10.6.1.2 States shall ensure that as of ~~18 November 2010~~ 15 November 2012, electronic terrain and obstacle data are made available in accordance with Area 2 and Area 3 specifications.

10.6.1.3 **Recommendation.—** *States should ensure that electronic terrain and obstacle data are made available in accordance with ~~Area 1,~~ Area 2~~,~~ and Area 3 specification~~s and terrain data in accordance with Area 4 specifications~~.*

. . .

APPENDIX 8. TERRAIN AND OBSTACLE DATA REQUIREMENTS
(see Chapter 10)

. . .

Editorial Note.— Replace Figure A8-2 with the following figure.

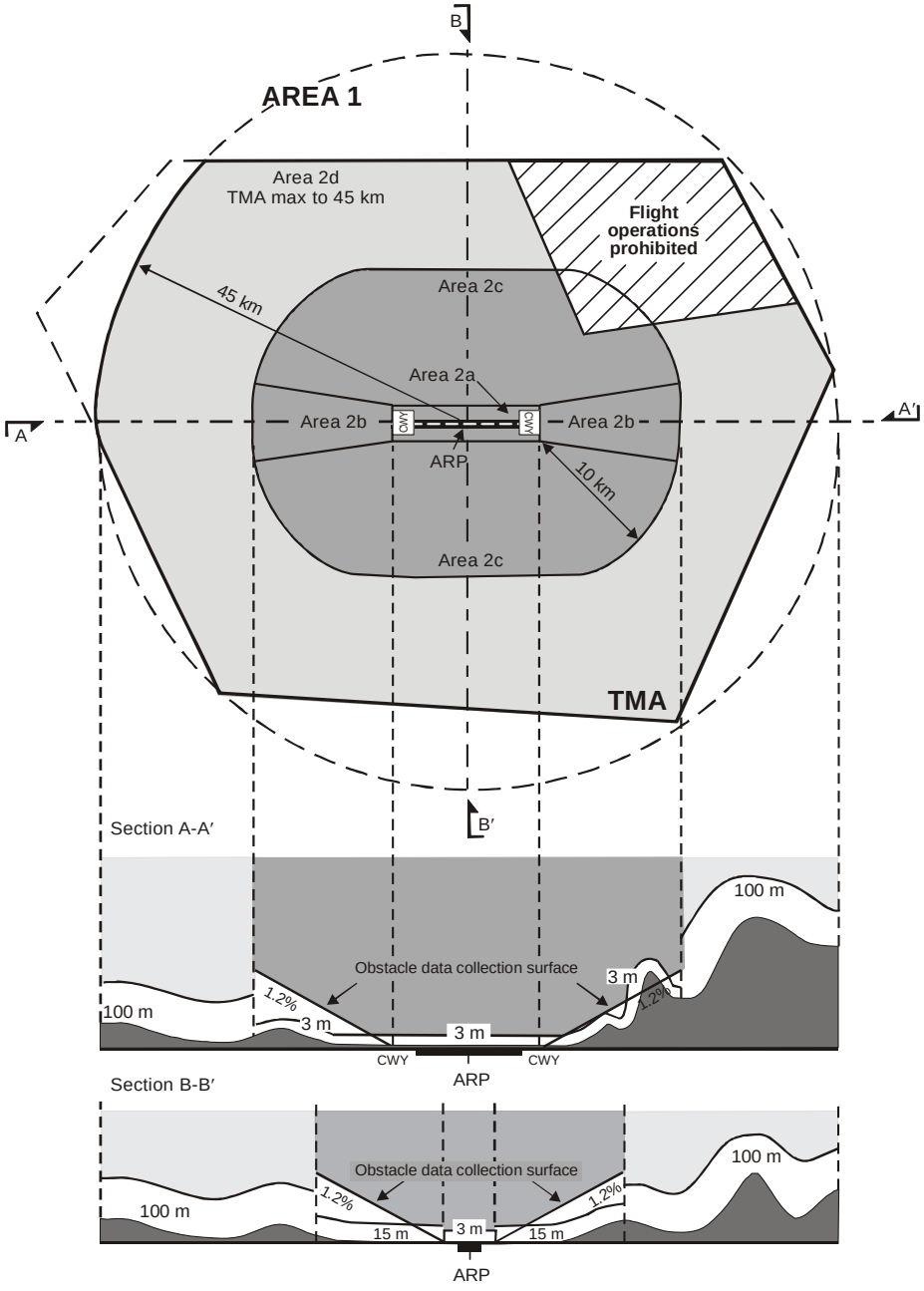

Figure A8-2. Obstacle data collection surfaces — Area 1 and Area 2

1. Obstacle data shall be collected and recorded in accordance with the Area 2 numerical requirements specified in Table A8-2:

Editorial Note.— Delete the following existing text.

a) any obstacle that penetrates the conical surface whose origin is at the edges of the 180-m wide rectangular area and at the nearest runway elevation measured along the runway centre line, extending at 1.2 per cent slope until it reaches 120 m above the lowest runway elevation of all operational runways at the aerodrome (1.2 per cent slope reaches 120 m at 10 km); in the remainder of Area 2 (between 10 km and the TMA boundary or 45-km radius, whichever is smaller), the horizontal surface 120 m above the lowest runway elevation; and

Editorial Note.— Insert the following new text.

a) Area 2 shall be divided into four sub-areas as follows:

— Area 2a is described as a rectangular area around the runway extending to 255 m 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 10 km 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 45 km from the ARP, or the TMA boundary, whichever is smaller;

b) obstacles shall be collected if they:

— are located within Area 2a and their height exceeds 3 m above ground level;

— penetrate the surface in Area 2b and their height exceeds 3 m above ground level; and

— penetrate the surface in Area 2c and their height exceeds 15 m above ground level;

c) in Area 2d, obstacles whose height exceeds 100 m above ground level shall be collected and recorded in the dataset.

End of new text.

~~b)~~ 2. In those portions of Area 2 where flight operations are prohibited due to very high terrain or other local restrictions and/or regulations, terrain data shall only be collected and recorded in accordance with the Area 1 numerical requirements.

~~2.~~ 3. Data on every obstacle within Area 1 whose height above the ground is 100 m or higher shall be collected and recorded in the data set in accordance with the Area 1 numerical requirements specified in Table A8-2.

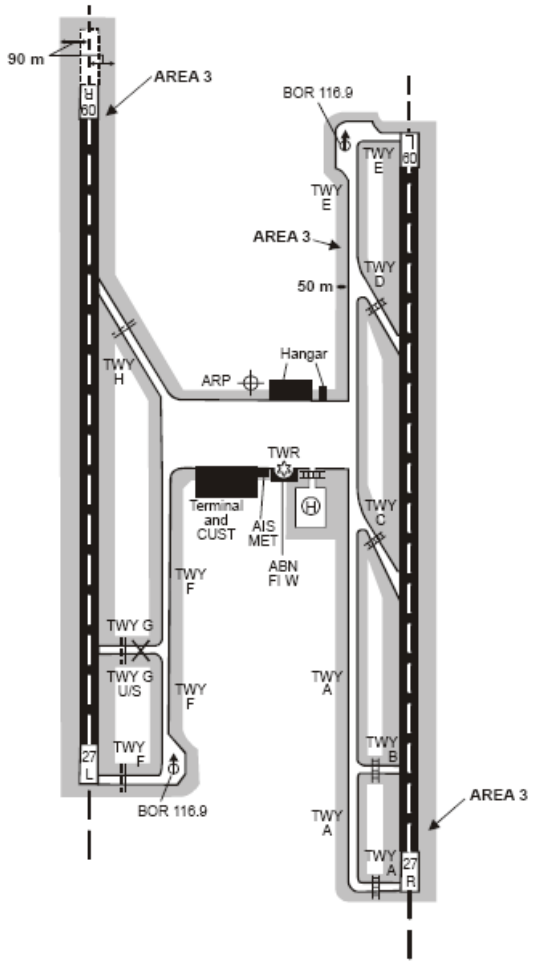

Figure A8-3. Terrain and obstacle data collection surface — Area 3

1. Data on terrain and obstacles, except frangible objects as defined by Annex 14, that extend more than a half-metre (0.5 m) above the horizontal plane passing through the nearest point on the aerodrome/heliport movement area shall be collected and recorded.

2. Terrain and obstacle data in Area 3 shall be collected and recorded in accordance with numerical requirements specified in Table A8-1 and Table A8-2, respectively.

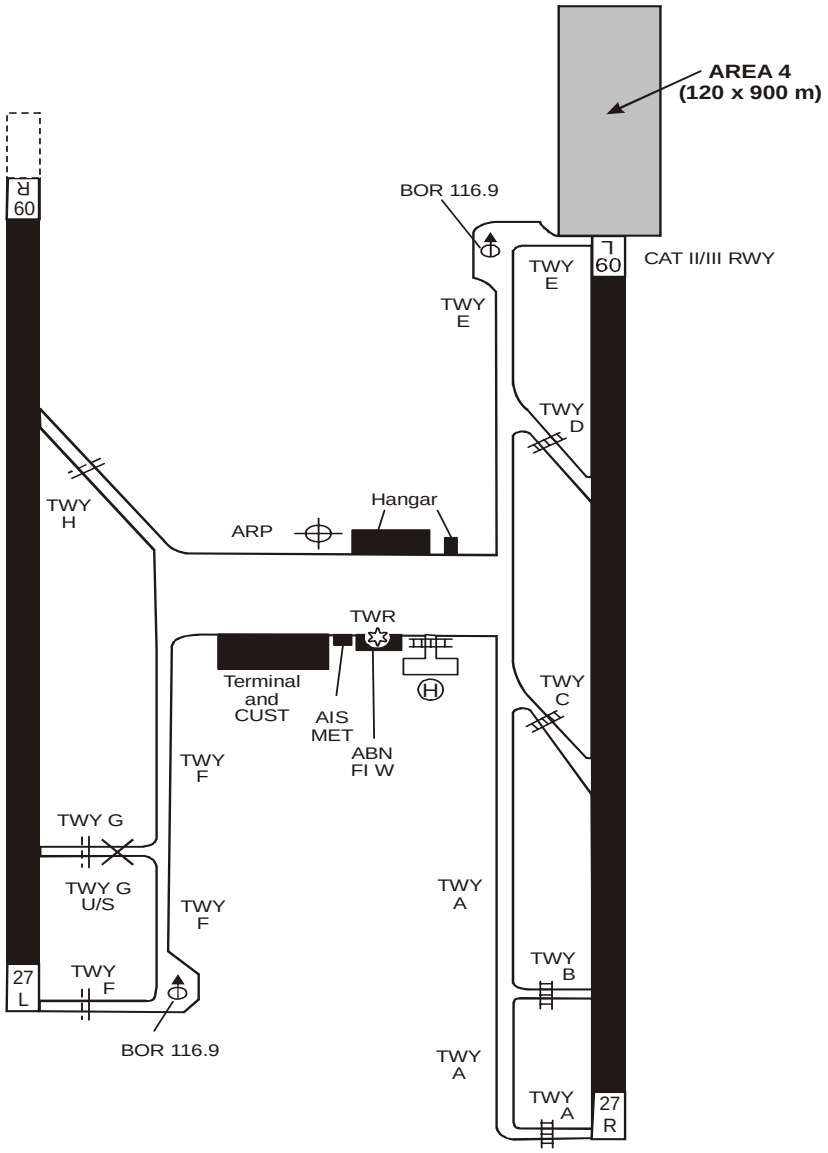

Figure A8-4. Terrain and obstacle data collection surface — Area 4

~~Only terrain~~ Terrain data shall be collected and recorded in Area 4 in accordance with the numerical requirements specified in Table A8-1.

Note 1.— The horizontal extent of Area 2 covers Area 4. More detailed obstacle data may be collected in Area 4 in accordance with Area 4 numerical requirements for obstacle data specified in Table A8-2. (See 10.2.6.)

Note 2.— Area 4 may be extended in accordance with 10.2.7.

Table A8-1. Terrain data numerical requirements

	Area 1	Area 2	Area 3	Area 4
Post spacing	3 arc seconds (approx. 90 m)	1 arc second (approx. 30 m)	0.6 arc seconds (approx. 20 m)	0.3 arc seconds (approx. 9 m)
Vertical accuracy	30 m	3 m	0.5 m	1 m
Vertical resolution	1 m	0.1 m	0.01 m	0.1 m
Horizontal accuracy	50 m	5 m	0.5 m	2.5 m
Confidence level ~~(1σ)~~	90%	90%	90%	90%
Data classification Integrity level	routine 1×10^{-3}	essential 1×10^{-5}	essential 1×10^{-5}	essential 1×10^{-5}
Maintenance period	as required	as required	as required	as required

Table A8-2. Obstacle data numerical requirements

	Area 1	Area 2	Area 3	Area 4
Vertical accuracy	30 m	3 m	0.5 m	1 m
Vertical resolution	1 m	0.1 m	0.01m	0.1 m
Horizontal accuracy	50 m	5 m	0.5 m	2.5 m
Confidence level ~~(1σ)~~	90%	90%	90%	90%
Data classification Integrity level	routine 1×10^{-3}	essential 1×10^{-5}	essential 1×10^{-5}	essential 1×10^{-5}
Maintenance period	as required	as required	as required	as required

Table A8-3. Terrain attributes

Terrain attribute	Mandatory/Optional
. . .	
Vertical confidence level	Mandatory
Surface type	~~Mandatory~~ Optional
Recorded surface	Mandatory
. . .	

Table A8-4. Obstacle attributes

Obstacle attribute	Mandatory/Optional
. . .	
Elevation	Mandatory
Height	Optional
Vertical accuracy	Mandatory
. . .	

— — — — — — — —

ICAO MIDDLE EAST OFFICE
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.

Middle East — Aeronautical Information Services Implementation

		2000	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16
Global	Provision of Terrain Data for Area 1																	
MID Region																		
States	Afghanistan																	
	Bahrain																	
	Egypt																	
	Iran, Islamic Rep. of																	
	Iraq																	
	Israel																	
	Jordan																	
	Kuwait																	
	Lebanon																	
	Oman																	
	Qatar																	
	Saudi Arabia																	
	Syrian Arab Republic																	
	United Arab Emirates																	
	Yemen																	
Global	Provision of Obstacle Data for Area 1																	
MID Region																		
States	Afghanistan																	
	Bahrain																	
	Egypt																	
	Iran, Islamic Rep. of																	
	Iraq																	
	Israel																	
	Jordan																	
	Kuwait																	
	Lebanon																	
	Oman																	
	Qatar																	
	Saudi Arabia																	
	Syrian Arab Republic																	
	United Arab Emirates																	
	Yemen																	

Middle East — Aeronautical Information Services Implementation

		2000	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16
Global	Provision of Terrain Data for Area 2																	
MID Region																		
States	Afghanistan																	
	Bahrain																	
	Egypt																	
	Iran, Islamic Rep. of																	
	Iraq																	
	Israel																	
	Jordan																	
	Kuwait																	
	Lebanon																	
	Oman																	
	Qatar																	
	Saudi Arabia																	
	Syrian Arab Republic																	
	United Arab Emirates																	
	Yemen																	
Global	Provision of Obstacle Data for Area 2																	
MID Region																		
States	Afghanistan																	
	Bahrain																	
	Egypt																	
	Iran, Islamic Rep. of																	
	Iraq																	
	Israel																	
	Jordan																	
	Kuwait																	
	Lebanon																	
	Oman																	
	Qatar																	
	Saudi Arabia																	
	Syrian Arab Republic																	
	United Arab Emirates																	
	Yemen																	

Middle East — Aeronautical Information Services Implementation																		
		2000	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16
Global	Provision of Terrain Data for Area 3																	
MID Region																		
States	Afghanistan																	
	Bahrain																	
	Egypt																	
	Iran, Islamic Rep. of																	
	Iraq																	
	Israel																	
	Jordan																	
	Kuwait																	
	Lebanon																	
	Oman																	
	Qatar																	
	Saudi Arabia																	
	Syrian Arab Republic																	
	United Arab Emirates																	
	Yemen																	
Global	Provision of Obstacle Data for Area 3																	
MID Region																		
States	Afghanistan																	
	Bahrain																	
	Egypt																	
	Iran, Islamic Rep. of																	
	Iraq																	
	Israel																	
	Jordan																	
	Kuwait																	
	Lebanon																	
	Oman																	
	Qatar																	
	Saudi Arabia																	
	Syrian Arab Republic																	
	United Arab Emirates																	
	Yemen																	

Middle East — Aeronautical Information Services Implementation

		2000	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16
Global	Provision of Terrain Data for Area 4																	
MID Region																		
States	Afghanistan									-	-	-	-	-	-	-	-	-
	Bahrain									-	-	-	-	-	-	-	-	-
	Egypt																	
	Iran, Islamic Rep. of																	
	Iraq																	
	Israel									-	-	-	-	-	-	-	-	-
	Jordan																	
	Kuwait																	
	Lebanon									-	-	-	-	-	-	-	-	-
	Oman									-	-	-	-	-	-	-	-	-
	Qatar																	
	Saudi Arabia																	
	Syrian Arab Republic									-	-	-	-	-	-	-	-	-
	United Arab Emirates																	
	Yemen									-	-	-	-	-	-	-	-	-

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.

AIS/MAP TF/5

Appendix 6E to the Report on Agenda Item 6

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 9)

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)

AIS/MAP TF/5
Appendix 6F to the Report on Agenda Item 6

FASID TABLE AIS-9 — 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-9)

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	
				TMA	45 Km				TMA	45 Km		
1	2	3	4	5	6	7	8	9	10	11	12	13
AFGHANISTAN			X					X				
(OAKB) KABUL/Kabul Int'l				X		X			X		X	
RS	11 29	NPA PA1										
(OAKN) KANDAHAR/Kandahar Int'l												
AS	05 23	NPA NPA										
BAHRAIN			X					X				
(OBBI) Bahrain/Bahrain Int'l.				X		X			X		X	
RS	12L 30R	PA2 PA2										
	12R 30L	NPA NPA										
EGYPT			X					X				
(HEAR) EL-ARISH/El-Arish Int'l				X		X			X		X	
AS	16 34	NPA NPA										
(HEAT) ASYUT/Asyut Int'l				X		X			X		X	
AS	13 31	NPA NPA										
(HEAX) ALEXANDRIA/Alexandria Int'l				X		X			X		X	
RS	18 36	NPA NPA										
	04 22	NPA NPA										
(HEAZ) CAIRO/Almaza Int'l				X		X			X		X	
ANS	18 36 05 23	NPA NPA NINST NINST										

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	
				TMA	45 Km				TMA	45 Km		
1	2	3	4	5	6	7	8	9	10	11	12	13
(HEBA) ALEXANDRIA/Borg El-Arab Int'l				X		X			X		X	
RS	14 32	PA1 NPA										
(HECA) CAIRO/Cairo Int'l				X		X			X		X	
RS	05L 23R 05R 23L 16 34	PA2 PA2 PA2 PA2 NINST NINST					X X X X					
(HEGN) HURGADA/Hurghada Int'l				X		X			X		X	
RS	16 34	NPA PA1										
(HELX) LUXOR/Luxor Int'l				X		X			X		X	
RS	02 20	NPA PA1										
(HEMA) MARSA ALAM/ Marsa Alam Int'l				X		X			X		X	
RNS	15 33	NPA NPA										
(HEOW) SHARK EL OWEINAT/Shark El-Oweinat Int'l				X		X			X		X	
AS	01 19	NPA NINST										
(HEPS) PORT SAID/Port Said Int'l				X		X			X		X	
AS	10 28	NPA NPA										
(HESC) ST. CATHERINE/ St. Catherine Int'l				X		X			X		X	
RS	17 35	NPA NINST										
(HESH) SHARM-EL-SHEIKH/ Sharm-El-Sheikh Int'l				X		X			X		X	
RS	04L 22R 04R 22L	PA1 NPA NPA NPA										

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	
				TMA	45 Km				TMA	45 Km		
1	2	3	4	5	6	7	8	9	10	11	12	13
(HESN) ASWAN/Aswan Int'l				X		X			X		X	
RS	17 35	NPA PA1										
(HETB) TABA/Taba Int'l				X		X			X		X	
AS	04 22	NPA NINST										
IRAN			X					X				
(OIKB) BANDAR ABBASS/					X	X				X	X	
Bandar Abbas Int'l RS	03R 21L 03L 21R	NPA PA1 NINST NINST										
(OIFM) Esfahan/ Shahid Beheshti Int'l					X	X				X	X	
RS	08L 26R 08R 26L	NPA PA1 NPA NPA										
(OIMM) Mashhad/ Shahid Hashemi Nejad Int'l					X	X				X	X	
RS	13L 31R 13R 31L	NPA PA1 NPA NPA										
(OISS) Shiraz/Shahid Dastghaib Int'l					X	X				X	X	
RS	11R 29L 11L 29R	NPA PA1 NPA NPA										
(OITT) Tabriz/Tabriz Int'l					X	X				X	X	
RNS	12L 30R 12R 30L	NPA PA1 NINST NINST										
(OIII) Tehran/ Mehrabad Int'l				X		X			X		X	
RS	11R 29L 11L 29R	NPA PA1 NPA NPA										

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	
				TMA	45 Km				TMA	45 Km		
1	2	3	4	5	6	7	8	9	10	11	12	13
(OIIE) TEHRAN/Imam Khomaini Int'l					X	X				X	X	
RS	11 29	NPA PA2					X					
(OIZH) ZAHEDAN/Zahedan				X	X				X	X		
Int'l RS	17 35	NPA PA1										
IRAQ			X					X				
(ORBI) BAGHDAD/Baghdad				X		X			X		X	
Int'l. RS	15L 33R	NINST NINST					X X					
	15R 33L	NINST NINST										
(ORMM) BASRAH/Basrah Int'l.				X		X			X		X	
RS	14 32	NINST NINST					X X					
(ORER) ERBIL/Erbil Int'l												
RS												
(ORSU) SULYMANIYAH/ Sulymaniyah Int'l												
RS												
(ORNI) AL NAJAF/ Al Najaf Int'l (non operational).												
RS												
ISRAEL			X					X				
(LLET) EILAT/Eilat				X		X			X		X	
RNS	03 21	NPA NINST										
(LLHA) HAIFA/Haifa				X		X			X		X	
RNS	16 34	NINST NINST										
(LLOV) OVDA/Ovda Int'l				X		X			X		X	
RNS	02L 20R	NINST NPA										

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	
				TMA	45 Km				TMA	45 Km		
1	2	3	4	5	6	7	8	9	10	11	12	13
(LLBG) TEL AVIV/ Ben Gurion				X		X			X		X	
RS	03 21 08 26 12 30	NPA NINST NPA PA1 PA1 NPA										
(LLSD) TEL AVIV/ Sde-Dov				X		X			X		X	
RNS	03 21	NINST NINST										
JORDAN			XI					XI				
(OJAI) Amman/				X		X			X		X	
Queen Alia Int'l	08R	NPA										
RS	26L 08L 26R	PA2 PA2 PA2					X X X					
(OJAM) Amman/Marka Int'l				X		X			X		X	
AS	06 24	NPA PA1										
(OJAQ) AQABA/King					X	X				X	X	
Hussein Int'l	01	PA1										
RS	19	NPA										
(OJJR) JERUSALEM/ Jerusalem (Non operational)					X	X				X	X	
RS	12 30	PA1 NPA										
KUWAIT			X					X				
(OKBK) Kuwait Int'l				X		X			X		X	
RS	33L 15R 33R 15L	PA2 PA2 PA2 PA2					X X X 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	
				TMA	45 Km				TMA	45 Km		
1	2	3	4	5	6	7	8	9	10	11	12	13
LEBANON			X					X				
(OLBA) BEIRUT/ R.B.H-Beirut Int'l				X		X			X		X	
RS	17 35 16 34 03 21	PA1 NINST PA1 NINST PA1 PA1										
OMAN			X					X				
(OOMS) Muscat/ Muscat Int'l				X		X			X		X	
RS	08 26	PA1 PA1										
(OOSA) SALALAH/Salalah Int'l				X		X			X		X	
AS	07 25	NPA PA1										
QATAR			X					X				
(OTBD) DOHA/Doha Int'l				X		X			X		X	
RS	34 16	PA2 PA1					X					
(OTxx) DOHA/New Doha Int'l (Future)												
RS												
SAUDI ARABIA			X					X				
(OEDF) DAMMAM/King Fahd Int'l				X		X			X		X	
RS	16L 34R 16R 34L	PA1 PA1 PA1 PA1										
(OEJN) JEDDAH/King Abdulaziz Int'l				X		X			X		X	
RS	16R 34L 16C 34C 16L 34R	PA2 PA2 PA2 PA2 PA1 PA1					X X X 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	
				TMA	45 Km				TMA	45 Km		
1	2	3	4	5	6	7	8	9	10	11	12	13
(OEMA)MADINAH/Prince Mohammad Bin Abdulaziz				X		X			X		X	
RS	17 35 18 36	PA1 PA1 NPA PA1										
(OERK) RIYADH/King Khalid Int'l				X		X			X		X	
RS	15L 33R 15R 33L	PA1 PA1 PA1 PA1										
SYRIA			X					X				
(OSAP) ALEPPO/Aleppo Int'l				X		X			X		X	
RS	09 27	PA2 PA2					X X					
(OSLK) LATTAKIA/Bassel Al-Assad				X		X			X		X	
RS	17 35	NPA PA1										
(OSDI) DAMASCUS/Damascus Int'l				X		X			X		X	
RS	05L 23R	PA2 PA2					X X					
	05R 23L	PA2 PA2					X X					
UNITED ARAB EMIRATES			X					X				
(OMAA) ABU DHABI/ Abu Dhabi Int'l				X		X			X		X	
RS	13R 31L 13L 31R	PA1 PA3 PA3 PA3					X X X					
(OMAL) AL AIN/ Al Ain Int'l				X		X			X		X	
RS	01 19	PA1 NPA										

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	
				TMA	45 Km				TMA	45 Km		
1	2	3	4	5	6	7	8	9	10	11	12	13
(OMDB) DUBAI/ Dubai Int'l				X		X			X		X	
RS	12L 30R 12R 30L	PA3 PA3 PA1 PA1					X X					
(OMFJ) FUJAIRAH/Fujairah Int'l				X		X			X		X	
RS	11 29	NPA PA1										
(OMRK) RAS AL KHAIMAH/ Ras Al Khaimah Int'l				X		X			X		X	
RS	16 34	NPA PA1										
(OMSJ) SHARJAH/ Sharjah Int'l				X		X			X		X	
RS	12 30	PA1 PA2					X					
(OMJA) DUBAI/ Jabel Ali Int'l (Future)												
RS	12L 30R 12R 30L	PA3 PA3 PA3 PA3					X X X X					
YEMEN			X					X				
(OYAA) ADEN/ Aden Int'l				X		X			X		X	
RS	08 26	NPA PA1										
(OYHD) HODEIDAH/ Hodeidah Int'l				X		X			X		X	
RS	03 21	NPA NPA										
(OYRN) MUKALLA/Riyan				X		X			X		X	
RS	06 24	NPA NPA										
(OYSN) SANA'A/Sana'a Int'l				X		X			X		X	
RS	18 36	PA1 NPA										
(OYTZ) TAIZ/ Taiz Int'l				X		X			X		X	
RS	01 19	NPA NPA										

REPORT ON AGENDA ITEM 7: REVIEW OF AIR NAVIGATION DEFICIENCIES IN THE AIS/MAP FIELD

7.1 The meeting recalled that MIDANPIRG/10 and MIDANPIRG/11 noted with concern that many deficiencies continue to persist for a number of years. The following was highlighted with regard to the root causes of non elimination of air navigation deficiencies in the MID Region in general:

- 55% of deficiencies are due to lack of a sustainable safety oversight system in the majority of MID States (in particular: appropriate legislative framework and supporting national regulations; well established civil aviation organisation where safety oversight functions and responsibilities are clearly defined and clear separation between regulatory bodies and service providers is ensured; provision of qualified personnel and expertise to carry out safety monitoring functions; provision of technical guidance and safety related information and appropriate enforcement provisions for the State' inspectors to allow them to carry out their safety oversight functions and take appropriate actions);

- 24% of deficiencies are due to lack of financial resources; and

- 21% of deficiencies are due to Military/political reasons.

7.2 The meeting noted that MIDANPIRG/11 noted with concern that:

- the majority of the deficiencies identified in the AIS/MAP field have not been eliminated and that the dates of elimination of these deficiencies by concerned Sates are just being deferred from meeting to meeting. More than 35% of these deficiencies are priority "U" and accordingly represent a lack of implementation of urgent requirements having a direct impact on safety and requiring immediate corrective actions;

- the non-elimination of the deficiencies in the AIS/MAP field is due mainly to the lack of financial resources and qualified personnel and expertise. The lack of coordination between the AISs and the other technical departments providing raw data was identified also as an important rationale for non-elimination of some AIS/MAP deficiencies especially those related to the non-compliance with the AIRAC system;

- the deficiencies related to the lack of regular and effective updating of the AIP, the lack of implementation of the AIRAC system, WGS-84 system and Quality Management System by a number of MID States were still not eliminated.

7.3 The meeting recalled that the MSG/1 meeting when addressing the issue of air navigation deficiencies, shared the concern of the ICAO Council, ANC and MIDANPIRG related to the longstanding deficiencies and explored ways and means to alleviate these deficiencies. In this regard, the MSG/1 meeting was of view that MID States that are Members of Gulf Co-operation Council (GCC), which has recently established an Air Navigation Commission, should present the subject of deficiencies to this Commission asking for up-down support for their elimination in the GCC States. The meeting encouraged also MID States that are Member of ACAC to seek ACAC's assistance for the elimination of deficiencies.

7.4 The meeting noted that the ICAO MID Regional Office further improved the MID Air Navigation Deficiency Database (MANDD). It was highlighted in this regard, that the database management system including all searching features capabilities will be available on the web (restricted) soon.

7.5 In connection with the above, the meeting noted that MIDANPIRG/11 agreed to Conclusion 11/86 related to the elimination of air navigation deficiencies as follows:

CONCLUSION 11/86: ELIMINATION OF AIR NAVIGATION DEFICIENCIES IN THE MID REGION

That,

a) MID 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) MID 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) MID 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) MID States are encouraged to seek support from regional and international organizations (i.e. ACAC, GCC, etc.) for the elimination of identified air navigation deficiencies.

7.6 The meeting reviewed and updated the list of deficiencies in the AIS/MAP field as at **Appendix 7A** to the Report on Agenda Item 4. It was noted with appreciation that Jordan has eliminated two deficiencies and Oman has eliminated one.

AIS/MAP TF/5
Appendix 7A to the Report on Agenda Item 7

Deficiencies in the AIS/MAP Field

AFGHANISTAN

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 for implementation of AIRAC requirements	Afghanistan	Jan, 2010	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	Afghanistan	Dec, 2010	B
3	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	Afghanistan	Dec, 2009	A
4	ANNEX 4 Para. 7.2	-	Non-production of the Enroute Chart-ICAO	May, 1995	-	F H O	Need to produce the Enroute Chart-ICAO	Afghanistan	Dec, 2010	A
5	ANNEX 4: Para 3.2	-	Non-production of Aerodrome Obstacle Chart-ICAO Type A	May, 1995	-	F H 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)	Afghanistan	Dec, 2009	A

(1) Rationale for non-elimination: "F"= Financial "H"= Human Resources "S"= State (Military/political) "O"= Other unknown causes

Item No	Identification		Deficiencies				Corrective Action			
	Requirement	**Facilities/ Services**	**Description**	**Date First Reported**	**Remarks/ Rationale for Non-elimination**		**Description**	**Executing Body**	**Date of Completion**	**Priority for Action**
6	ANNEX 15: Para 4.1.1	-	Newly Restructured AIP tested	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	Afghanistan	Dec, 2010	U
7	ANNEX 15: Para 3.7.1	-	Implementation of WGS-84	Dec, 1997	-	F H O	Need to implement WGS-84	Afghanistan	Dec, 2010	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	Afghanistan	Dec, 2009	U
9	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.	Afghanistan	Dec, 2011	U
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	Afghanistan	Dec, 2008	A
11	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	Afghanistan	Dec, 2008	A
12	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.	Afghanistan	Dec, 2009	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

EGYPT

Item No	Identification		Deficiencies				Corrective Action			
	Requirement	Facilities/ Services	Description	Date First Reported	Remarks/ Rationale for Non-elimination		Description	Executing Body	Date of Completion	Priority for Action
1	Annex 15: Para. 8.1	-	AIS Aerodrome Units not established at St. Catherine and Taba Int`l Airports	May, 2009	-	O	Need to provide a pre-flight information service at all aerodromes used for international air operations.	Egypt	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

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	~~F~~ ~~H~~ ~~S~~ O	Need to produce the assigned sheets of the World Aeronautical Chart – ICAO 1:1 000 000	Iran+neighboring states	Dec, 2009	B
2	ANNEX 4: Para. 3.2	-	Non-production of Aerodrome Obstacle Chart-ICAO Type A	May, 1995	ICAO to follow up with State	~~F~~ ~~O~~ 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, 2009	A
3	ANNEX 15: Para. 3.6.5	-	Lack of AIS automation	Dec, 2007	-	~~F~~ ~~H~~ O	AIS automation should be introduced with the objective of improving the speed, accuracy, efficiency and cost-effectiveness of aeronautical information services	Iran	Dec, 2009	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	Jan, 2010	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, 2010	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, 2010	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, 2010	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, 2010	U
6	ANNEX 15: Para 3.7.1	-	Implementation of WGS-84	Dec, 1997	-	F H O	Need to implement WGS-84	Iraq	Dec, 2010	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, 2010	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, 2008	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, 2008	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, 2009	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 6	-	Lack of implementation of AIRAC System	May, 1995	ICAO to follow up with State	H O	Need for implementation of AIRAC requirements	Israel	Dec, 2007	U
2	ANNEX 4: Para. 7.2	-	Non-production of the Enroute Chart-ICAO	May, 1995	-	S O	Need to produce the Enroute Chart-ICAO	Israel	Dec, 2007	A
3	ANNEX 15: Para 3.7.1	-	Implementation of WGS-84	Dec, 1997	-	H O	Need to implement WGS-84	Israel	Dec, 2007	U
4	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.	Israel	Dec, 2007	U
5	ANNEX 15: Para. 5.2.8.3	-	Non-production of the monthly printed plain language summary of NOTAM	Jan, 2003	-	H	Need to produce the monthly printed plain language summary of NOTAM	Israel	Dec, 2007	A
6	ANNEX 15 Para. 8.1	-	Non provision of pre-flight information service at international airports	Mar, 2004	-	H O	Need to provide a pre-flight information service at all aerodromes used for international air operations.	Israel	Dec, 2007	A

(1) Rationale for non-elimination: "F"= Financial "H"= Human Resources "S"= State (Military/political) "O"= Other unknown causes

Deficiencies in the AIS/MAP Field

JORDAN

Item No	Identification		Deficiencies				Corrective Action			
	Requirement	Facilities/ Services	Description	Date First Reported	Remarks/ Rationale for Non-elimination		Description	Executing Body	Date of Completion	Priority for Action
1	ANNEX 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.	Jordan	Dec, 2009	U
~~2~~	~~ANNEX 15: Para. 6~~	~~-~~	~~Lack of implementation of AIRAC System~~	~~Mar, 2004~~	~~ICAO to follow up with State~~	~~H O~~	~~Need to fully comply with the AIRAC procedure~~	~~Jordan~~	~~Dec, 2009~~	~~U~~
~~3~~	~~Doc 8126: Para. 3.2.2 & 3.3~~	~~-~~	~~Lack of adequate resources and efficient working arrangements~~	~~Jul, 2005~~	~~-~~	~~F H~~	~~Need to provide AIS (including AIS Briefing Offices) with adequate resources and efficient working arrangements~~	~~Jordan~~	~~Mar, 2009~~	~~A~~
4	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, 2009~~ 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, 2009	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	-	H 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. 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.~~	~~Oman~~	~~Jun, 2010~~	~~A~~
3	~~Doc 8126: Para. 3.2.2 & 3.3~~ ANNEX 15: Para. 8.1 Doc 8126: Para. 3.2.2 & 3.3	-	~~Lack of adequate resources and efficient working arrangements~~ Lack of adequate resources and efficient working arrangements at Salalah AIS Briefing Office	Jul, 2005	-	F H	~~Need to provide AIS (including AIS Briefing Offices) with adequate resources and efficient working arrangements~~ Need to provide the AIS Briefing Office at Slalah airport with adequate resources and efficient working arrangements for the provision of required pre-flight information service.	Oman	Jun, 2010	A
4	~~ANNEX 15: Para. 3.6.5~~ ANNEX 15: Para. 3.6.5 and 8.2	-	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	Oman	~~Jun, 2010~~ 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**
5	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	Oman	~~Dec, 2010~~ Dec, 2011	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

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 4: Para. 13.2	-	Non-production of Aerodrome/Heliport Chart - ICAO	May, 1995	-	H O	Need to produce Aerodrome/Heliport Chart - ICAO for all Int`l Aerodromes	Qatar	Dec, 2008	A
2	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	Dec, 2009	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.	H	Need to implement geoid undulation referenced to the WGS-84 ellipsoid.	Qatar	Dec, 2009	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

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	-	~~F~~ ~~H~~ ~~S~~ H	Need to produce the assigned sheets of the World Aeronautical Chart – ICAO 1:1 000 000	Saudi Arabia	~~Jun, 2009~~ Jun, 2010	B
2	ANNEX 4: Para. 7.2	-	Non-productionof the Enroute Chart-ICAO	May, 1995	-	~~F~~ ~~O~~ O	Need to produce the Enroute Chart-ICAO	Saudi Arabia	Jun, 2009	A
3	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.	Saudi Arabia	Jun, 2009	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.	H	Need to implement geoid undulation referenced to the WGS-84 ellipsoid.	Saudi Arabia	~~Dec, 2009~~ Jun, 2010	A
5	ANNEX 4: Para. 3.2	-	Non-production of Aerodrome Obstacle Chart-ICAO Type A	Mar, 2004	For some RWYs in Saudi Arabia, the Aerodrome Obstacle Chart-ICAO Type A has not been produced	F H 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)	Saudi Arabia	Mar, 2009	A

(1) Rationale for non-elimination: "F"= Financial "H"= Human Resources "S"= State (Military/political) "O"= Other unknown causes

Item No	Identification		Deficiencies				Corrective Action			
	Requirement	**Facilities/ Services**	**Description**	**Date First Reported**	**Remarks/ Rationale for Non-elimination**		**Description**	**Executing Body**	**Date of Completion**	**Priority for Action**
6	ANNEX 15: Para. 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	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

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, 2009	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, 2009	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	Sep, 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	Aug, 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	Aug, 2009	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	Aug, 2009	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	Sep, 2009	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	Jun, 2009	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	AIS automation should be introduced with the objective of improving the speed, accuracy, efficiency and cost-effectiveness of aeronautical information services	UAE	Jun, 2010	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	Jun, 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

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	Jun, 2007	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, 2007	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	Jun, 2007	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, 2007	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	Jun, 2007	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	Jun, 2007	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	Jun, 2007	A

(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

REPORT ON AGENDA ITEM 8: MID REGION AIS/MAP IMPLEMENTATION PLAN

8.1 The meeting recalled that the AIS/MAP Timelines are used by the AIS/MAP Task Force as an internal planning tool for the implementation of specific AIS/MAP related subjects.

8.2 The meeting reviewed and updated the MID Region AIS/MAP Timelines as at **Appendix 8A** to the Report on Agenda Item 8, taking into consideration the latest developments in the AIS/MAP field.

AIS/MAP TF/5
Appendix 8A to the Report on Agenda Item 5

Middle East Region

AIS/MAP IMPLEMENTATION PLAN

Updated Timelines

TIMELINES:

Global

Regional

National

Middle East — Aeronautical Information Services Implementation

		1994	95	96	97	98	99	2000	01	02	03	04	05	06	07	08	09	2010
Global	WGS-84 Implementation																	
MID Region																		
States	Afghanistan																	
	Bahrain																	
	Egypt																	
	Iran, Islamic Rep. of																	
	Iraq																	
	Israel																	
	Jordan																	
	Kuwait																	
	Lebanon																	
	Oman																	
	Qatar																	
	Saudi Arabia																	
	Syrian Arab Republic																	
	United Arab Emirates																	
	Yemen																	
Global	WGS-84 Geoid undulation (GUND) Implementation																	
MID Region																		
States	Afghanistan																	
	Bahrain																	
	Egypt																	
	Iran, Islamic Rep. of																	
	Iraq																	
	Israel																	
	Jordan																	
	Kuwait																	
	Lebanon																	
	Oman																	
	Qatar																	
	Saudi Arabia																	
	Syrian Arab Republic																	
	United Arab Emirates																	
	Yemen																	

Middle East — Aeronautical Information Services Implementation

		1994	95	96	97	98	99	2000	01	02	03	04	05	06	07	08	09	2010
Global	Quality System Implementation																	
MID Region																		
States	Afghanistan																	
	Bahrain																	
	Egypt																	
	Iran, Islamic Rep. Of																	
	Iraq																	
	Israel																	
	Jordan																	
	Kuwait																	
	Lebanon																	
	Oman																	
	Qatar																	
	Saudi Arabia																	
	Syrian Arab Republic																	
	United Arab Emirates*																	
	Yemen																	
Global	Quality System Certification																	
MID Region																		
States	Afghanistan																	
	Bahrain																	
	Egypt																	
	Iran, Islamic Rep. Of																	
	Iraq																	
	Israel																	
	Jordan																	
	Kuwait																	
	Lebanon																	
	Oman																	
	Qatar																	
	Saudi Arabia																	
	Syrian Arab Republic																	
	United Arab Emirates*																	
	Yemen																	

Middle East — Aeronautical Information Services Implementation

		1994	95	96	97	98	99	2000	01	02	03	04	05	06	07	08	09	2010
Global	Implementation of an automated NOF and pre-flight Information System																	
MID Region																		
States	Afghanistan																	
	Bahrain																	
	Egypt																	
	Iran, Islamic Rep. Of																	
	Iraq																	
	Israel																	
	Jordan																	
	Kuwait																	
	Lebanon																	
	Oman																	
	Qatar																	
	Saudi Arabia																	
	Syrian Arab Republic																	
	United Arab Emirates																	
	Yemen																	
Global	Harmonization of AIS, MET and flight plan information to support combined AIS/MET/FPL pre-flight briefing.																	
MID Region																		
States	Afghanistan																	
	Bahrain																	
	Egypt																	
	Iran, Islamic Rep. Of																	
	Iraq																	
	Israel																	
	Jordan																	
	Kuwait																	
	Lebanon																	
	Oman																	
	Qatar																	
	Saudi Arabia																	
	Syrian Arab Republic																	
	United Arab Emirates																	
	Yemen																	
Global	Interrogation of aeronautical databases from the aircraft for combined automated AIS/MET/FPL in-flight briefing.	SARPs not yet available																
MID Region																		
States	Afghanistan																	
	Bahrain																	
	Egypt																	
	Iran, Islamic Rep. Of																	
	Iraq																	
	Israel																	
	Jordan																	
	Kuwait																	
	Lebanon																	
	Oman																	
	Qatar																	
	Saudi Arabia																	
	Syrian Arab Republic																	
	United Arab Emirates																	
	Yemen																	

Middle East — Aeronautical Information Services Implementation

		1994	95	96	97	98	99	2000	01	02	03	04	05	06	07	08	09	2010
Global	Publication of the Integrated Aeronautical Information Package on a CD-ROM and on the website.																	
MID Region																		
States	Afghanistan																	
	Bahrain																	
	Egypt																	
	Iran, Islamic Rep. of																	
	Iraq																	
	Israel																	
	Jordan																	
	Kuwait																	
	Lebanon																	
	Oman																	
	Qatar																	
	Saudi Arabia																	
	Syrian Arab Republic																	
	United Arab Emirates																	
	Yemen																	
Global	Implementation of a fully automated AIS Database/System.	SARPs not available																
MID Region																		
States	Afghanistan																	
	Bahrain																	
	Egypt																	
	Iran, Islamic Rep. of																	
	Iraq																	
	Israel																	
	Jordan																	
	Kuwait																	
	Lebanon																	
	Oman																	
	Qatar																	
	Saudi Arabia																	
	Syrian Arab Republic																	
	United Arab Emirates																	
	Yemen																	

		1994	95	96	97	98	99	2000	01	02	03	04	05	06	07	08	09	2010
Global	Vertical reference system (EGM 96) Implementation																	
MID Region																		
States	Afghanistan																	
	Bahrain																	
	Egypt																	
	Iran, Islamic Rep. of																	
	Iraq																	
	Israel																	
	Jordan																	
	Kuwait																	
	Lebanon																	
	Oman																	
	Qatar																	
	Saudi Arabia																	
	Syrian Arab Republic																	
	United Arab Emirates																	
	Yemen																	

REPORT ON AGENDA ITEM 9: AERONAUTICAL INFORMATION MANAGEMENT (AIM)

9.1 The meeting recalled that the Eleventh Air Navigation Conference (ANConf/11) held in Montreal in 2003 endorsed the ATM Operational Concept and recognized that in the global ATM system environment envisioned by the operational concept, Aeronautical Information Services (AIS) would become one of the most valuable and important enabling services. As the global ATM system foreseen in the operational concept was based on a collaborative decision-making (CDM) environment, the timely availability from authorized sources of high quality electronic aeronautical, meteorological, airspace and flow management information would be necessary. The ANConf/11 stressed out that AIS and MET services are subsets of the ATM information requirements and therefore, would need to be fully addressed when developing ATM requirements.

9.2 The meeting noted that the most important change to move from AIS to AIM is the transition from a product-centered service to the provision and management of data in an interoperable form sufficient for end use. The shift from standardizing products to standardizing data will enable more freedom in the definition of future products while maintaining a high degree of quality, integrity and coherence of the information contained in these new products. The biggest change in the transition to AIM will be the increase use of computer technologies in the management of information. This will be materialized by an increased emphasis on the digital form of data that will drive all processes for the management of information.

9.3 The meeting further noted that, by using this approach, the definition of the data products is decoupled from definition of the usage for the end products. The end-user applications which make use of the information transferred in the form of data sets do not rely exclusively on the structure and format of the messages, but are free to transform the data and combine it with other data to construct the final view appropriate for the end user.

9.4 It was highlighted that though the transition from a product-centric (current AIS) to a data centric (AIM) service is essential, it is foreseen that AIM will still have to cater for the provision of traditional AIS products during the transition phase.

9.5 The meeting noted that the AIM concept requires that all aeronautical information, including that currently held in aeronautical information publications (AIP) be stored as individual standardized data sets to be accessed by user applications. The distribution of these data sets will define the new services provided by the future AIM. This will constitute the future Integrated Aeronautical Information Package that will contain the minimum regulatory requirement to ensure the flow of information necessary for the safety, regularity and efficiency of international air navigation. It was also highlighted that the future capabilities of transferring digital data between the air and the ground will be used for providing new products such as In-flight information bulletins by uploading aeronautical and meteorological information directly aboard the aircrafts at all phases of flight.

9.6 The meeting recalled that on 20 March 2008, the ANC, agreed to the establishment of the AIS-AIM Study Group (AIS-AIMSG), which held its First meeting in Montreal, Canada, 2 to 4 December 2008. It was noted that the work of the AIS-AIMSG would be completed within four years. The meeting was informed that a first round of SARPs related mainly to the standard aeronautical data models, eAIP, electronic charts and quality system for AIM, is expected to be adopted in 2010 and that the second round of SARPs related to AIM with associated guidance material would be adopted in 2013.

9.7 It was highlighted that the implementation of AIM SARPs is expected to be phased between 2015 and 2019. In this regard, recognizing that not all States or regions would be able to implement the AIM related SARPs with same rate, it was underlined that the implementation should be evolutionary, based on regional needs and taking into consideration national capabilities.

9.8 The meeting recalled that the ANC noted the Roadmap for the transition from AIS to AIM at **Appendix 9A** to the Report on Agenda Item 9, which is available also 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. The expectations are that the transition to AIM will not involve many changes in terms of the scope of information to be distributed. The major change will be the increased emphasis on data distribution. The roadmap is based on what we know today but has been developed to provide sufficient flexibility for the new concepts that will emerge from future research.

9.9 The meeting noted that three phases of action are envisaged for States and ICAO to complete the transition to AIM:

Phase 1 — Consolidation
Phase 2 — Going digital
Phase 3 — Information management

9.10 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 the adopted standard reference system for coordinates (World Geodetic System-1984); 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.

9.11 In the second phase, the introduction of database-driven processes will improve the value of current products by improving their quality and availability for current users. This will concern mainly the creation of a national or regional databases used to produce the existing products and services, but with better quality and availability. The global deployment of new, already well specified products such as electronic AIP will also be initiated. The projects in the second phase will be conducted to enhance the quality and availability of existing products in the medium-term work programme activities.

9.12 In the third phase, new products and services will be developed. Quality control and staff training and planning will be applied to current and new products and services. This will support a new AIM function for air navigation service providers which will enable the provision of the new data that will be required by the future ATM components. The projects in the third phase will be conducted to serve new users and to promote continuous improvement by the research community.

9.13 It was highlighted that during the complex transition to AIM, industry, regulators, manufacturers, service providers and other organizations will need to work together to achieve the best results.

9.14 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 at **Appendix 9B** to the Report on Agenda Item 9 and take necessary follow up actions.

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

DRAFT CONCLUSION 5/9: TRANSITION FROM AIS TO AIM

That, recognizing the limitations of the current AIS, which do 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 are urged to develop national plans to implement the transition from AIS to AIM and send them to the ICAO MID Regional Office before **15 September 2009**; 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.

DRAFT DECISION 5/10: 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.

DRAFT CONCLUSION 5/11: HOSTING OF THE GLOBAL AIM CONGRESS

That, considering that the Global AIM Congress has been hosted since 2006 by States from the EUR, APAC and AFI Regions:

a) MID States are encouraged to host the Global AIM Congress in 2012; and

*b) those MID States that are interested to host the Global AIM Congress in 2012, inform the ICAO MID Regional Office of their intention before **30 September 2009**, in order to carry out necessary coordination with EUROCONTROL and the Congress Consortium.*

9.16 With a view to give effect to the above Draft Conclusion in a timely manner, the 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.

AIS/MAP TF/5
Appendix 9A to the Report on Agenda Item 9

ROADMAP FOR THE TRANSITION FROM AIS TO AIM

Noted by the Air Navigation Commission on 10 March 2009

FOREWORD

The ***Global Air Navigation Plan*** (Doc 9750) was developed as a strategic document to guide the implementation of CNS/ATM systems with respect to the ***Global Air Traffic Management Operational Concept*** (Doc 9854) and the Strategic Objectives of ICAO.

The ***Global Air Navigation Plan*** (Doc 9750) contains near- and medium-term guidance on air navigation system improvements necessary to support a uniform transition to the air traffic management system envisioned in the ***Global Air Traffic Management Operational Concept*** (Doc 9854). More specifically, Doc 9750, Chapter 1, Table 1-1 sets out twenty-three global plan initiatives (GPI). Two are directly related to aeronautical information (***GPI-18 Aeronautical Information and GPI-20 WGS-84***) and many of the others have an indirect impact on the way aeronautical information will be exchanged in the future.

This roadmap has been developed to address more specifically, and in greater detail, the direction given in Doc 9750 for the future development of aeronautical information. The changes foreseen are such this development is being referred to as the transition from aeronautical information services (AIS) to aeronautical information management (AIM).

The roadmap offers practical guidance and advice to regional planning groups and States for development of the implementation and funding strategies which will be required for the global plan initiatives related to aeronautical information. It identifies the major milestones recommended for a uniform evolution across all regions of the world, specific steps that need to be achieved and timelines for implementation.

The roadmap is intended to serve as a strategic positioning initiative to drive the continuing improvement of aeronautical information services in terms of quality, timeliness and the identification of new services and products to better serve aeronautical users. The roadmap sets a baseline for establishing strategies and other initiatives to advance the AIM objectives globally. It should place the future AIM in a position to better serve airspace users and ATM in terms of their information management requirements.

The expectations are that the transition to AIM will not involve many changes in terms of the scope of aeronautical information to be distributed. The major change will be the introduction of new products and services and an increased emphasis on better data distribution in terms of quality and timeliness in order to meet user requirements and contribute to improved safety, increased efficiency and greater cost-effectiveness of the air navigation system.

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GLOSSARY

TERMS

Aeronautical data. A representation of aeronautical facts, concepts or instructions in a formalized manner suitable for communication, interpretation or processing.

Aeronautical information. Information resulting from the assembly, analysis and formatting of aeronautical data.

[1]***Aeronautical information management (AIM).*** The dynamic, integrated management of aeronautical information services — safely, economically and efficiently — through the provision and exchange of quality assured digital aeronautical data in collaboration with all parties.

[1]***Data set.*** Identifiable collection of related digital data.

[1]***Database.*** A usually large collection of data stored in structured digital format so that appropriate applications may quickly retrieve and update it.

Note. — This primarily refers to digital data (accessed by computers) rather than files of physical records.

[1]***Digital***. Involving or relating to the use of computer technology or digital communications.

[1]***Information management (IM).*** The processes defined to ensure the collection, utilization and transmission of quality data which is tailored for the needs of each component of the air traffic management system.

[1]***Interoperability.*** The capacity for diverse systems and organizations to exchange information by transferring data and requesting remote services in a manner that requires the client system to have little or no knowledge of the unique characteristics of the server system.

Note.— This is usually achieved by common understanding of the semantic, the syntax and the protocols for the exchange of data.

NOTAM. A notice distributed by means of telecommunication containing information concerning the establishment, condition or change in any aeronautical facility, service, procedure or hazard, the timely knowledge of which is essential to personnel concerned with flight operations.

[1]***Metadata***. A structured description of the content, quality, condition or other characteristics of data.

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1 Not an official ICAO definition. (Used in the context of this document only).

ABBREVIATIONS/ACRONYMS

AICM	Aeronautical information conceptual model
AIM	Aeronautical information management
AIP	Aeronautical information publication(s)
AIRAC	Aeronautical information regulation and control
AIS	Aeronautical information services
AIXM	Aeronautical information exchange model
AN-Conf/11	Eleventh Air Navigation Conference (2003)
ATM	Air traffic management
EUROCONTROL	European Organisation for the Safety of Air Navigation
IP	Internet protocol
PIB	Pre-flight information bulletin
RNAV	Area navigation
RNP	Required navigation performance
SARPs	Standards and Recommended Practices
WGS-84	World geodetic system-1984

Part I

Roadmap Overview

WHY AERONAUTICAL INFORMATION MATTERS

1. The Eleventh Air Navigation Conference (AN-Conf/11) held in Montreal in September 2003 endorsed the operational concept and recognized that, in the global air traffic management (ATM) system environment envisioned by the operational concept, aeronautical information service (AIS) would become one of the most valuable and important enabling services. As the global ATM system foreseen in the operational concept was based on a collaborative decision-making environment, the timely availability of high-quality and reliable electronic aeronautical, meteorological, airspace and flow management information would be necessary. Some recommendations of AN-Conf/11 addressed the importance of aeronautical information in particular.

2. In June 2006, a Global AIS Congress was held in Madrid, Spain. The event was facilitated by the European Organization for Safety of Air Navigation (EUROCONTROL) in partnership with ICAO. The congress considered the essential role of AIS in the evolving world of ATM. It noted that computer-based navigation systems, and area navigation (RNAV), required navigation performance (RNP) and ATM requirements, introduced a need for new corresponding AIS requirements for quality and timeliness of information. The role of AIS would need to transform to an information management service, changing duties, responsibilities and scope to satisfy these new requirements and to cope with and manage the provision of information.

3. The congress supported the recommendations of AN-Conf/11 dealing with aeronautical information, and began to define a future high-level view as to the shape, nature and content of a strategy for the evolution from traditional product-centric AIS to the enlarged scope of data-centric aeronautical information management (AIM). Realizing the safety-critical nature of aeronautical information, the congress agreed that, in order to prevent diverging developments in the future, it was considered essential that ICAO take the lead at the global level with regard to the transition from AIS to AIM. Accordingly, the congress developed ten recommendations calling for ICAO action or support from States and international organizations.

4. In September 2007, the 36th Session of the Assembly recognized the need to support the recommendations of the congress and called for further coordination with States and international organizations.

5. Today, high-quality aeronautical information is often cited in research programmes as a pre-requisite for the development of the many new interoperable tools that future aircraft will carry to improve their effectiveness in navigating safely and efficiently. These new tools will also be used by ATM systems to improve the efficiency while maintaining safety. This will result in the provision of more services to more aircraft in the same airspace at the same time.

HOW INFORMATION IS DISTRIBUTED TODAY

6. We are in the age of the Internet, satellite navigation and computer networks, yet our approach to aeronautical information distribution is still based on paper charts, paper documentation and telex-based text messages. Systems exist in isolation. Much of the data is entered more than twice in different computers using a keyboard rather than via file transfer or database transactions.

7. Better aeronautical information is essential if we are to have an integrated and interoperable ATM system which enables air navigation service providers to safely handle more traffic in the same amount of space during the same amount of time. Such a system would effectively link the full range of services from airspace design to flight planning, airport operations planning and flight separation assurance while continuing to maintain the safety and security of the travelling public and lessening the environmental impact on the planet and its population.

8. Better aeronautical information is essential if we are to have a flexible ATM System which reduces costs and environmental impacts while improving access to congested airspace and remote airports in developing countries. Such a system would allow planners and decision makers to make the right decisions for the development of new tools and techniques based on information of the right accuracy, available on time at the right place.

9. Better aeronautical information is essential if we are to have a system that empowers airspace users by giving them a greater role in shaping the ATM system, understanding their options and helping them making informed decisions while maintaining the public safety and minimizing the impact on the environment. Such a system would be focussed on users needs.

10. Corrupt or erroneous aeronautical information has the potential to adversely affect the safety of satellite navigation just as corrupt or malfunctioning navigation aids adversely affects the safety of ground-based navigation.

11. These improvements are central to the ICAO Global Air Traffic Management Operational Concept and justify by themselves the name change from AIS to AIM that identifies the new focus on all aspects related to proper information management as opposed to the traditional way of focusing on the provision of standard products to the pilot only.

THE OBJECTIVE OF THE TRANSITION TO AIM

12. Recommendation 1/8 of AN-Conf/11 clearly stated the objective for global aeronautical information as follows:

> "That ICAO, when developing ATM requirements, define corresponding requirements for safe and efficient global aeronautical information management that would support a digital, real-time, accredited and secure aeronautical information environment".

13. The Global Air Traffic Management Operational Concept, which had been developed to be visionary in scope and not constrained by the level of technology available at the time, was also endorsed by AN-Conf/11.

14. Much has been done in the community, and the technology has become more mature and more widely deployed. However, some regions are more advanced than others and the need for the adoption of global standards is becoming more evident now than it was in 2003. Present and future navigation systems, and other air traffic management systems, are data dependant. All require

access to global, broad-based aeronautical information of a considerably higher quality and timeliness than is generally available today. The provision of aeronautical information is a core process that underpins all elements of ATM.

15. To satisfy new requirements arising from the Global Air Traffic Management Operational Concept, aeronautical information services must transition to a broader concept of aeronautical information management, with a different method of information provision and management given its data-centric nature as opposed to the product-centric nature of AIS.

WHAT WILL CHANGE

16. The Global Air Traffic Management Operational Concept defines seven interdependent concept components that will be integrated to form the future ATM system. They comprise airspace organization and management, aerodrome operations, demand and capacity balancing, traffic synchronization, conflict management, airspace user operations and ATM service delivery management. The order of these components implies no priority.

17. The management, utilization and transmission of data and information are vital to the proper functioning of these components. The exchange and management of information used by the different processes and services must ensure the cohesion and linkage between the seven concept components described above.

Users

18. The provision of aeronautical information today is mainly focused on the requirements of pre-flight briefing. The provision of aeronautical information tomorrow will address the requirements of all components of the ATM system for all phases of flight.

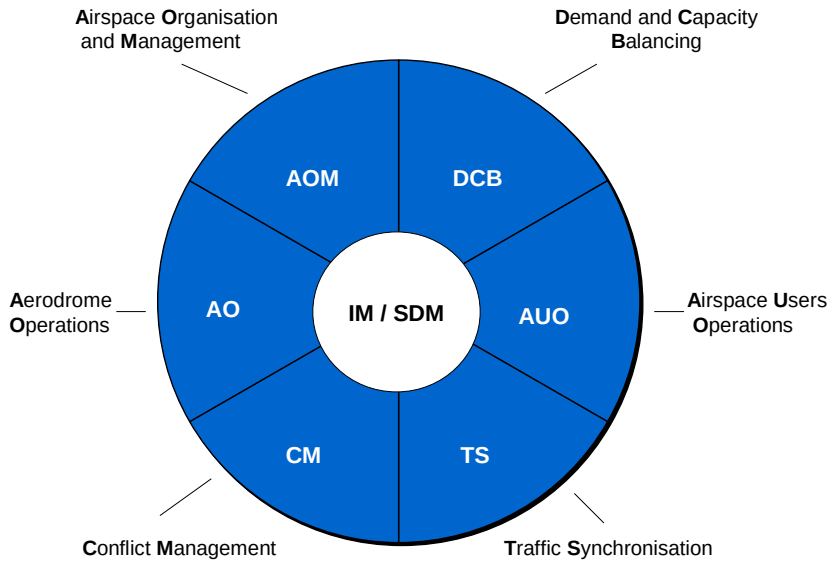

Figure 1. Information Management as a component of the future ATM Operational Concept

Data

19. The shift from standardizing products to standardizing data will enable more freedom in the definition of future products while maintaining a high degree of quality, integrity and coherency of the information contained in these new products.

20. The biggest change in the transition to AIM will be the increase use of computer technologies in the management of information. This will be materialised by an increased emphasis on the digital form of data that will drive all processes for the management of information.

21. Both graphical and text products will be based on the same underlying, standard definition of geo-referenced atomic data. The definition of a standard aeronautical data exchange model will ensure standardized interfaces between computers of providers and users of data. This will enable the definition of new products where both text and graphics will be presented in a more readable form. This will enable the definition of new services where the same information will be made available in the decision support tools for all ATM components.

22. The current standard in Annex 15 — ***Aeronautical Information Services*** is centred on products and does not provide specifications required for digital data exchange. A central element in the transition to AIM will be the precise standardization of atomic data elements in terms of field names, field types and field definitions. This will be provided in the form of a standard aeronautical data dictionary (also called metadata registry). Furthermore, the definition of standard structured groupings of fields by features, attributes and associations is necessary. This will be provided in the form of a standard conceptual model for aeronautical information. Finally, the mechanisms to maintain a data set, up to date across different components, would need to be agreed. This will be provided in the form of a standard exchange model for aeronautical data. The evolution of these models will be organised at the global level to ensure continuity in the services in a way that allows innovation and new requirements to be taken into account.

23. By using this approach, the definition of the data products is decoupled from definition of the usage for the end products. The end-user applications which make use of the information transferred in the form of data sets do not rely exclusively on the structure and format of the messages, but are free to transform the data and combine it with other data to construct the final view appropriate for the end user.

Products

24. Pre-flight information bulletins are often loaded with information not relevant to the flight because of the limited filtering capabilities that the current NOTAM format is offering. Pre-flight briefings are often also difficult to read and interpret because of the lack of graphical capabilities of the current NOTAM format. This will require that new standard products combining textual and graphical information be specified.

25. Electronic chart displays are becoming easier to install in the cockpit and at lower costs. Their functionality is increasing and it is likely that they will progressively complement some paper charts and replace others. This will require updated standards and symbols for electronic displays capabilities.

26. The future capabilities of transferring digital data between the air and the ground will be used for providing new products such as In-flight information bulletins by uploading aeronautical and meteorological information directly aboard the aircrafts at all phases of flight.

27. The AIM concept requires that all aeronautical information, including that currently held in aeronautical information publications (AIP), be stored as individual standardized data sets to be accessed by user applications. The distribution of these data sets will define the new services provided by the future AIM. This will constitute the future Integrated Aeronautical Information package that will contain the minimum regulatory requirement to ensure the flow of information necessary for the safety, regularity and efficiency of international air navigation.

Static versus dynamic information

28. Stability is essential for proper planning of airspace operations. Examples of changes that must be announced well in advance are: the installation or decommissioning of ground-based air navigation aids; the opening of a new aerodrome for international flight operations; airspace danger and restricted areas; and the route structure for major traffic flows.

29. Events of short duration or known with little advance notice are inevitable occurrences. These events must be announced quickly in a manner that is comprehensible by the different components of the ATM system.

30. In an interoperable environment based on data standards, these two types of information will be transferred by common networks under the same data exchange mechanisms using the same data standard definitions.

AIRAC cycle

31. It is expected that the need for aeronautical data to become effective on internationally agreed common dates will remain. Coordination and planning constraints require major changes to be announced well in advance and introduced only at regular intervals.

32. The quality and integrity requirements of databases will define new roles for human intervention such as verification, monitoring and correction before releasing new data.

33. The current cycle is essentially based on the maximum expected time for postal delivery of the paper products. The distribution of data products through data networks will not suffer from the same delay in delivery. Shorter cycles will become possible to better match users needs. Transitioning to a modern distribution mechanism will mean that the specifications for new concepts of operation need not be constrained to a twenty-eight-day cycle. The future ATM system will be free to identify a better cycle that will adequately balance the need for improved reactivity with the need for advanced planning.

EIGHT GUIDING PRINCIPLES FOR THE TRANSITION TO AIM

34. The projects undertaken to achieve the steps identified in the roadmap must be specified and conducted in accordance with the following eight guiding principles. The transition from AIS to AIM will have to:

1. comply with the process for amendments to the Annexes to the Chicago Convention;

2. support or facilitate the generation and distribution of aeronautical information which serves to improve the safe and cost-effective accessibility of air traffic services in the world;

3. provide a foundation for measuring performance and outcomes linked to the distribution of quality assured aeronautical information and a better understanding of the determinants of ATM, safety and effectiveness not related to the distribution of the information;

4. assist States to make informed choices about their aeronautical information services and the future of AIM;

5. build upon developments in States, international organizations and industry and acknowledge that the transition to AIM is a natural evolution rather than a revolution;

6. provide over-arching and mature standards, that apply to a wide range of aeronautical information products, services and technologies;

7. be guided by the ***Global Air Navigation Plan*** (Doc 9750) and ensure that all development is aimed at achieving the ATM system envisaged in the ***Global Air Traffic Management Operational Concept*** (Doc 9854);

8. ensure, to the greatest extent possible, that solutions are internationally harmonized and integrated and do not unnecessarily impose multiple equipment carriage requirements for aircraft or multiple systems on the ground.

THE ROADMAP TO AIM

35. The purpose of the roadmap is to develop the AIM concept and associated performance requirements by providing a basis upon which to manage and facilitate, on a worldwide basis, the transition from AIS to AIM. The roadmap is based on what we know today but has been developed to provide sufficient flexibility for the new concepts that will emerge from future research.

36. Three phases of action are envisaged for States and ICAO to complete the transition to AIM:

Phase 1 — Consolidation

Phase 2 — Going digital

Phase 3 — Information management

37. The roadmap must proceed with caution when advocating more sophisticated information management initiatives to ensure that they do not impede the obligations of States to correct infrastructure and other deficiencies already identified.

38. 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 the adopted standard reference system for coordinates (World Geodetic System-1984); 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.

39. In the second phase, the introduction of database-driven processes will improve the value of current products by improving their quality and availability for current users. This will concern mainly the creation of a national or regional databases used to produce the existing products and services, but with better quality and availability. The global deployment of new, already well specified products

such as electronic AIP will also be initiated. The projects in the second phase will be conducted to enhance the quality and availability of existing products in the medium-term work programme activities.

40. In the third phase, new products and services will be developed. Quality control and staff training and planning will be applied to current and new products and services. This will support a new AIM function for air navigation service providers which will enable the provision of the new data that will be required by the future ATM components. The projects in the third phase will be conducted to serve new users and to promote continuous improvement by the research community.

41. The roadmap will identify the main steps to be achieved in the three phases. Each step will require projects of two types of activities: one will be the development of the standards required and the other will be the implementation in States of the standards.

a) ***Development of Standards.*** The development of new standards often lie on the critical path of the transition. Amendments to ICAO Standards and Recommended Practices (SARPs) are required for uniform implementation of the transition to AIM in all States. Actions related to the establishment of these standards in Annexes to the Chicago Convention and in guidance material will be led by the ICAO Secretariat with the support of States and International Organisations.

b) ***Implementation of Standards.*** Implementation of Standards allowing the transition to AIM will be the responsibility of States. Guidance material will be issued by ICAO to assist in the implementation.

42. Part II of the roadmap lists numerous steps of varying complexity. Some will result in the establishment of new databases or the expansion of existing ones. Others will seek to foster better data and technical standards for gathering information and data protection. Still others will focus on obtaining consensus on the indicators and determinants of quality aeronautical information. Almost all of the projects will involve collaborative efforts with key stakeholders at the national, regional and inter-regional levels. Securing stakeholder participation at the outset of the process and maintaining it throughout the project implementation phase are critical to ensuring that outcomes are relevant, practical and contribute to improving the efficiency and safety of air travel and of the ATM system.

43. Accordingly, consultations through various ICAO working arrangements have been and will remain an ongoing feature of the roadmap. The input and feedback of all players is key to ensuring that the roadmap contributes to better aeronautical information and a stronger ATM system for the air transport industry.

Phase 1 — Consolidation

44. During Phase 1 of the transition to AIM, steps will aim to strengthen a solid base by enhancing the quality of the existing products. Fine-tuning and improvement of SARPs for existing products will continue to be conducted in the usual manner in order to respond to near-term user requirements.

45. Since the electronic AIP will have the exact same structure as the paper it is important that States make every effort to issue their aeronautical information as specified in Annex 15.

46. The NOTAM system as it exists today requires on-going upgrades to cope with new types of information (e.g. GNSS navigation) and to respond to the difficulties being reported by the users. It is not clear at this time when and how the current NOTAM system will be changed. Research and trials are underway and their results will be addressed in Phase 3 of the transition to AIM or later. It

is important to continue to improve the current SARPs related to NOTAM to better serve users needs with the current products. It is also important for States to continue to invest the time and effort necessary to comply with these SARPs.

47. Many ICAO charts types form an integral part of the AIP. Amendments to specifications are also envisaged for electronic chart display but most of the SARPs in Annex 4 — ***Aeronautical Charts*** will remain applicable after the transition to AIM. It is important that States comply with the existing Annex 4 SARPs.

48. The requirement to use a common horizontal, vertical and temporal reference system remains essential to facilitate the exchange of data between different systems. The expression of all coordinates in the AIP and charts using WGS-84 is important and should be pursued during the first phase of the transition to AIM.

49. Provision of terrain and obstacle data becomes applicable during Phase 1 of the transition to AIM. It will be an important project to be conducted by States. Feedback from States on the implementation experience may require adaptation of the relevant SARPs. Since these constitute also digital data sets products, the achievement of these steps will also contribute to phase 2 of the roadmap.

50. Quality requirements on information are covered by current SARPs in terms of accuracy and integrity. The steps in Phase 1 aim to meet these requirements. Should the requirements prove to be difficult to implement, the requirements would have to be reassessed to verify that the risk of harm to persons or damage to property for not achieving the requirements is reduced to, and maintained at or below, an acceptable level (definition of safety). In addition, States will implement and continuously improve their quality management system in view of its increasing importance for future products and services.

51. The requirement for States to adhere to the Aeronautical Information Regulation and Control (AIRAC) process must be emphasized. The quality of the future service to be provided under information management will rely on proper mechanism for distribution and synchronisation of information. Shorter response times will be required in the future. This can only be achieved if the current requirements can, at the very least, be met.

Phase 2 — Going digital

52. 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 which have not yet done so will be encouraged “to go digital” by using computer technology or digital communications and introducing the use of structured digital data from databases in their production processes. The emphasis will not, therefore, be on the introduction of new products or services but more on the introduction of highly structured databases and tools like geographic information systems.

53. An aeronautical information conceptual model will provide guidance for States to implement such digital databases. Guidance material will include advice on a minimum data set to begin a phased development of the database.

54. Many States are already providing electronic forms of their AIPs, whether on CD or on the Internet. These electronic AIP may be accessible for printing and/or for navigation via a web browser tool. Guidance material that will be based on existing best practices will be provided to States to ensure that new types of media will be harmonized for users.

Phase 3 — Information management

55. During Phase 3, the digital databases that will have been 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 aeronautical data exchange model to ensure interoperability between all systems for the exchange of full aeronautical data sets, but also for short term notification of changes.

56. As new products are introduced, organisational changes will need to be defined to implement better management of information in terms of: staff planning and staff training; formalization of agreements with data providers to ensure high degree of data quality; introduction of an extensive amount of explicit meta-information; impact on cost-recovery mechanisms; and explicit traceability of the changes to information and identification of liabilities.

57. The third phase will place the future AIM functions of the States in capacity of addressing the new requirements that will be needed to implement the future Global Air Traffic Management Operational Concept in a net-centric information environment.

58. ATM systems will require a common information reference model with quality procedures for the management of seamless information flow to ensure not only interoperability between States, but interoperability between different systems within the State. New digital data products and services will be specified to serve these interoperability requirements.

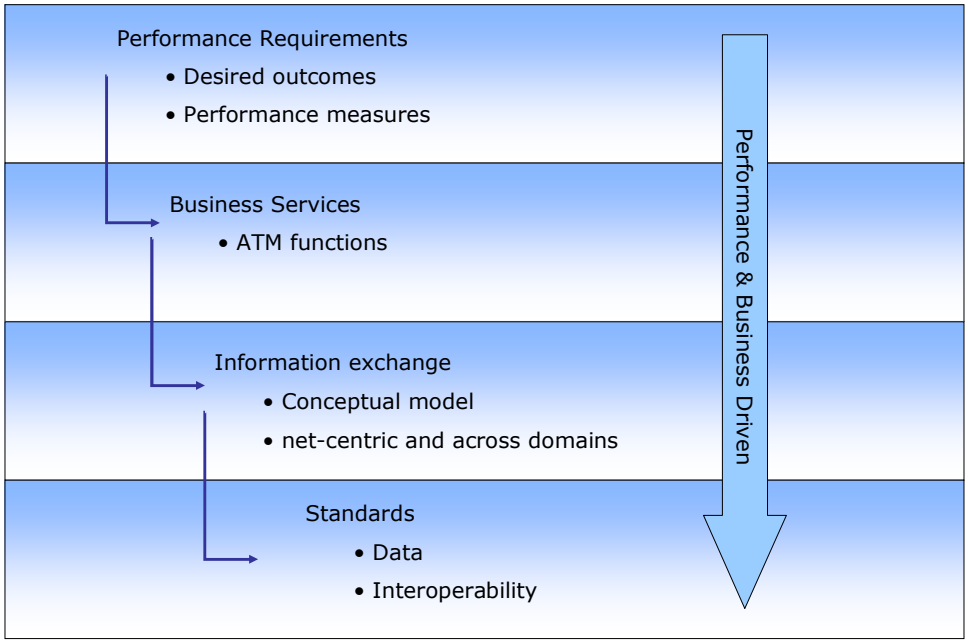

Figure 2. Performance driven approach.

59. The definition of new AIM data products and services will be based on requirements identified for each ATM Component. A structured approach to the development of these new requirements on AIM will be followed to ensure that any standards recommended for AIM is derived from agreed information exchange models that specify the minimum information required to support business services defined for ATM functions that are identified to fulfil desired outcomes specified in terms of performance requirements. This structured top-down approach of deriving specific data

standards from high level objectives will ensure that the new requirements introduced in the transition to AIM on States will clearly relate to identified enablers for the future ATM system as illustrated in Figure 2.

The regional dimension

60. During the complex transition to AIM, industry, regulators, manufacturers, service providers and other organizations will need to work together to achieve the best results.

61. In Europe, the SESAR Master Plan and the Single European Sky initiatives have assembled a multitude of partners to define a modernization programme to significantly reduce costs and increase service capabilities.

62. In United States of America, the NextGen programme is also underway to modernize the national air transportation system to allow increased capacity and reliability, while improving safety and security and minimizing the environmental impact of aviation.

63. In many parts of the world States are grouping their resources to introduce new equipment and new structures for the provision of common services over their common airspace.

64. These are only three of the many examples of modernization programmes that are underway in different regions of the world. All initiatives are primarily directed towards improving safety and security and minimizing the environmental impact of aviation. They all seek a more efficient and reliable exchange of information between the various components of the future ATM system. They refer to new concepts such as system-wide information management, increased automation for collaborative decision making, better integration of systems and 4-D trajectory, to name just a few.

65. These initiatives are all using the Global Air Traffic Management Operational Concept as a guide to ensure a common reference. They are referring to the Global Air Navigation Plan as a common planning framework. All of these initiatives need some assurance of stability in the development of new techniques. This is the purpose of the Global Air Navigation Plan and this roadmap.

66. This roadmap provides a structured framework for States to plan and to monitor their progress with reference to other States in the same region and across regions of the world and supports regional and national plans to implement the transition to AIM.

67. It is not the intention that this roadmap could be used without addition to form a national or a regional plan. No milestones nor description of deliverables are provided in the roadmap, since these will be included via the usual planning process.

Part II

Roadmap Steps

INTRODUCTION

68. The roadmap overview provides the strategic direction and major principles for the transition to AIM. Three phases have been introduced in Part I of this document, the three phases are not to be followed in a waterfall approach to each of the phases. For example, steps may be taken to introduce the digital elements while the consolidation steps are not all finalised yet. Similarly, it is not necessary that all steps for going digital be achieved to start introducing new measures related to information management. The phases are however giving an indication of the priorities on how to address the transition.

69. A minimum list of major steps to achieve in order to realise the transition to AIM is provided in Part II. A broad positioning of the steps in relation with the three phases is also provided. The transition to AIM will be effective at the global level when these steps will be achieved. Most steps in Phase 2 and 3 of the transition require new standards and recommended practices to be adopted at the global level, an indication of the time required for these new texts to be made available is provided in Part III.

STEPS

70. The steps listed in Part 2, constitute a minimum list of areas of activities for States to coordinate the transition to AIM between themselves and with ICAO. The steps are to be taken as a checklist of high level actions to be conducted for realising the transition. Failing to take action on any of those steps would necessarily increase the duration of the transition and negatively affect the enabling role of AIM in the future ATM Concept of operation.

71. The list may evolve during the transition especially when we get closer to Phase 3. This roadmap will be maintained up-to-date with the further evolution of the overall ATM concepts and system requirements.

P-01 — Data quality monitoring

P-02 — Data integrity monitoring

P-03 — AIRAC adherence monitoring

P-04 — Monitoring of States' differences to Annex 4 and Annex 15

P-05 — WGS-84 implementation

P-06 — Integrated aeronautical information database

P-07 — Unique identifiers

P-08 — Aeronautical information conceptual model

P-09 — Aeronautical data exchange

P-10 — Communication networks

P-11 — Electronic AIP

P-12 — Aeronautical information briefing

P-13 — Terrain

P-14 — Obstacles

P-15 — Aerodrome mapping

P-16 — Training

P-17 — Quality

P-18 — Agreements with data originators

P-19 — Interoperability with meteorological products

P-20 — Electronic aeronautical charts

P-21 — Digital NOTAM

P-01 — Data quality monitoring

An ongoing challenge for organizations producing information is to ensure that the quality of the information produced suits its intended uses, and that data users are provided the appropriate information about data quality.

P-02 — Data integrity monitoring

Data integrity requirements introduced by safety objectives must be measurable and adequate.

P-03 — AIRAC adherence monitoring

The standard regulation and control mechanisms for the distribution of aeronautical information is an essential element ensuring that each person involved makes decisions based on the same information.

P-04 — Monitoring of States' differences to Annex 4 and Annex 15

Adherence to Standards is an ongoing effort. The transition to AIM offers an opportunity to increase the focus on implementation and on reviewing differences in application of the Standards by States.

P-05 — WGS-84 implementation

The target of expressing one hundred per cent of coordinates in the WGS-84 reference system is achievable. This is one of the first steps to achieve in the transition to AIM.

P-06 — Integrated aeronautical information database

The establishment and maintenance of a database where digital aeronautical data from a State is integrated and used to produce current and future AIM products and services is the main step in phase 2 of the transition to AIM.

A database may be operated by States or by regional initiatives under delegation from the States. The design of such a database will not be identical in all States or regions to accommodate local technical or functional requirements. However, the material that will be provided under step P-08 will provide guidance that may be used to validate the design for facilitating the future data exchange.

P-07 — Unique identifiers

Improvements to the existing mechanisms for the unique identification of aeronautical features is required to improve the effectiveness of information exchange without the need for human intervention.

P-08 — Aeronautical information conceptual model

Defining the semantics of the aeronautical information to be managed in terms of digital data structures is essential for introducing interoperability.

The existing documentation developed by States and international organizations considered mature enough for global applicability will be used to produce common guidance material. This may serve as a reference for the database design needed in P-06 for States that do not yet have a database.

New information requirements coming from the Global Air Traffic Management Operational Concept will be analyzed and modelled if needed (e.g. airspace sectors, or information related to airspace and route traffic restrictions, or generic information related to aircraft performance, or information related to airline operators call signs).

P-09 — Aeronautical data exchange

Defining the syntax of the aeronautical data to be exchanged in terms of field names and types is essential for introducing interoperability.

The exchange of data, and the mechanisms to exchange or access the new digital products or services, will be defined by an exchange model. The content of the model will be driven by the aeronautical information conceptual model (top-down)

and by requirements coming from technological choices (bottom-up) and the evolution of the model will be coordinated in order to balance the need for innovation with the need for protecting investments.

The use of the Internet as a communication media is, for example, one important bottom-up driver in the definition of the model. The use of well established geographic information standards also applied in non aeronautical domains is another important technological choice.

P-10 — Communication networks

More data will be exchanged on ground networks and the current data will be exchanged in a form that will require more bandwidth. It is envisaged that a transition of the network to be based on Internet protocol (IP) will be required to cope with these future needs. for the transition to AIM to be effective, the needs of future AIM will have to be declared in terms usable for network specification. Which data network will be used to distribute the new data products and services;, what information can be exchanged via the public Internet; and what information requires a secured network reserved for aviation are open questions that will need to be answered for the transition to be effective.

P-11 — eAIP

The integrated aeronautical information package will not be phased out because new products will be introduced to serve the needs of future systems and new users. On the contrary, the integrated aeronautical information package will be adapted to include the new data products needed during the transition to AIM.

The electronic version of the AIP will be defined in two forms: one will be in the form of a printable document, and the other will be in a form that can be viewed by web browsers.

Guidance material will be required to help States implementing the web browser form of the electronic AIP in order to avoid the proliferation of many different presentations of AIP information over the Internet.

P-12 — Aeronautical information briefing

Fine tuning of the current NOTAM format by introduction of new selection criteria is needed to improve the selectivity of the information presented to pilots in the Pre-flight information bulletin (this can be done in Phase 1).

The combination of graphical and textual information in a digital net-centric environment will be exploited to better respond to the airspace users requirements of aeronautical information in all phases of flight when the new digital data products will be specified and made available (in Phase 3).

P-13 — Terrain

The compilation and provision of terrain data sets is an integral part of the transition to AIM.

P-14 — Obstacle

The compilation and provision of obstacle data sets is an integral part of the transition to AIM.

P-15 — Aerodrome mapping

There is a new requirement emerging from industry that traditional aerodrome charts should be complemented by structured aerodrome mapping data which can be imported into electronic displays.

P-16 — Training

The training of personnel will be adapted to the new requirements on skill and competences introduced by the transition to AIM.

A new training manual will be developed to reflect the new competencies required by the transition to AIM.

P-17 — Quality

Quality management measures will be re-enforced to ensure the required level of quality of the aeronautical information.

In order to assist States in the implementation of an efficient quality management system, guidance material for the development of a quality manual will be developed.

P-18 — Agreements with data originators

Data of high quality can only be maintained if the source is of good quality. States will be required to better control relationships along the whole data chain from the producer to the distributor. This may take the form of template service level agreements with data originators, neighbouring States, information service providers or others.

P-19 — Interoperability with meteorological products

The meteorological data products of the future will be combined with the AIM data products to form the future flight briefings and the new services provided to all ATM components.

This will require that the meteorological data will be made available in a similar format to the other aeronautical data which are clearly focusing on the use of open standards (such as XML and GML) for the implementation of table-driven data validation built into the data exchange mechanism, whereas current meteorological data products for aviation are based on simple alphanumeric codes.

Now that the bandwidth of telecommunication links and space of digital storage devices are no longer a limiting factor, the move towards net-centric and system-wide information management is becoming feasible for wider distribution of meteorological forecast data from the world area forecast centres in a format that

will not require considerable efforts for the learning and configuration of a decoding software thereby ensuring true interoperability.

Meteorological information is essential in the compilation of pilot briefings, the transition to AIM will include activities both at the standardization and implementation level to find solutions for the interoperability of meteorological data products with the new AIM data products.

P-20 — Electronic aeronautical charts

New electronic aeronautical charts, based on digital databases and the use of Geographic Information Systems will be defined to complement paper charts and replace others that have become obsolete and need to be improved to satisfy user needs. The possibility to deploy these new products over the Internet will be exploited.

P-21 — Digital NOTAM

One of the most innovative data product that will be based on the standard aeronautical data exchange model will be a digital NOTAM that will provide dynamic aeronautical information to all stakeholders with an accurate and up-to-date common representation of the aeronautical environment.in which flights are operated.

The digital NOTAM will be defined as a data set that contains information included in a NOTAM in a structured format which can be fully interpreted by an automated computer system for accurate and reliable update of the aeronautical environment representation both for automated information equipments and for human actors.

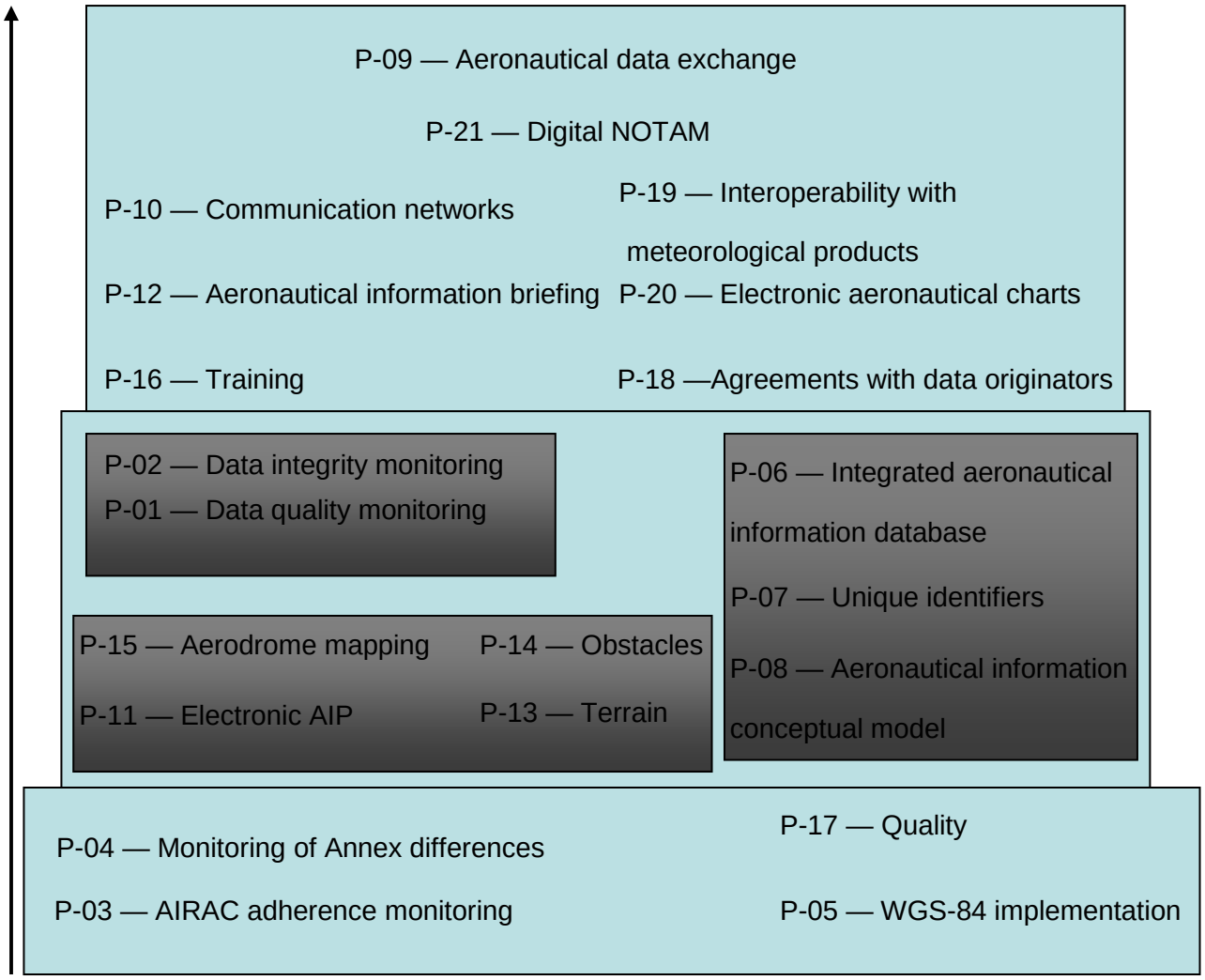

Figure 3. Positioning of the 21 steps of the roadmap in the three phases.

Part III

Roadmap Timeline

1. The roadmap serves as general indication of what the air transport industry may be expecting from States in their implementation of the transition to AIM. In this part III, the timeline indicates to States, the major milestones that are envisaged in ICAO to support the transition to AIM and the Global Air Traffic Management Operational Concept initiatives related to the management of aeronautical information.

December 2008

Phase 1 — Consolidation, has begun with the establishment of the AIS-AIM Study Group, more information on the work and planned actions of the group may be found on the ICAO website under the Air Navigation Bureau, MET/AIM link.

The consultation process for Amendment 36 to Annex 15 and Amendment 56 of Annex 4 are initiated in the first quarter of 2009.

The development of Amendment 2 to the AIS Manual (Doc 8126) and Amendment 30 to the PANS-ABC (Doc 8400) has begun to introduce guidance on best practices already available.

November 2009

Phase 2 – Going digital will begin by the development of new guidance material related (electronic AIP, aeronautical information conceptual model, training, quality) that will be developed with the support of the AIS-AIMSG which will hold its second meeting end of 2009.

November 2010

Amendment 36 of Annex 15 and Amendment 56 of Annex 4 would become applicable. The preparation of Amendment 37 to Annex 15 and Amendment 57 to Annex 4 plus any consequential amendments required in other annexes will have progresses with the help of the AIS-AIMSG.

October 2011

Phase 3 — Information management, will begin with the fourth meeting of the AIS-AIMSG which will finalise the proposals for amendment 37 to Annex 15 and amendment 57 of Annex 4. These amendments will be setting the scene for the future requirements on States to produce data sets. It is not envisaged that new data products will be required for mandatory provision by the future ATM systems at this date, but if States choose to provide the data identified in scope at that time, they will be able to base their development on recommendations ensuring a global harmonisation.

	The consultation process of Amendment 37 to Annex 15 and Amendment 57 to Annex 4 will be initiated in the first quarter of 2012.
November 2013	Amendment 37 to Annex 15 and Amendment 57 to Annex 4 would become applicable, Possible divisional-type meeting should a substantial number of subjects of worldwide scope involving meteorological, aeronautical information and supporting communication network fields need to be agreed in order to finalize the transition to AIM. This could include a substantial enlargement of the scope of aeronautical information required by ATM and an obligation to provide the information in the form of digital data.
November 2016	Amendment 38 to Annex 15 and Amendment 58 to Annex 4 would become applicable including the recommendations of the divisional meeting.

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AIS/MAP TF/5
Appendix 9B to the Report on Agenda Item 9

MID AIM SEMINAR
(Cairo, 21-23 October 2008)

EXECUTIVE SUMMARY

1. INTRODUCTION:

1.1 The MID AIM Seminar has been successfully held in Cairo from 21 to 23 October 2008. 53 participants from 16 States, 3 international organizations and 1 Commercial data house have attended the seminar. The seminar was hosted by the Egyptian National Air Navigation Services Company (NANSC). It was moderated by Mr. Mohamed Smaoui, RO/AIS/MET, ICAO MID Office and Mr. Manfred Unterreiner, Chairman AIS Operations Subgroup, AIM, EUROCONTROL.

1.2 The seminar addressed different subjects related to the transition from AIS to AIM according to the following agenda:

1. Introduction

2. Setting the Scene/Drivers for change
   - ANC/11 and ATM Operational Concept
   - User Requirements, Single European Sky (SES)

3. Current Status of AIS
   - Global and Regional issues/developments
   - MID Regional AIS/MAP planning and implementation Status

4. Transition towards Aeronautical Information Management (AIM)
   - From Strategy to Implementation

5. AIM Opportunities & Enablers for Change
   - QMS and CHAIN
   - Training and Competency Management
   - eAIP
   - Data Modelling/Exchange (AICM/AIXM)
   - Digital NOTAM (xNOTAM)
   - EAD
   - eTOD and airport mapping
   - Emerging Technologies (GIS, 4D, Digital Data Link, etc).

6. Conclusions and closing session

1.3 The main objectives of the MID AIM Seminar were to:

a) increase the level of awareness of States regarding the current shortcomings of AIS and the necessity to transit from the provision of AIS products to the interchange and management of aeronautical information in digital form;

b) provide States with a better understanding of the planning and implementation issues related to the transition from AIS to AIM; and

c) provide briefings related to international experiences, directions and advances being made in the field, in particular: QMS and CHAIN, AICM/AIXM, xNOTAM, EAD, eAIP, etc.

2. SUMMARY OF DISCUSSIONS

2.1 The seminar recognized the limitations of the current AIS, which do not meet the new global ATM system requirements envisioned by the ATM Operational Concept.

2.2 The need to support the global ATM system by establishing conditions for the provision, in real-time, of high quality aeronautical information to any airspace user, any time, anywhere, was re-iterated.

2.3 The seminar recalled and supported the Recommendations of the Global AIS Congress.

2.4 ICAO should take the lead in the development of the AIM Strategy/Roadmap and associated AIM SARPs and guidance material; and ensure that they are suitable for global use. Particularly, when defining the Roadmap for the transition from AIS to AIM, ICAO should establish clear milestones and related success criteria.

2.5 The Seminar noted with appreciation the establishment of the AIS-AIMSG and emphasized that States and international organizations should assist ICAO and contribute to the development of successful AIM SARPs, based on a partnership approach and sharing of experience and expertise. In particular, active contribution by the States is encouraged to support the work of the AIS-AIMSG considering that input would be coordinated through the Study Group Members or regional ‘contact points’.

2.6 The Seminar recognized the urgent need for ICAO to develop SARPs and guidance material to enable the global exchange of data in digital format, i.e.: provision of a standard Aeronautical Information Conceptual Model and standard Aeronautical Information Exchange Model (AICM/AIXM).

2.7 The need to define appropriate means to allow the further evolution of the standard models in a managed and supportable manner was highlighted.

2.8 Legal and institutional issues as well as cost-recovery and copyright issues should be addressed.

2.9 Policy, regulations and human factors are critical components of AIM.

2.10 Performance goals for the transition from AIS to AIM need to be identified.

2.11 A common understanding of Global AIM in terms of vision, goals, functions and capabilities need to be developed. Milestones that are achievable and mechanisms for coordination and monitoring of progress need to be identified.

2.12 States can proceed at their own rate towards the common vision.

2.13 The achievement of current ICAO requirements is an essential foundation for the transition towards AIM and States need to take urgent action to achieve the requirements, in particular concerning the implementation of a QMS.

2.14 QMS is one of the most important pre-requisites for the transition from AIS to AIM and for a performance driven business.

2.15 Need for Quality and Implementation Monitoring "You can improve only what you measure".

2.16 Urgent need for ICAO to develop the AIM QMS Manual.

2.17 The deliverables shared with and provided to the seminar e.g. the CHAIN solutions need to be exploited in order to enable increased supply of digital products/data.

2.18 Future AIM will have a series of implication on staff competency. A global training and competency management scheme shall be established and an ICAO AIM Training Manual has to be published, as a matter of urgency.

2.19 Projects like xNOTAM (Digital NOTAM) would be beneficial for the Civil Aviation Community only with a global effort.

2.20 Transition from AIS to AIM requires information management technologies that were not necessary for conventional AIS i.e.: UML, XML, GML, GIS, data link, etc.

2.21 Best use must be made of the Experience gained from the implementation of the EAD in the European Region. Participation of the MID States to the EAD would be very beneficial for the AIS Community to promote the availability, completeness and quality of aeronautical information, in a harmonized and cost-effective manner.

2.22 The ICAO Work Programme that supports the transition from AIS to AIM has been defined. However, much work has to be done and the timescales are very tight.

2.23 The importance of gathering AIM stakeholders and providing forums for discussion of planning and implementation issues related to the transition from AIS to AIM, was highlighted. In this regard, the Seminar recognized the importance for all stakeholders to attend the AIM Congresses (the upcoming AIM Congress will be held in Johannesburg, South Africa, 23-25 June 2009).

2.24 MID States were encouraged to host one of the AIM Congresses.

2.25 MID States were also encouraged to organize AIM Seminars, Workshops, awareness campaigns, etc.

2.26 The Seminar noted with concern the non-attendance of the end users representative Organizations (IATA and IFALPA).

2.27 The participants expressed their gratitude to ICAO for organizing such an important Seminar, to EUROCONTROL for their support and to Egypt for hosting the Seminar.

REPORT ON AGENDA ITEM 10: MID REGION AIS/MAP PERFORMANCE OBJECTIVES

10.1 The meeting recalled that performance-based approach to planning stems from requirements associated with the results based environment that ICAO, industry and States have been steadily moving toward. The ICAO *Global ATM Operational Concept* (Doc 9854) provides a clear statement of the expectations of the Air Traffic Management (ATM) Community. In this regard, it was noted that eleven Key Performance Areas (KPAs) have been identified in the operational concept. The meeting further noted that the *Manual on Global Performance of the Air Navigation System* (Doc 9883) was developed to support this approach. Doc 9883 provides a step by step approach to performance-based planning on the basis of the KPAs identified in the operational concept.

10.2 In addition to the above, the meeting recalled that ICAO is transitioning to a results based approach and it is therefore, important to trace all activities and work programmes to the Business Plan (and the outputs contained therein) to ensure consistency of strategy and traceability to previously agreed global results. In this regard, the work of the Planning and Implementation Regional Groups (PIRGs) has to be justified and based on clearly established performance objectives in support of the ICAO Strategic Objectives. The methods of monitoring progress are also being revised to ensure that progress can be measured against timelines and to ensure that performance objectives are being met.

10.3 Based on the above, the meeting reviewed and updated the AIS/MAP Performance Framework Forms (PFF) as at **Appendix 10A** to the Report on Agenda Item 10.

AIS/MAP TF/5
Appendix 10A to the Report on Agenda Item 10A

AIM PERFORMANCE OBJECTIVES

REGIONAL PERFORMANCE OBJECTIVES /NATIONAL PERFORMANCE OBJECTIVES **IMPLEMENTATION OF WGS-84 AND eTOD**				
Benefits				
Environment **Efficiency** **Safety**	• none; • benefits described in performance objectives for PBN • efficient use of airspace. • improve situational awareness; • support determination of emergency contingency procedures; and • 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 implemented a number of PBN components (based on 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)** ***Medium term (2011 - 20015)***				
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
	eTOD			
ATM CM, ATM SDM	• 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
	• provide Terrain and Obstacle data for area 1;	2008-2010	States	valid
	• provide Terrain data for area 4;	2008-2010	States	valid
	• provide Terrain and Obstacle data for area 2;	2010-2012	States	valid
	• provide Terrain and Obstacle data for area 3.	2010-2012	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 /NATIONAL PERFORMANCE OBJECTIVES **TRANSITION FROM AIS TO AIM**	
Benefits	
Environment **Efficiency** **Safety**	• reductions in fuel consumption; • improved planning and management of flights; • efficient use of airspace; • 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 States complying with the AIRAC procedures Number of posting of AIS information on the ICAO MID Forum Number of States having developed and signed Service Level Agreements between AIS and data originators Number of States having organised QMS awareness campaigns and training programmes 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)
Medium term (2011 - 20015)

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
	• foster the development of eAIPs by MID States;	2009-2013	States & AIS/MAP TF	valid

Strategy **Short term (2010)** ***Medium term (2011 - 20015)***				
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			

Abbreviations used in the Global ATM Operational Concept:

AO	Aerodrome Operations
AOM	Airspace Organization and Management
ATM SDM	ATM Service Delivery Management
AUO	Airspace User Operations
CM	Conflict Management
DCB	Demand and Capacity Balancing
TS	Traffic Synchronization

REPORT ON AGENDA ITEM 11: FUTURE WORK PROGRAMME

11.1 The meeting recalled that MIDANPIRG/11, under Decision 11/54, approved the revised Terms of Reference (TOR) and Work Programme of the AIS/MAP Task Force.

11.2 Taking into consideration the latest development of the AIS/MAP field, the meeting reviewed and updated the TOR and Work Programme of the AIS/MAP Task Force and agreed to the following Draft Decision, which is proposed to replace and supersede MIDANPIRG/11 Decision 11/54:

DRAFT DECISION 5/12: 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 11A** to the Report on Agenda Item 11.*

11.3 Taking into consideration the Work Programme of the Task Force, and noting that MIDANPIRG/12 is tentatively scheduled to be held in October 2010, the meeting agreed that the AIS/MAP TF/6 meeting be held in the first half of 2011. The venue will be Cairo, unless a State is willing to host the meeting.

11.4 In accordance with the ICAO Business plan and the requirements for performance monitoring, the meeting developed a follow-up action plan as at **Appendix 11B** to the Report on Agenda Item 11.

AIS/MAP TF/5
Appendix 11A to the Report on Agenda Item 11

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
(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.

AIS/MAP TF/5
Appendix 11B to the Report on Agenda Item 11

DRAFT FOLLOW-UP ACTION PLAN

CONCLUSIONS AND DECISIONS	FOLLOW-UP	TO BE INITIATED BY	DELIVERABLE	TARGET DATE	REMARKS
DRAFT DEC. 5/1: DRAFT PROPOSAL FOR AMENDMENT TO THE MID FASID, PART VIII (AIS TABLES) That, based on the feedback from States, the Secretariat consolidate a draft proposal for amendment to the MID FASID, Part VIII (AIS), for review by the ATM/SAR/AIS SG/11 meeting before official circulation to States.	Consolidate the proposal for amendment	ICAO	Draft Proposal for amendment to be presented to the ATM/SAR/AIS SG/11 meeting	Nov. 2009	
DRAFT CONC. 5/2: AWARENESS CAMPAIGNS AND TRAINING PROGRAMMES ON QMS That, States, with the support of ICAO and the QMS Implementation Action Group (QMS AG), organize, at the National level, awareness campaigns and training programmes to promote and expedite the process of implementation of QMS for AIS.	Implement the Conclusion	States	Feedback from States on their plan for awareness campaigns and training programmes on QMS	Nov. 2009	
DRAFT DEC. 5/3: 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 4B to the Report on Agenda Item 4.	Follow-up the activities of the QMS AG	AIS/MAP TF ICAO	Feedback from the Action Group	Nov. 2009	
DRAFT DEC. 5/4: 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 5B to the Report on Agenda Item 5.	Follow-up the activities of the AISA AG	AIS/MAP TF ICAO	Feedback from the Action Group	Nov. 2009	

CONCLUSIONS AND DECISIONS	FOLLOW-UP	TO BE INITIATED BY	DELIVERABLE	TARGET DATE	REMARKS
DRAFT CONC. 5/5: eTOD CHECKLIST That, States be encouraged to use the eTOD checklist at **Appendix 6B** to the Report on Agenda Item 6 in order to assist them in the process of planning and implementation of the eTOD provisions.	Implement the Conclusion	ICAO States	State Letter Feed back from States	Jun. 2009 Nov. 2009	
DRAFT CONC. 5/6: eTOD AWARENESS CAMPAIGNS That, for the sake of an efficient and harmonized implementation of eTOD, States at the National Level and, to the extent possible co-operatively, organize awareness campaigns and training programmes to promote and expedite the process of eTOD implementation.	Implement the Conclusion	ICAO States	State Letter Feedback from States on their plan for awareness campaigns and training programmes on eTOD	Jun. 2009 Nov. 2009	
DRAFT CONC. 5/7: PROPOSAL FOR AMENDMENT TO THE MID BASIC ANP (DOC 9708) RELATED TO eTOD That, a) States review the draft proposal for amendment to the MID Basic ANP (Part VIII) at Appendix 6E to the Report on Agenda Item 6 and send their comments to the ICAO MID Regional Office before 15 August 2009; and b) the ATM/SAR/AIS Sub Group further review and refine, as necessary, the proposal and propose to MIDANPIRG its inclusion in the MID Basic ANP, in accordance with standard procedure.	Implement the Conclusion	ICAO States	State Letter Comments from States on the draft proposal for amendment	Jun. 2009 Aug. 2009	

CONCLUSIONS AND DECISIONS	FOLLOW-UP	TO BE INITIATED BY	DELIVERABLE	TARGET DATE	REMARKS
DRAFT DEC. 5/8: 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	ICAO AIS/MAP TF	eTOD WG/2 Report	Jun. 2009	
DRAFT CONC. 5/9: TRANSITION FROM AIS TO AIM That, recognizing the limitations of the current AIS, which do 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) States are urged to develop national plans to implement the transition from AIS to AIM and send them to the ICAO MID Regional Office before 15 September 2009; 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	State Letter Feedback from States on their national plans for the transition to AIM	Jun. 2009 Sep. 2009	

CONCLUSIONS AND DECISIONS	FOLLOW-UP	TO BE INITIATED BY	DELIVERABLE	TARGET DATE	REMARKS
DRAFT DEC. 5/10: 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 Conclusion	AIS/MAP TF	Performance goals for the transition to AIM Proposal for amendment to the ANP	Mar. 2011	
DRAFT CONC. 5/11: HOSTING OF THE GLOBAL AIM CONGRESS That, considering that the Global AIM Congress has been hosted since 2006 by States from the EUR, APAC and AFI Regions: a) States are encouraged to host the Global AIM Congress in 2012; and b) those States that are interested to host the Global AIM Congress in 2012, inform the ICAO MID Regional Office of their intention before 30 September 2009, in order to carry out necessary coordination with EUROCONTROL and the Congress Consortium.	Implement the Conclusion	ICAO States	State Letter Feedback from States	Jun. 2009 Sep. 2009	
DRAFT DEC. 5/12: 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 11A** to the Report on Agenda Item 11.	Implement the AIS/MAP TF Work Programme	AIS/MAP TF	AIS/MAP TF/6 Report	Mar 2011	

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AIS/MAP TF/5
Report on Agenda Item 12

REPORT ON AGENDA ITEM 12: ANY OTHER BUSINESS

12.1 The meeting highlighted that the update of the hardcopies of the AIPs of the different States represents a big burden for the AIS/MAP Personnel and that States should promote the exchange of aeronautical information in electronic format. In this regard, reference was made to Annex 15 para. 3.3.5, which states that "*One copy of each of the elements of the Integrated Aeronautical Information Package, in paper or electronic form or both, that have been requested by the aeronautical information service of an ICAO Contracting State shall be made available by the originating State in the mutually-agreed form(s), without charge, even where authority for publication/storage and distribution has been delegated to a commercial agency*".

12.2 The meeting recognized that AIS is in a transition phase and that the hardcopies are still needed by some users, especially the aeronautical charts printed on a format bigger than A4. In addition, the provisions of Annex 15 give enough flexibility for the exchange of aeronautical information in paper or electronic form or both. However, States were encouraged to clearly mention in the AIC related to the renewal of the subscription to their Aeronautical Information Publications (if available in an electronic format), the possibility of exchange of the paper and/or electronic copy of the publications.

12.3 The meeting recalled that Standards and Recommended Practices for Aeronautical Information Services were first adopted by the ICAO Council on 15 May 1953, and were designated as Annex 15 to the Convention. Accordingly, each 15 May, all AISs in the world are celebrating the AIS day. The meeting noted that within few days, the AIS community will celebrate the fifty sixth "anniversary" of Annex 15.

12.4 The meeting inquired if it was time to rename the AIS/MAP Task Force to AIM Task Force and agreed that this could be decided by the AIS/MAP TF/6 meeting.

AIS/MAP TF/5
Attachment A to the Report

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