INTERNATIONAL CIVIL AVIATION ORGANIZATION

REPORT OF THE FIRST MEETING OF THE AERONAUTICAL INFORMATION MANAGEMENT DIGITALIZATION & PLANNING TASK FORCE (AIMDP TF1)

AIMDP TF/1 Meeting

(Amman, Jordan, 20 – 21 January 2025)

The views expressed in this Report should be taken as those of the MIDANPIRG AIM Sub-Group 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

TABLE OF CONTENTS

Page

PART I - HISTORY OF THE MEETING

PART II - REPORT ON AGENDA ITEMS

APPENDICES

ATTACHMENT

PART I - HISTORY OF THE MEETING

1. PLACE AND DURATION

1.1 The First meeting of the Aeronautical Information Management Digitalization & Planning Task Force (AIMDP TF/1) was graciously hosted by IATA AME and CARC Jordan in V Business Center VBC, King Hussain Business Park, Amman, Jordan from 20 to 21 January 2025.

2. OPENING

2.1 The meeting was opened by Mr. Kamil Al-Awadhi, Regional Vice President Africa & Middle East at International Air Transport Association (IATA), who welcomed the participants and wished them a successful and fruitful meeting.

2.2 Mr. Kamil Al-Awadhi pointed out that, Aeronautical information is the foundation of safe and efficient air navigation. Transitioning from traditional AIS to digital AIM is no longer optional—it is essential. Digitalization ensures the accuracy, accessibility, and timeliness of critical data, enhancing operational safety and efficiency across the industry.

2.3 Mr. Kamil Al-Awadhi reaffirmed IATA's strong commitment to advancing AIM digitalization in the MID region. He urged States to align with ICAO's roadmap and global initiatives to ensure a seamless and coordinated transition. Concluding his remarks, he emphasized that through collaboration, all stakeholders can accelerate implementation and significantly enhance the efficiency and safety of air navigation services.

2.4 Mr. Radhouan Aissaoui, Regional Officer Information Management, ICAO Middle East Office, welcomed all participants to the AIMDP TF/1 meeting. He expressed his sincere gratitude to the IATA AME and CARC Jordan for hosting this important meeting in Amman, for the warm welcome, outstanding hospitality, excellent organisation, and the decent premises provided for this important meeting. He reminded the meeting that 7 December 2024 marks the 80th anniversary of the signing of the Convention on International Civil Aviation in Chicago, a landmark agreement that has become the cornerstone of the global civil aviation system. This historic convention has fostered international cooperation and has been instrumental in enabling the safe, efficient, and sustainable growth of air transport, benefiting nations worldwide. On this significant occasion, Mr. Radhouan Aissaoui commemorated the milestone and extended his warmest congratulations to all ICAO Member States on the celebration of International Civil Aviation Day. He emphasized that this gathering serves as another testament to the unwavering spirit of collaboration within the global aviation community, reinforcing the collective commitment to addressing challenges and advancing the safety, efficiency, and sustainability of global air transport.

2.5 Mr. Radhouan Aissaoui expressed heartfelt gratitude to the states and industry that have accepted to share their experience and achievements. Recognizing the importance of collaboration and knowledge-sharing. He emphasized the positive impact of such cooperation on advancing global aviation standards and practices, encouraging other states to follow. Concluding his remarks, Mr. Radhouan Aissaoui encouraged the delegates to participate in all the activities and discussions, thanked them for their attendance and wishing them successful and productive meeting.

2.6 Mr. Abdalla Al Rashidi, Director AIM, GCAA, United Arab Emirates, and Chairman of the AIM SG, warmly welcomed the participants and expressed his hopes for a successful and productive meeting.

3. ATTENDANCE

3.1 The meeting was attended by a total of forty-one (41) participants from seven (7) States (Egypt, Iraq, Jordan, Libya, Oman, Saudi Arabia and UAE) and three (3) Organizations/Industries (ADL, IATA, NGL). The list of participants is at **Attachment A.**

4. OFFICERS AND SECRETARIAT

4.1 The AIMDP TF/1 meeting was chaired by Ms. Hind A. Almuhaimeed, ANS Senior Inspector, GACA, Saudi Arabia. Mr. Radhouan Aissaoui, Regional Officer, Information Management was the Secretary of the meeting.

5. LANGUAGE

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

6. AGENDA

6.1 The following Agenda was adopted:

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

Agenda Item 2: AIMDP TF Terms of Reference

Agenda Item 3: AIM digitalization Challenges and Priorities

Agenda Item 4: MID Regional Implementation Plan for Digital Datasets.

Agenda Item 5: MID Air Navigation Strategy and eANP Volume III

Agenda Item 6: Future Work Programme and AoB

7. CONCLUSIONS AND DECISIONS – DEFINITION

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

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

b) **Decisions** relate solely to matters dealing with the internal working arrangements of the Group and its Sub-Groups

8. LIST OF CONCLUSIONS AND DECISIONS

DRAFT DECISION 1/1: AIMDP TASK FORCE TORS

PART II: REPORT ON AGENDA ITEMS

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

1.1 The subject was addressed in WP/1, presented by the Secretariat. The meeting reviewed and adopted the Agenda as at paragraph 6 of the History of the Meeting.

1.2 The meeting recalled the procedure included in the MIDANPIRG Procedural Handbook (MID Doc 001) and unanimously elected Ms. Hind A. Almuhaimeed, ANS Senior Inspector, GACA, Saudi Arabia, as the Chairperson; and Mr. Tarek Mohammad Al-Rabee, AIS Officer, AISHQ CARC, Jordan, as the Vice Chairperson of the Aeronautical Information Management Digitalization & Planning Task Force (AIMDP-TF).

REPORT ON AGENDA ITEM 2: AIMDP TF TERMS OF REFERENCE

2.1 The subject was addressed in WP/2, presented by the Secretariat.

2.2 The meeting noted that the Aeronautical Information Management Digitalization & Planning Task Force (AIMDP TF) was established by the MIDANPIRG/21 meeting to ensure alignment of the DAIM thread/elements with GANP latest Edition, develop appropriate monitoring tables for inclusion in ICAO eANP Vol. III. This task force is also entrusted to ensure a synchronized and harmonized deployment of digital AIS datasets in the MID Region, to address the challenges facing the AIM digitalization and to work together to foster harmonization and digitalization of the entire aeronautical data chain to meet future demand requirements.

2.3 The meeting reviewed and endorsed the AIMDP TF Terms of Reference (ToR), as outlined in **Appendix 2A**, agreeing to the following Draft Decision:

DRAFT DECISION 1/1: AIMDP TASK FORCE TORS

*That, the AIMDP Task Force Terms of Reference (ToR) at **Appendix 2A** are endorsed.*

2.4 The meeting encouraged the States and international organizations to support the activities of the AIMDP TF.

REPORT ON AGENDA ITEM 3: AIM DIGITALIZATION CHALLENGES AND PRIORITIES

3.1 The subject was addressed in WP/3, presented by the Secretariat.

3.2 The meeting acknowledged that the digital transformation from Aeronautical Information Services (AIS) to Aeronautical Information Management (AIM) represents a significant shift in how aeronautical data is managed and utilized.

3.3 The meeting noted also that the Aeronautical Information Publication (AIP) has existed as paper products for well over half a century. These products are now gradually and increasingly provided digitally. Over the course of the last few years, ICAO standards have been developed to provide parts of the AIP as digital data sets. The focus there has been on extracting the numbers from the AIP and to provide them as digital data sets. The first five digital data sets that have been defined are the AIP data set, the instrument flight procedure data set, the terrain and obstacle data sets, and the airport mapping data set. Digital transformation thereby implies a shift in focus away from the AIP and towards digital data sets.

3.4 However, while the global aviation industry is rapidly advancing towards digital data sets as part of this transformation, the MID Region continues to face considerable challenges in aligning with this progress. A key issue is the inconsistent or insufficient provision of digital data sets, particularly in critical areas such as terrain and obstacle data. Lessons learned from the implementation of the first two categories of data sets suggest that similar challenges may arise with the recommended categories, potentially hindering the region's ability to fully embrace the AIM digital transformation.

3.5 The meeting noted the following challenges affecting the MID Region:

3.5.1 Institutional issues:

- Some MID States are often lacking a National Policy for digital data sets; as a result there is no clear assignment of responsibilities concerning who is originating, processing, managing and distributing digital datasets;
- Lack of National Plan for digital datasets.

3.5.2 Financial issues:

- Costs for collecting, processing/managing of digital data are higher than for traditional paper-based information exchanges;
- Need for extra-resources;
- It is not clear which are the cost-recovery policies for digital datasets.

3.5.3 Technical issues:

- Lack of detailed procedures and guidance to support States in preparing, compiling, managing and updating datasets;
- Lack of technical knowledge and expertise related to digital datasets;
- Potential interoperability risks related to the provision of digital data sets, such as cross-border data coordination failures, multiple formats for the digital data sets.

3.6 To support States in addressing these challenges and to promote a synchronized and harmonized deployment of digital AIS datasets across the MID Region, the meeting outlined key strategic priorities. The following priorities are intended to clearly define the expectations for the AIMDP Task Force (TF) in leading the transformation, foster a shared understanding of the TF's role, and empower the TF to effectively organize its efforts, monitor progress, and identify focus areas in alignment with its Terms of Reference (ToRs).

1. Assessment of Readiness (From Macro to Micro Levels – State to Regional Level): Developing a Framework to determine the status quo by Gap analysis activities to evaluate progress on transition from AIS to AIM and on the Digital Data Sets provision.
2. Develop an overarching vision, concept, and strategy for AIS service provision to foster harmonization and digitalization of Aeronautical Information.
3. Development of the Regional Plan – Conceptual Framework for the provision of aeronautical information digital datasets across the region, addressing three key aspects to ensure harmonization - "what to provide", "how to provide it" and "when to provide it".
4. Implementation Support and Capacity Building : Regional Workshops and direct assistance to States through Go-Teams.
5. Monitoring and Reporting: Monitor progress and evaluate the effectiveness of AIM digitalization efforts.

3.7 The meeting agreed to organize its work and deliverables into distinct steps, with a milestone report to be submitted to MIDANPIRG upon the completion of each step. These reports will be prepared in coordination and consultation with the AIM SG.

3.8 To ensure effective implementation of the agreed-upon actions, the meeting also assigned specific responsibilities, deliverables, and timelines as follows:

Action 1: Develop an overarching vision, concept, and strategy for AIS service provision to foster harmonization and digitalization of Aeronautical Information

Champion: Egypt and ICAO MID

Deliverables: updated Guidance for AIM Planning and Implementation in the MID Region (MID Doc 008).

Timeline: Q4 2025

Action 2: Assessment of Readiness (From Macro to Micro Levels – State to Regional Level): Developing a Framework to determine the status quo by gap analysis activities to evaluate progress on transition from AIS to AIM and on the Digital Data Sets provision.

Champion: Oman , ICAO MID and ADL (member of IFAIMA)

Deliverables: A comprehensive framework document outlining the methodology, criteria, and indicators for assessing readiness at the State and Regional levels and Gap Analysis Report.

Timeline: Q2 2025

Action 3: Development of the MID Regional Implementation Plan for Digital Datasets – Conceptual Framework for the provision of aeronautical information digital datasets across the MID Region, addressing three key aspects to ensure harmonization - "what to provide", "how to provide it" and "when to provide it"

Champion: UAE and Saudi Arabia

Deliverables: MID Regional Implementation Plan for Digital Datasets.

Timeline: Q4 2025

Action 4: Development of Comprehensive Implementation Support and Capacity Building Plan to foster the Transition from AIS to AIM and Digital Data Set Provision. This action will focus on creating a structured and actionable plan including targeted capacity-building initiatives (Regional workshops and Direct assistance to States through Go-Teams), resource allocation, and tailored support mechanisms to address identified gaps and challenges.

Champion: Saudi Arabia

Deliverables: Implementation Support and Capacity Building Plan.

Timeline: Q4 2025

Action 5: Monitoring and Reporting: Monitor progress and evaluate the effectiveness of AIM digitalization efforts.

Champion: Jordan and IATA

Deliverables: Monitoring and Reporting mechanism.

Timeline: Q4 2025

People Centric Transitions

3.9 The subject was addressed in PPT/4, presented by the ADL (member of IFAIMA).

3.10 The meeting noted that the migration to a digital environment revolves around two key elements: technology and people. However, common misconceptions often arise during such transitions, such as the belief that technology alone can solve all problems, that it will make humans redundant, or that it inherently brings disruption. To counter these fallacies, the focus should be on prioritizing people over technology, seamlessly integrating technology around their needs. This approach is termed “Weaving Technology around People,” emphasizing the need to adapt technology rather than simply adopt it. Adoption is often compulsive and mandated, while adaptation is collaborative and inclusive, ensuring a smoother transition.

3.11 It was pointed out that a people-centric approach involves several simple yet effective steps. First, a gap analysis helps identify constants and changes, focusing on critical components that need attention. Second, constant collaboration is essential, with technology providers offering continuous training, support, and guidance to users throughout the transition. Third, people-centric processes should be established, including re-aligning roles, providing clarity to prevent overlaps, and ensuring proper validation. By adopting a process-centric approach, transitions can be as smooth and seamless as the drive of a Rolls Royce, ensuring both technological and human elements work in harmony.

REPORT ON AGENDA ITEM 4: DIGITAL DATASETS PLANNING AND IMPLEMENTATION

4.1 The subject was addressed in WP/5, presented by the Secretariat.

4.2 The meeting recalled that the MIDANPIRG/18 meeting, through Decision 18/17, established the Digital Datasets Ad-hoc Working Group (DDI Ad-hoc WG). The Digital Data Sets WG was tasked to develop a detailed Regional Implementation Plan for Digital Datasets. The meeting noted that based on the regional best practices and available provisions in ICAO and Eurocontrol guidance material, the DDI Ad-hoc WG drafted a Regional Implementation Plan for the provision of Digital Datasets, which provides information about coding rules, guidelines, limitations, and possible workarounds for the data set. In addition, the plan contains implementation steps of the digital data sets along with Data Set Specimen, as appropriate.

4.3 The meeting recalled also that the Digital Datasets Implementation Ad-hoc Working Group has been dissolved. In line with MIDANPIRG/21 Decision 21/29, it was agreed that the AIMDP Task Force (TF) would take over and build upon the work of the former Ad-hoc Working Group. This ensures continuity in efforts and eliminates the need to start the process anew, allowing the TF to focus on advancing the initiative effectively.

4.4 It has been pointed out that, to ensure a coordinated and harmonized deployment of the digital AIS data sets in MID Region, three key aspects were considered to ensure harmonization - “what to provide”, “how to provide it” and “when to provide it”. The plan should provide the Scope, Format, Coding Specification, and timelines for the provision of Digital Data Sets in MID Region.

4.5 In addition, the meeting agreed that the AIMDP TF establish the AIP data sets technical specifications based on UAE AIP data sets technical specifications, as best practices, and should be part of the Regional plan.

4.6 The meeting reviewed the draft Regional Implementation Plan for the provision of Digital Datasets, as outlined in **Appendix 4A**. Key points raised during the discussions included the removal of tables from the AIP and the provision of Instrument Flight Procedures (IFP) data sets, along with their associated coding rules. These topics were highlighted as critical considerations for the completion of the plan. Accordingly, and in line with the agreed-upon actions outlined in paragraph 3.8, the UAE was designated as the champion of this initiative. Its responsibilities include finalizing the plan in consultation with the Task Force (TF) members.

REPORT ON AGENDA ITEM 5: MID AIR NAVIGATION STRATEGY AND ANP VOLUME III

MID Air Navigation Plan (ANP VOL III) and Implementation Status of the DAIM Related ASBU Elements

5.1 The subject was addressed in WP/6, presented by the Secretariat.

5.2 The meeting recalled that the MIDANPIRG/21 meeting reviewed and endorsed, through MIDANPIRG CONCLUSION 21/2, the MID Region Air Navigation Strategy, Edition, March 2024. The MID Region Air Navigation Strategy edition March 2024 is available at: https://www.icao.int/MID/MIDANPIRG/Documents/eDocuments/MID%20Doc%20002%20-%20MID%20Air%20Navigation%20Strategy%20-%20Apr%202024.pdf

5.3 The meeting was apprised of the updated ASBU DAIM Thread/Elements and the monitoring table as per the revised MID Region Air Navigation Strategy (ICAO MID Doc 002) and in line with the Global Air Navigation Plan (GANP 7th edition). The meeting reviewed and updated the status of DAIM implementation in MID Region and the MID eANP Volume III (DAIM Tables) as at **Appendix 5A** and **Appendix 5B** respectively.

5.4 The MID Region DAIM implementation status by element is presented below:

DAIM Elements	B1/1 Provision of quality-assured aeronautical data and information	B1/3 Provision of terrain digital data sets	B1/4 Provision of obstacle digital data sets
Average per Element	60 %	42.11 %	39.5 %
DAIM Thread Average	47.19 %		

5.5 The meeting emphasized the following critical points:

- **DAIM B1/1 (Provision of Quality-Assured Aeronautical Data and Information):** The implementation status currently stands at **60%**, falling short of the regional target of **80%** set for December 2021.
- **DAIM B1/3 (Provision of Digital Terrain Data Sets):** The implementation progress is at **42.11%**, significantly below the regional target of **60%** by December 2021.
- **DAIM B1/4 (Provision of Digital Obstacle Data Sets):** With an implementation rate of **39.5%**, this metric also lags behind the regional target of **60%** for December 2021.
- The overall average implementation of DAIM in the MID region stands at **47.19%**.

5.6 The meeting urged States to consider the following key actions:

(1) Secure High-Level Commitment and Funding:
- Raise awareness among high-level decision-makers to prioritize AIM projects and allocate dedicated funding within national aviation budgets.
- Explore additional funding opportunities from international organizations, development banks, and other financial mechanisms to support implementation efforts.

(2) **Foster Collaboration and Resource Sharing:**

– Strengthen partnerships with aviation authorities, air navigation service providers (ANSPs), and industry stakeholders to align efforts, share resources, and avoid duplication of work.

(3) Leverage Knowledge and Best Practices:

– Participate in workshops, seminars, and training programs facilitated by ICAO MID to learn from states with advanced implementation levels and adopt proven best practices.

Review and update of the MID Air Navigation Strategy DAIM Thread/Elements (MID Doc 002)

5.7 The meeting acknowledged that the evolution of AIS/AIM services in the MID Region must prioritize harmonization and digitalization across the entire aeronautical data chain. To achieve this, strategic updates to the Air Navigation Strategy—particularly the DAIM component—are essential. Key changes include transitioning to an automated, data-centric AIM environment, enhancing quality assurance processes, and expanding the provision of digital products. These steps will ensure alignment with ICAO's Global Air Navigation Plan (GANP) and drive the digital transformation of Aeronautical Information Management in the region.

5.8 Following discussions and to align with ongoing developments, the meeting agreed to the changes outlined in the tables below, with modifications highlighted in yellow

MID REGION ASBU THREADS & ELEMENTS (BLOCK 0 & 1) PRIORITIZATION AND MONITORING

Thread	Element code	Title	Priority	Start Date	Monitoring		Remarks
					Main	Supporting	
Information Threads							
DAIM							
DAIM	**B1/1**	Provision of quality-assured aeronautical data and information	**1**	2021	AIMDP TF and AIM SG	RANP/NANP TF	
	B1/2	Provision of digital Aeronautical Information Publication (AIP) data sets	1	2025	AIMDP TF and AIM SG		
	B1/3	Provision of digital terrain data sets	**1**	2021	AIMDP TF and AIM SG	RANP/NANP TF	
	B1/4	Provision of digital obstacle data sets	**1**	2021	AIMDP TF and AIM SG	RANP/NANP TF	
	B1/5	Provision of digital aerodrome mapping data sets	2				

Thread	Element code	Title	Priority	Start Date	Monitoring		Remarks
					Main	Supporting	
	B1/6	Provision of digital instrument flight procedure data sets	2				
	B1/7	NOTAM improvements	2				

MONITORING THE IMPLEMENTATION OF THE PRIORITY 1 ASBU THREADS/ELEMENTS (Block 0 & 1) IN THE MID REGION

Element		Applicability	Performance Indicators/ Supporting Metrics	Baseline (2023)	Target	Timeline	KPA/ KPI
Information Threads							
DAIM							
DAIM B1/1	Provision of quality-assured aeronautical data and information	All States	Indicator*: Regional average implementation status of DAIM B1/1 (provision of quality-assured aeronautical data and information). Supporting Metrics: ~~1. Number of States that have implemented an AIXM-based AIS database (AIXM V5.1+)~~ 1. Number of States that have migrated to AIM automated data-centric environment based on (AIXM V5.1+) 2. Number of States Implementing Quality Assurance and Quality Control (QA/QC) Processes	45%	80%	Dec 2021	N/A

Element		Applicability	Performance Indicators/ Supporting Metrics	Baseline (2023)	Target	Timeline	KPA/ KPI
			3. Number of States that have established formal arrangements with at least 50% of their AIS data originators.				
DAIM-B1/2	Provision of digital Aeronautical Information Publication (AIP) data sets	Egypt, Jordan, Oman, Qatar,Saudi Arabia and UAE	Indicator*: Regional average implementation status of DAIM B1/2 (Provision of digital Aeronautical Information Publication (AIP) data set). Supporting Metrics: Number of States that provide digital Aeronautical Information Publication (AIP) data sets	15%	75%	Dec 2027	N/A
DAIM B1/3	Provision of digital terrain data sets	All States	Indicator*: Regional average implementation status of DAIM B1/3(Provision of Terrain digital datasets). Supporting Metric: Number of States that provide required Terrain digital datasets	35%	60%	Dec 2021	N/A
DAIM B1/4	Provision of digital obstacle data sets	All States	Indicator*: Regional average implementation status of DAIM B1/4(Provision of obstacle digital datasets). Supporting Metric: Number of States that provide required	35%	60 %	Dec 2021	N/A

Element		Applicability	Performance Indicators/ Supporting Metrics	Baseline (2023)	Target	Timeline	KPA/ KPI
			obstacle digital datasets				

MID ANP Volume III (DAIM Tables)

5.9 The subject was addressed in WP/7, presented by the Secretariat.

5.10 The meeting recalled that the MIDANPIRG/21 meeting acknowledged the need to analyze changes in the GANP, review the structure of the MID B0-DATM tables, and develop appropriate tables for inclusion in ICAO ANP Volume III. Furthermore, the MIDANPIRG/21 meeting tasked the AIMDP Task Force (TF) with developing these tables.

5.11 The meeting reviewed the proposed tables, which have been updated to align with the Seventh Edition of the Global Air Navigation Plan (GANP), as detailed in **Appendix5C**.

5.12 Following the discussions, the meeting agreed to the following tables, which include:

a) Table DAIM 3-1: Automated Data-Centric Environment
b) Table DAIM 3-2: Aeronautical Data Quality
c) Table DAIM 3-3: Provision of Digital Data Sets

5.13 It is essential to highlight that the associated sub-elements of the above Tables were defined based on the provisions of Doc 8126, Annex 15, PANS AIM and GANP 7th Edition.

5.14 The meeting also agreed that the proposed changes should be submitted to the RANP/NANP Task Force (TF) for review and consideration, followed by submission to MIDANPIRG for final approval.

REPORT ON AGENDA ITEM 6: FUTURE WORK PROGRAMME AND AOB

AIMDP TF List of Focal Points

6.1 The subject was addressed in WP/8, presented by the Secretariat.

6.2 The meeting reiterated the importance of designating Focal Points to support the work of the AIMDP Task Force (TF). States are requested to use **Appendix 6A** to populate and formally designate their respective Focal Points at the earliest opportunity.

Date and Venue of the AIMDP TF/2 Meeting

6.3 The meeting agreed that the AIMDP TF/2 meeting will be held virtually during Q2/2025.

APPENDICES

APPENDIX 2A

TERMS OF REFERENCE (TOR) OF THE MIDANPIRG THE AERONAUTICAL INFORMATION MANAGEMENT DIGITALIZATION & PLANNING TASK FORCE (AIMDP TF)

I. TERMS OF REFERENCE

1.1 The Aeronautical Information Management Digitalization & Planning Task Force (AIMDP TF) was established by the MIDANPIRG/21 meeting to align the DAIM elements with the latest edition of the GANP, develop monitoring tables for inclusion in ICAO eANP Volume III, and ensure the synchronized and harmonized deployment of digital AIS datasets across the MID Region. The AIMDP TF aims to foster the harmonization and digitalization of the aeronautical data chain. Its Terms of Reference are as follows:

a) develop a clear vision and strategy for AIS service provision in MID Region, ensuring alignment and update of the Guidance for AIM Planning and Implementation in the MID Region (MID Doc 008).

b) Maintain regular updates to the MID Air Navigation Strategy parts related to the DAIM thread and its elements, ensuring alignment with the latest edition of the GANP.

c) Develop, review and maintain monitoring tables of DAIM elements for inclusion in ICAO ANP Volume III to track progress and implementation.

d) Promote synchronized and harmonized deployment of digital aeronautical information datasets across the MID Region.

e) Develop and align the Regional Plan for the provision of digital datasets, in accordance with ICAO Annex 15 , PANS-AIM and AIS Manual. This includes defining the required formats, coding specifications, and implementation timelines to ensure consistent deployment across the MID Region.

f) Identify and address challenges related to AIM digitalization, including data quality, standardization, and technological barriers.

g) Act as a forum for AIM specialists in the MID Region to collaborate, share best practices, and promote capacity building to foster the harmonization and digitalization of the aeronautical data chain.

1.2 The TF should organize its work and deliverables in different steps. After accomplishment of each step a milestone report will be provided to AIM SG and MIDANPIRG.

II. COMPOSITION

2.1 The TF aims to include a broad variety of competences from different stakeholders contributing to the entire aeronautical data chain. This should include, SMEs from:

a) MIDANPIRG Member States;
b) concerned International and Regional Organizations as observers; and
c) other representatives from provider States and Industry may be invited on ad hoc basis, as observers, when required.

2.2 Secretariat support will be provided by ICAO MID.

III. WORKING ARRANGEMENTS

3.1 The Chairperson, in close co-operation with the Secretariat, shall make all necessary arrangements for the most efficient working of the Task Force. The Task Force shall at all times conduct its activities in the most efficient manner possible with a minimum of formality and paperwork (paperless meetings). Permanent contact shall be maintained between the Chairperson, Secretary and Members of the Task Force to advance the work. Best advantage should be taken of modern communications facilities, particularly videoconferencing (Virtual Meetings) and e-mails.

3.2 Face-to-face meetings will be conducted when it is necessary to do so.

MID Region Implementation Plan for Digital Datasets

First Edition — 2025

International Civil Aviation Organization
MIDDLE EAST Air Navigation Planning and Implementation Regional Group
(MIDANPIRG)

RECORD OF AMENDMENTS AND CORRIGENDA

AMENDMENTS		
No.	Date	Entered by

CORRIGENDA		
No.	Date	Entered by

EXECUTIVE SUMMARY

The ICAO Amendment 40 to Annex 15 and the new PANS-AIM, both applicable since November 2018, contain recommendations for the provision by State AIS of the AIP Data Set and of Instrument Flight Procedures Data Sets. These are meant to gradually replace the provision of tabular data in the AIP for routes, points, navaids, airspace structures, etc.

These two new kinds of data sets complement the data sets that were already specified in Annex 15: obstacle data sets, terrain data sets and airport mapping data sets, for which the ICAO provisions remain unchanged.

The introduction of Standards and Recommended Practices (SARPs) related to the provision of digital data sets, led to significant challenges for States in achieving compliance. These challenges are wide reaching in scope and relate to technical, institutional and implementation aspects.

In order to facilitate and harmonize AIM digital data sets implementation, the MIDANPIRG asked that support and guidance be provided to identify and address these issues and formed the Digital Data Sets Ad hoc Working Group (DDS WG) of the Aeronautical Information Management Sub-group to address this request. The MID Region Implementation Plan for Digital Datasets has been prepared by the DDS WG in response to this task.

It is expected that this will be a living document, updated as experience grows during implementation. As a result, in order to ensure that this document can continue to meet stakeholder needs, it is important that comments on the document and any issues identified as not being adequately addressed, are brought to the attention of ICAO MID Office <icaomid@icao.int>.

TABLE OF CONTENTS

Page

GLOSSARY

Aerodrome mapping data (AMD). Data collected for the purpose of compiling aerodrome mapping information.

Aerodrome mapping database (AMDB). One or more files containing information in a digital form that represent selected aerodrome features. This data includes geo-spatial data and metadata over a defined area. The files have a defined structure to permit an AMDB management system and other applications to make revisions that include additions, deletions, or modifications

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.

Aeronautical information management (AIM). The dynamic, integrated management of aeronautical information through the provision and exchange of quality-assured digital aeronautical data in collaboration with all parties.

[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.

Data product specification. Detailed description of a data set or data set series together with additional information that will enable it to be created, supplied to and used by another party (ISO 19131*).

Note.— A data product specification provides a description of the universe of discourse and a specification for mapping the universe of discourse to a data set. It may be used for production, sales, end-use or other purposes.

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

[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 that are tailored to 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 semantics, the syntax and the protocols for the exchange of data.

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

Validation. Confirmation, through the provision of objective evidence, that the requirements for a specific intended use or application have been fulfilled (ISO 9000*).

Verification. Confirmation, through the provision of objective evidence, that specified requirements have been fulfilled (ISO 9000*).

Note.— The term “verified” is used to designate the corresponding status

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
AI	Aeronautical Information
AIP	Aeronautical information publication
AIS	Aeronautical information service
AIXM	Aeronautical information exchange model
AMDB	Aerodrome Mapping Database
ANP	Air Navigation Plan
ANSP	Air Navigations Services Provider
ASBU	Automated System Block Upgrade
ATM	Air traffic management
DAIM	Digital Aeronautical Information management
eAIP	electronic Aeronautical Information Publication
eANP	electronic Air Navigation Plan
EUROCONTROL	European Organization for the Safety of Air Navigation
FMS	Flight Management System
GANP	Global Air Navigation Plan
GIS	Geographic Information System
GML	Geography Markup Language
IM	Information management
IP	Internet protocol
MIDANPIRG	Middle East Air Navigation Planning and Implementation Regional Group
PBN	Performance-Based Navigation
QMS	Quality Management System
RNAV	Area navigation
RNP	Required navigation performance
SARPs	Standards and Recommended Practices
SWIM	System Wide Information Management
TBO	Trajectory Based Operations
TOD	Terrain and Obstacle Data
UML	Unified Modelling Language
WGS-84	World Geodetic System-1984
XML	Extensible Markup Language

PART I

GENERAL ASPECTS OF DIGITAL AERONAUTICAL DATA SETS

1. Data set categories

1.1 It is important to understand the necessity of quality-assured digital data (rather than information in an AIP or on a chart which needs conversion in digital form) to allow the integration in ATM and aviation-related applications allowing the user to interpret the information correctly and to aid in decision making.

1.2 The term Aeronautical Information Product was introduced with the 16th Edition of Annex 15 to cover all the AIS deliverables, which are provided in either digital form or as a standardized presentation in either paper or electronic form. PANS-AIM provides a vehicle for expanded and/or new specifications for digital data sets and digital data exchange where it is found there is a need to have a high level of standardization. The purpose of digital data sets is to support the transition of the ATM domain towards the use of digital data instead of paper products. Therefore, the scope of each data set is defined considering the likelihood that the data is actually used in digital format by ATM systems (including other AIS systems), data service providers and IFR/VFR airspace users.

1.3 The following categories of data sets are specified in the Annex 15 as elements of the Aeronautical Information Products:

- AIP Data Set - comprising a selection of enroute and airport subjects and properties, which are meant to support flight planning and air navigation;
- Obstacle Data Set - comprising data about man-made structures or natural features that match the requirements set for the data obstacle collection surfaces or other obstacle collection and provision criteria;
- Instrument Flight Procedure Data Set - comprising a selection of subjects and properties that represent Instrument Approach Procedures, SID and STAR and related data;
- Airport Mapping Data Set - comprising a selection of subjects and properties that match the industry requirements for Airport Mapping Databases;
- Terrain Data Set - gridded data representing the surface of the Earth, including water surfaces, that matches aviation collection and provision criteria.

1.4 Providing the data in digital form and complying with standard digital data exchange requirements such as in the use of the Aeronautical Information Exchange Model (AIXM) is an important step forward in the implementation of System Wide Information Management (SWIM). The availability of digital data is the basis for the provision and consumption of integrated aeronautical information services in a SWIM environment.

2. General considerations for the data format applicable to digital data sets

2.1 For the interoperability of the data and to ensure the high effectiveness of the AIS upstream and downstream data chain AIP data sets and Obstacle data sets, as defined by ICAO Annex 15 , should be provided at least in AIXM 5.1 format.

2.2 AIXM 5.2 should be considered for the provision of Instrument Flight Procedure Data Sets as it includes critical elements in support of PBN procedures.

3. Data quality requirements

3.1 The Global Air Traffic Management Operational Concept (Doc 9854) states that the ATM community depends on the provision of quality-assured information to collaborate and make informed decisions. Sharing information on a system-wide basis will allow the ATM community to conduct its business and operations in a safe and efficient manner.

3.2 Data quality specifications include meeting accuracy, resolution, integrity, traceability, timeliness, completeness, and format requirements of standardized digital data sets. These data quality requirements are specified in ICAO Annex 15, Chapter 3 and the AIS Manual, Part II (Doc 8126).

3.3 The provision of quality-assured digital data sets should be carried out in a consistent and interoperable presentation, since there is an inherent need to fulfil the quality requirements of the next intended users.

3.4 Non-compliant digital data sets can potentially affect the safety of air navigation.

4. Data product specification

4.1 A description of available digital data sets shall be provided in the form of data product specifications on which basis air navigation users will be able to evaluate the products and determine whether they fulfil the requirements for their intended use (application).

4.2 A data product specification is a specification of a dataset or dataset series together with additional information that will enable it to be created, supplied to and used by another party. In this context of creating, supplying and using data products, the specification thereof is of essence in a controlled and standardized process leading to interoperability. The data product specification is the final product in a process that describes the conceptual formalization of semantics and data structure related to specific requirements or use cases. It is a precise and full description of the data product in terms of the requirements that it will or may fulfil. A data product specification is primarily a technical document that may contain non-technical elements such as narrative descriptions of some aspects, like the overview or data capture statements. However, for various reasons compromises can need to be made in the implementation.

4.3 A data product specification according to ISO standard 19131 is divided into sections. Each section identifies and details specific aspects of the data product. The information that has to be provided in the different sections of the DPS include:

Overview: A specification overview placed in the beginning of a DPS should provide a short introduction to the data product and allow the reader a better understanding of the data product specification. It has the form of a human-readable narrative description of the data product and the data product specification. It may be regarded as a summary of other parts of the data product specification.

Data Product Identification: The purpose of the identification section is to provide information for identification, search, discovery and first evaluation of data products.

Specification Scope: when, within a section of the DPS, particular specifications are applicable for different parts of the data, the section should contain one separate specification for each individual part.
Data Content and Structure: the purpose of the data content and structure section is to provide information that specifies the data structure and content of the data product.

Reference Systems: the reference system section provides information about the spatial and temporal reference systems used for a certain specification scope.

Data Quality: the data quality section provides information about the conformance of the data product with the quality requirements. This can be specified by a threshold value for a certain data quality measure or by a descriptive statement about a data quality element.

Data Capture and Production: the purpose of the data capture and production section is to provide instructions, requirements and/or descriptions of the data capture and production. This may include details referring to specific methods and/or processing steps. When data sources are specified, they may be described in detail, including specific conformance quality levels required.

Data Maintenance: the purpose of the maintenance section is to provide descriptions, principles and/or criteria for how the data is maintained once it has been captured. This includes frequency with which changes and additions are made to the data product.

Portrayal: the purpose of the portrayal section is to specify how to portray the feature types for human interpretation, usually by means of a portrayal catalogue.

Data Delivery: the purpose of the data delivery section is to provide descriptions of data delivery format and means for physical delivery or for data delivery using download services or view services.

Metadata: the purpose of the metadata section is to provide a description of the metadata provided with a dataset.

Additional Information: the purpose of the section additional information is to provide additional information about the data product.

4.4 Supporting guidance and examples of Data Product Specifications (DPS) are outlined in Doc 8126, Part IV: Digital Data Sets (currently under development).

4.5 Provision of the DPS

Provision of the DPS: the DPS must be made available to potential users of the data sets series. The description of available data sets in AIP GEN 3.1.6 should contain information about the availability of DPS for each data set series. For data sets provided by services, information about the availability of a DPS should be provided in the Service Overview.

4.6 Amendment of the DPS

Amendment of the DPS: data users may be affected by changes of the content or structure of a data product. Such changes are documented in amendments of the DPS. The data set provider should ensure an early provision of DPS amendments to allow the data set users sufficient time for implementing required changes of their systems and processes. Any change that is expected to require technical adaptations on the client systems (such as the use of a new data coding format) should be announced with a DPS amendment at least 12 months in advance. Other significant changes in the structure/content of a data series should be announced through an updated DPS at least 56 days in advance.

5. Metadata requirements for digital data sets

5.1 ICAO ANNEX 15 para. 5.3.1.2 states that: “Each data set shall be provided to the next intended user together with at least the minimum set of metadata that ensures traceability.

5.2 ICAO PANS-AIM SECTION 5.3.2 stipulates that: “Each data set shall include the following minimum set of metadata:

a) the names of the organization or entities providing the data set;
b) the date and time when the data set was provided;
c) period of validity of the data set; and

d) any limitations with regard to the use of the data set.

5.3 This requirement outlines the purpose of “metadata” as well as what should be included in the “metadata” for each data set to ensure the traceability of the data sets. More information on metadata and examples can be found in in Doc8126, Part IV Digital Data Sets (currently under development).

6. Validation and verification of digital data sets

6.1 Data sets should be verified and validated before providing them to the next intended users.

6.2 Data sets with a defined structure and format according to the provisions in PANS-AIM 5.3.1.5 / 5.3.1.6 (e.g. AIXM) can be validated by using software tools. The following guidance illustrates the two-step validation procedure shown for AIXM 5.1 (AIP or obstacle) data sets:

a) The first step is XML validation, by which the data set is checked whether it is syntactically correct (XML is well formed) and follows the structure defined in the XML schema[1] (XML is valid).

b) The second step consists of verifying the data against the business rules. Business rules define constraints on the aeronautical data such as the valid range of a data element, accuracy requirements, mandatory attributes, etc.

6.3 The coding specifications for digital data sets introduce business rules as additional provisions to the definitions of the features and associations in specific implementations.

6.4 The standard used in defining business rules is Semantics of Business Vocabulary and Business Rules (SBVR).

Note : The Semantics of Business Vocabulary and Rules (SBVR) standard is applied for writing the AIXM business rules, in relation with the AIXM XML schema elements. This means that the AIXM terms, together with their definitions and data types, provide the "business vocabulary" that is used as the basis for the definition of the AIXM business rules.

7. Distribution

7.1 The preferred method of distribution of aeronautical information provided as digital data sets is by secure online access. It is anticipated that in the future, aeronautical information and digital data sets will be distributed by SWIM information services.

8. Advance notification of a State’s intention to stop providing information in the AIP and only to provide them in the form of digital data sets

8.1 Advance announcements to the user community of a State’s intention to stop providing information in the AIP and to only provide the data in electronic format should be published by AIC. The AIC should be published early enough to enable industry implementation.

Note: Information on how to obtain data sets should be provided in GEN 3.1.6 of the AIP.

9. Declaration of the primary source of information is provided both in AIP standardised format and electronic format

9.1 If a State provides information both in AIP standardised format as well as files in electronic format (e.g. digital data sets), neither source should take precedence over the other in terms of correctness. It is the State’s responsibility to ensure the consistency of information published in multiple formats.

9.2 However, should a State need to declare that the sources available are of equal status or that one means of publication is the primary source, the recommended placeholder is AIP GEN 3.1.6.

[1] An XML schema is a description of an XML document, typically expressed in terms of constraints on the structure and content.

10. Data set provision checklist

9.1 ICAO PANS-AIM (Doc 10066) allow for the omission (removal) of certain AIP sections, when applicable data sets are provided (as indicated in 5.2.1.1.3/4 explicitly). The replacement of information published in the AIP (e.g. AIP tables) with information provided in digital data sets should be performed in orderly manner, ensuring data quality at all times during transition to digital data set provision.

There should be a mid region specification covering the minimum requirements and attributes for AIP Section to avoid having discrepancy in the outcome, specially mentioning that we are in the time of development therefore, it is strongly recommended.

9.2 Supporting guidelines for the transition from AIP tables to digital data sets are provided in the EUROCONTROL Guidelines for harmonised AIP publication and data set provision (ANNEX A – Data set provision checklist) available at https://www.eurocontrol.int/publication/eurocontrol-guidelines-harmonised-aip-publication-and-data-set-provision

PART II –

PROVISION OF TERRAIN & OBSTACLE DATA SETS

1. Introduction

1.1 The requirements for the provision of terrain and obstacle data (TOD) in an electronic form are part of the move from traditional AIS to Aeronautical Information Management (AIM).

1.2 With the transition from a product-based to a data-centric environment, the AIM will be able to use the digital terrain and obstacle data from the central storage for the development and provision of various AIM products using terrain and/or obstacle data. Therefore, terrain and obstacle data bring about a change in the culture and philosophy regarding aeronautical information provision.

1.3 Digital terrain and obstacle data are used in several applications which provide additional defence against air navigation hazards such as aircraft collisions with terrain and obstacles. Furthermore, pilots and operators have to make sure that the planned takeoff weight is suitable to clear all obstacles in case of an engine failure during takeoff.

1.4 Users of digital terrain and obstacle data are Air Navigation service providers including ATCOs and Procedure designers ; Flight crews; Aerodrome operators; Data service and application providers; Authorities involved in the obstacle restriction and removal and others more.

1.5 Applications using digital terrain and obstacle data may include Ground-based or airborne safety nets, Procedure design, Drift-down procedures, Emergency en-route landing, Advanced Surface Movement Guidance and Control System (A-SMGCS), Aeronautical chart production, On-board databases, etc.

2. TOD Relevant Areas and Surfaces

2.1 Different geographic areas and 3D-surfaces constitute the spatial scope of the ICAO TOD provisions. Most of these areas and surfaces are related to airport geometry. They are defined in the following ICAO Annexes and PANS:

a) Annex 15 and PANS-AIM (coverage areas)
b) Annex 14 (obstacle limitation surfaces)
c) Annex 4 (take-off flight path area)

3. Coverage Areas

3.1 With the introduction of TOD in Amendment 33 to ICAO Annex 15, ICAO has defined four coverage areas where different numerical requirements apply for terrain and obstacle data:

a) Area 1 The entire territory of a State
b) Area 2 The vicinity of an aerodrome
c) Area 3 An area bordering the movement area on an aerodrome
d) Area 4 The radio altimeter area operating in front of a precision approach runway, Category II or III.

3.2 With Amendment 36 to ICAO Annex 15, Area 2 was broken down into four sub-areas. The areas are defined in ICAO Annex 15 Para 5.3.3.1 and ICAO PANS-AIM Appendix 8.

4. TOD Planning and Implementing steps

4.1 EUROCONTROL Terrain and Obstacle Data Manual , available at https://www.eurocontrol.int/publication/eurocontrol-terrain-and-obstacle-data-manual, outlines a recommended approach to planning and implementing terrain and obstacle data on a national basis. The

steps described in the Manual constitute a list of activities for States to coordinate the provision of TOD.

5. Terrain Digital Datasets Provision

5.1 AIXM 5.1 does not encompass terrain data. Commonly used terrain data exchange formats are shown below for two of the most common file formats.

GeoTIFF

5.2 GeoTIFF is an extension to the Tagged Image File Format (TIFF), the well-known format for raster images. The OGC GeoTIFF accessible through OGC GeoTIFF Standard defines how the geo-refence information is encoded in the header of a TIFF file. GeoTIFF supports a wide variety of grid definitions (rotated grids, different post spacing in x and y direction, tie points, etc.) including geodetic reference system information.

Point Cloud

5.3 A Point Cloud is a collection of data points in a three-dimensional (3D) coordinate system, typically representing the external surface of an object, terrain, or environment. Each point in the cloud has a set of coordinates (X, Y, Z) that define its position in space. Point clouds are often generated using 3D scanning technologies, such as LiDAR (Light Detection and Ranging), photogrammetry, or structured light scanning.

6. Obstacle data set provision

6.1 The Aeronautical Information Exchange Model (AIXM) version 5.1 should be used for modelling and encoding obstacle data. AIXM 5.1 supports the attributes required by ICAO PANS-AIM (Doc 10066) to be contained in the obstacle data set. It also provides support identifying the modifications made to the attributes of the obstacle data set (new, edited or deleted).

As defined in Part 1, Para 4 define the minimum Data Product Specification requirements for Obstacles Data. The ISO 19131 requirements are vast and a minimum requirements profile is needed to control the propagation of this information in MID Region

6.2 Guidelines for a harmonised approach for the provision of an obstacle data set are set out in the EUROCONTROL Guidelines for harmonised AIP Publication and data set provision.

7. Announcement of the TOD availability in the AIP

6.1 According to PANS-AIM Appendix 2 “Contents of the Aeronautical Information Publication (AIP)” the availability of terrain and obstacle data sets has to be announced in the national AIP in section GEN 3.1.6.

PART III

PROVISION OF AERODROME MAPPING DATA SETS (AMD)

1. Introduction

1.1 According to Annex 14, Aerodrome Mapping Data (AMD) should be made available to the aeronautical information services for aerodromes deemed relevant by States where safety and/or performance-based operations suggest possible benefits.

1.2 Annex 15 states that AMD sets shall contain the digital representation of aerodrome features.

1.3 PANS-AIM (Doc 10066) further explains that the content of the aerodrome mapping data sets is defined in the industry standards of the Radio Technical Commission for Aeronautics (RTCA) Document DO-272D/European Organization for Civil Aviation Equipment (EUROCAE) Document ED-99D — User Requirements for Aerodrome Mapping Information.

1.4 An Aerodrome Mapping Database (AMDB) is an AMD set that fulfills industry requirements as specified by EUROCAE ED99() /RTCA DO272() and EUROCAE ED119() / RTCA DO 291(). These requirements include specific business rules and data encoding requirements for the intended applications.

1.5 Aerodrome mapping data should be supported by electronic terrain and obstacle data for Area 3 to ensure consistency and quality of all geographical data related to the aerodrome.

1.6 Supporting material for the aerodrome mapping data set is provided through the AIXM website in the collaboration area[2].

2. Implementation drivers

2.1 Implementation of AMD shall follow a collaborative approach involving the concerned stakeholders. This will maximize the benefits and the utilization of AMD.

2.2 It is an AISP responsibility to provide AMD. However AISPs can delegate the provision of AMD to aerodromes, recognizing the aerodrome as data originator.

2.3 Provision of AMD is based on three main driver perspectives:

- *State level initiation*

The 'State level initiation' approach builds on the fact that the State makes a decision based on applicable requirements (ICAO provisions) to make AMD provision compulsory for specified aerodromes. The State should specify individual aerodromes (as described in ICAO Annex 14, Chapter 2) for the provision of AMD where safety and/or performance-based operations suggest possible benefits. In this case the State should delegate the CAA with task to implement national regulation.

- *Aerodrome initiation*

The 'Aerodrome initiation' approach builds on the fact that an aerodrome decides to provide AMD. The decision is driven by the possibilities that the use of AMD provides.

- *ANSP/AISP initiation*

The 'ANSP/AISP initiation' approach builds on the ANSP need for AMD. Should an aerodrome not come to a positive business case the ANSP/AISP can originate AMD internally or sub-contract commercial providers.

[2]link is: https://ext.eurocontrol.int/aixm_confluence/display/ACGAMD/%28ICAO%29+Aerodrome+Mapping+Data+Sets+-+Supporting+Material .

Whichever the implementation approach, collaboration between ANSP/AISP, the CAA and the aerodromes is an important factor for success.

3. Implementation steps

While the implementation drivers mentions three approaches, two scenarios are further documented here since similar for both ANSP and Aerodrome.

3.1 Scenario 1: State initiates

In this scenario the State decides to implement Statewide provision of AMD.

Step	Activity	output	Responsible party
1. Decision making on AMD provision	The State decides to implement AMD.	N/A	State
2. Identification of stakeholders and focal points	The identification of stakeholders needs to include roles and responsibilities. Focal points of the parties involved need to be known.	N/A	State/CAA
3. Forming a Working Group	A representative Working Group (State/CAA involved) is formed based on the identified stakeholders and responsible parties.	Working Group with terms of reference	State/CAA
4. Analysis of international regulations, standards and guidelines	The Working Group identifies and analyses the documents the national regulation will be based on.	Analysis	Working Group
5. Classification of aerodromes	The Working Group together with State/CAA identifies aerodromes that should implement AMD provision based on their scale of operations, complexity and needs as well as impact on the network	List of aerodromes that will provide AMD	Working Group/State
6. Establishing the national regulation	The regulation is being prepared according to normal State processes.	National regulation	State/CAA
7. Making AMD available	The AISPs and Aerodromes agree how AMD will be published and how will it impact publication of AIP.	N/A	AISP, Aerodromes
8a. Implementation plan - AISP	AISP creates an implementation plan to fulfill all requirements from the national regulation.	AISP implementation plan	AISP
8b. Implementation plan - Aerodrome	Aerodrome creates an implementation plan to fulfill all requirements from the national regulation.	Aerodrome implementation plan	Aerodrome
9. Formal agreements - LoAs	Formal agreements, LoAs are created between	Formal agreements	Involved stakeholders

	stakeholders.		
10. Use of AMD	The provision and use of AMD is implemented as defined in the national regulation.	AMD data provisioning	All stakeholders involved

3.2 Scenario 2: Aerodrome or ANSP initiates

In this scenario the Aerodrome or the ANSP decides to provide AMD.

Step	Activity	output	Responsible party
1. Decision to investigate provision of AMD. .	The Aerodrome or ANSP management initiates an internal kick-off meeting	N/A	Aerodrome management, ANSP management
2. Analysis of the potential AMD use at the aerodrome	Working group is created which role is to analyse internal processes and identify use cases and benefits of AMD. The working group has to involve multiple departments. Each should analyse how AMD improves their current processes.	Analysis	Internal working group
3. Decision to provide AMD	Aerodrome management decides based on the output of the working group if AMD will be implemented and to what extent.	Decision - Scope of AMD use	Aerodrome management, ANSP management
4. Collaboration	If there is a National Regulation already in place the collaborative processes are already set by this legislation. If there isn't a National Regulation published, the entity which decided to provide or originate AMD starts a collaborative process with the each actor within the data chain to implement AMD provision according to best practices, international standards and EU law. If there is no positive feedback from other stakeholders, the entity may still use AMD internally.	N/A	Aerodrome, ANSP, AISP
5. Implementation plan	The Working Group at the aerodrome initiates creation of implementation plan based on the decided extent and agreed collaboration with other partners.	Internal implementation plan	Internal working group
6. Formal agreements - LoAs	Formal agreements, LoAs are being created between stakeholders, third parties. Data suppliers & originators - data product specifications AISP or Aerodrome - agreement and specification how data is provided	Formal agreements	Aerodrome, ANSP, AISP

7. Use of AMD	AMD is implemented as agreed and defined in the steps above.	AMD provisioning	All stakeholders involved / Internally at an Aerodrome or ANSP

4. Coding specifications for Aerodrome Mapping Data Set

4.1 The supporting material available at https://ext.eurocontrol.int/aixm_confluence/display/ACGAMD/Information+exchange+models, covers the requirements, standards, use cases, implementation considerations, and encoding of AMD features in AIXM 5.1.1. The focus of the body of the material is on AMD encoding in AIXM 5.1.1 including:

- aerodrome mapping data mappings between the cited industry standards and AIXM 5.1.1
- metadata aspects

5. Aerodrome Mapping Data Set Specimen

5.1 An aerodrome mapping data set can be consulted upon request on the AIXM collaboration area (Specimen data - (ICAO) Aerodrome Mapping Data Sets - AIXM Confluence (eurocontrol.int). The specimen data covers a single aerodrome and is based on RTCA DO-272D/EUROCAE ED-99D features encoded in AIXM 5.1. It is available to operational stakeholders such as ANSPs, AISPs and aerodrome operators.

PART IV –

PROVISION OF AERONAUTICAL INFORMATION PUBLICATION (AIP) DATA SETS

1. Introduction

1.1 The main purpose of the AIP Data Set is to ensure the minimum digital data necessary for efficiently and safely conducting the following operations:

- Flight planning;
- En-route air navigation (excluding departure procedures, arrival procedures and final approach/landing procedures, which are covered by separate Instrument Flight Procedures data sets).

1.2 Data service providers and integrators may use the AIP data set as an authoritative source for the en-route navigation data (airspaces, routes, navaids etc).

1.3 The content of an AIP Data Set is specified in the PANS-AIM, ICAO DOC 10066 as a list of subjects and their properties, which includes airspace, routes, significant points and radio navigation and landing aids, airport and runway data.

1.4 Air navigation service providers may use the AIP data set as a basis for the validation of flight plans and for depiction of airspace and Air Traffic Service (ATS) routes on ATS displays.

1.5 Other State AIS may use the AIP data for cross-border data coordination and in order to support the production of route and narrow-route PIB.

2. Coding Specification for AIP Data Set

2.1 The Aeronautical Information Exchange Model (AIXM) provides a globally accepted data model and data coding format for the aeronautical data subjects mentioned in 1.3 above.

2.2 A complete suite of specifications and guidance material for the provision of the AIP Data Set Coding Specification using AIXM 5.1.1 is available at https://ext.eurocontrol.int/aixm_confluence/display/ACGAIP/Introduction.It provides common coding rules and guidelines for the provision of the AIP Data Set in AIXM 5.1(.1) format, with the aim to ensure that such data sets can be effectively used by the downstream AIS data chain actors, particularly by Data Provider organisations and flight planning service providers.

3. AIP Data Set Specimen

3.1 A Specimen AIP data set is available3 in order to exemplify the coding guidelines on a concrete case. The content of the Specimen AIP data set is based on the fictitious Specimen AIP provided with the ICAO AIS Manual (DOC 8126), also known as the "DONLON" data. When needed, the initial DONLON data has been altered or extended (e.g. to correct errors such as wrong coordinates or to provide additional features that are not contained in the ICAO data such as TACAN, displaced threshold, airspace aggregations, etc).

[3] The “Donlon” AIP Data Set specimen (EA_AIP_DS_FULL_20170701.xml) was provided through the following web site: www.gitHub.com/aixm/Donlon.

PART V –

PROVISION OF INSTRUMENT FLIGHT PROCEDURE DATA SETS

1. Introduction

1.1 The "Instrument Flight Procedure" data sets are defined in the ICAO Annex 15, 16th edition. Such data sets will contain the departure, arrival and approach procedure data for airports used for international air traffic, as published in the AIP. The PANS-AIM document contains an explicit list of the minimal subjects and properties that should be included in an IFP data sets.

1.2 The purpose of the Instrument Flight Procedures (IFP) Data Set is to ensure the minimum digital data necessary for efficiently and safely conducting the following operations:

- Flight planning
- Flight preparation
- Transition to/from en-route air navigation from/to the airport environment

2. Coding Specification for IFP data set

TBD

PART VI –

DATABASE DRIVEN CHARTING IMPLEMENTATION IN MID

(TBD)

PART VII –

COORDINATED DEPLOYMENT OF THE AIS DIGITAL DATA SETS IN MID REGION

In order to ensure a coordinated deployment of the digital AIS data sets in MID Region, there are three key aspects that require harmonization - “what to provide”, “how to provide it” and “when to provide it”.

1. What to provide as Digital AIS data sets

1.1 Like other AIS products, the provision of the digital AIS data sets requires precise coding rules. Only this can ensure interoperability and can give the necessary assurance to the end users that the data can be used safely and efficiently. Precise rules for the scope and the content will also allow the users to verify the data sets for compliance.

1.2 AIS Manual Volume 4 provides guidance for the digital data sets containing high-level guidance explaining the purpose and content of the coding specifications for each data set. For the detailed rules, the AIS Manual refers to the EUROCONTROL Specifications.

1.3 Conformance with the AIS Manual Volume 4 and EUROCONTROL Digital Data Set Specifications, when available, will ensure the harmonization of data set contents and scope in MID Region.

2. How to provide the digital AIS data sets

2.1 The 16th Edition of ICAO Annex 15 indicates that: "5.4.1.3 Recommendation. — Global communication networks such as the Internet should, whenever practicable, be employed for the provision of aeronautical information products."

2.2 PANS-AIM states that "Further guidance on digital data set distribution can be found in the Manual on System-wide Information Management (SWIM) Concept (Doc 10039)." While the current Doc 10039 – Manual on SWIM Concept - and its envisaged update, will in principle not contain domain-specific guidance such as for the provision of digital aeronautical dataset services. However, it is expected to contain guidance on the “transversal requirements” (common to all domains) with respect to SWIM information services. In addition, the Aeronautical Dataset service definition is included in the ICAO guidance material of AIS Manual, volume 4.

2.3 Digital data set provision services (TBD)

3. When to provide the Digital AIS data sets

3.1 MIDANPIRG AIM SG will propose a consensus on a harmonized deployment calendar in MID Region for the implementation of Digital AIS data sets to be as endorsed by MIDANPIRG.

4. Scope, Format, Coding Specification, and timelines for the provision of Digital Data Sets in MID Region

4.1 In order to achieve a harmonized deployment of the Digital AIS data sets in MID Region, it is necessary to have a common approach for digital data sets in terms of scope, structure and coding rules (the “what”), for the digital data set provision services (the “how”) and, as much as possible, for the implementation dates (the “when”). The agreed Scope, Format, Coding Specification, and timelines for the provision of Digital Data Sets in MID Region are summarized in the following table:

Data set category	Scope	Format	Coding Specification	Provision date	Transition Period for Removal of tables from AIP
AIP data set	GEN 2.5, ENR 2.1, ENR 3.1, ENR 3.2, ENR 3.3, ENR 3.4, ENR 4.1, ENR 4.2, ENR 4.4, ENR 4.5, ENR 5.1, ENR 5.2, ENR 5.3.1, ENR 5.3.2, ENR 5.5, AD 2.17, AD 2.19, AD 3.16, AD 3.18	AIXM 5.1/5.1.1	EUROCONTROL Specification on AIP Dataset https://ext.eurocontrol.int/aixm_confluence/display/ACGAIP/Overview	2030	5 years from the provision date of the AIP data set
Obstacle data set	Area 1: the entire territory of a State Areas 4, 2a + TKOF flight path + OLS for aerodromes regularly used by international civil aviation	AIXM 5.1/5.1.1	AIXM coding guidelines for obstacle data sets. https://ext.eurocontrol.int/aixm_confluence/	2018	5 years from the provision date of the AIP data set
	Areas 2b, 2c , 2d and 3 For aerodromes regularly used by international civil aviation			left to the discretion of each State	
Terrain data set	Area 1: the entire territory of a State Areas 4, 2a + TKOF flight path + OLS for aerodromes regularly used by international civil aviation	GeoTIFFor ESRI ASCII Grid	NA	2018	Not applicable
	Areas 2b, 2c , 2d and 3 For aerodromes regularly used by international civil aviation			left to the discretion of each State	
Aerodrome mapping data set	For aerodromes regularly used by international civil aviation	AIXM 5.1.1 and/or AMXM	https://ext.eurocontrol.int/aixm_confluence/display/ACGAMD/Information+exchange+models	left to the discretion of each State	Not applicable
IFP data set	a) procedure (all properties); b) procedure segment (all properties); c) final approach segment (all properties); d) procedure fix (all properties); e) procedure holding (all properties); and f) helicopter procedure (all properties) and the data publication requirements contained in PANS-OPS, Doc 8168, Volume II	AIXM 5.2	TBD	TBD	5 years from the provision date of the AIP data set

5. National Plans for the provision of Digital Data Sets

5.1 To monitor the implementation status of Digital Data Sets in the MID Region, States are encouraged to develop a National Plan for the provision of Digital Data Sets, including a detailed timetable for delivering all required digital AIS data sets. The National Plan should be structured as an Excel sheet containing the following elements. For ease of reference, a template is provided in Appendix B to assist States in preparing their plans.

1 Name of the State.
2 AIP Data Set
3 Obstacle Data Set for area 1
4 Obstacle Data Sets for airports (area 2, 3, 4, as applicable)
5 Instrument Flight Procedures Data Sets (IFPD)
6 Airport Mapping Data Sets (AMD)
7 Terrain Data Set for area 1
8 Terrain Data Sets for airports (area 2, 3, 4, as applicable)
9 Removal of AIP tables
10 Date of last update/review

Each element of 2 to 8 provides Provision date, Specification / Format and Remarks. Element 9 indicates the States' decision to remove AIP tables and the list of tables to be removed. The last element shows the date of the last update.

5.2 The status of implementation is updated on a regular basis and monitored by the AIMDP TF/AIM SG and reported to MIDANPIRG.

Appendix A –

References

[RD 1] ICAO Annex 15 Aeronautical Information Services, sixteenth edition (July 2018).

[RD 2] ICAO PANS AIM (Doc 10066), first edition (2018), incl. Amendment 1 (November 2021).

[RD 3] ICAO Aeronautical Information Services Manual (Doc 8126), seventh edition, 2022

[RD 4] ICAO Annex 4 Aeronautical Charts, eleventh edition (July 2016).

[RD 5] GANP Portal - Global Air Navigation Plan

[RD 6] EUROCONTROL -The Guidelines for harmonised AIP publication and data set provision

[RD 7] EUROCONTROL Terrain and Obstacle Data Manual, Ed. 3.0 (June 2021).

[RD 8] AIP and Obstacle Data Sets Interoperability Rules (AIXM Coding Guidelines - Work area Obstacle Data Set - Interoperability Rules)

https://ext.eurocontrol.int/aixm_confluence/display/ACGAIP/Data+set+files

Appendix B –

National Plan for the provision of Digital Data Sets

National Plan
Template for DDS pro

APPENDIX 5A

MID REGION DAIM IMPLEMENTATION STATUS

Updated on January 2025

STATE	B1/1 Provision of quality-assured aeronautical data and information		%	B1/3 Provision of terrain digital data sets			%	B1/4 Provision of obstacle digital data sets			%	DAIM %
	AIXM DB	SLA		Area 1	Area 4	2a/TOFP/OLS		Area 1	Area 4	2a/TOFP/OLS		
BHR	FI	FI	100	FC	FC	FI	100	FC	FC	FI	100	**100**
EGY	NI	FI	50	FC	NC	NI	33.3	NC	NC	NI	0	**27.7**
IRN	NI	FI	50	FC	FC	NI	66.6	FC	FC	NI	66.6	**61**
IRQ	NI	NI	0	NC	NC	NI	0	NC	NC	NI	0	**0**
JOR	FI	FI	100	NC	NC	NI	0	NC	NC	NI	0	**33.3**
KWT	NI	FI	50	FC	FC	NI	66.6	FC	FC	NI	66.6	**61**
LBN	NI	FC	50	NC	N/A	NI	0	NC	N/A	NI	0	**16.6**
LBY	NI	NI	0	NC	N/A	NI	0	NC	N/A	NI	0	**0**
OMN	FI	FI	100	NC	N/A	NI	0	NC	N/A	NI	0	**33.3**
QAT	FI	FC	100	FC	FC	FI	100	FC	FC	FI	100	**100**
SAU	FC	FC	100	FC	N/A	FI	100	FC	N/A	FI	100	**100**
SDN	FI	FI	100	NC	N/A	NI	0	NC	N/A	NI	0	**33.3**
SYR	NI	NI	0	NC	N/A	NI	0	NC	N/A	NI	0	**0**
UAE	FI	FI	100	FC	FI	FI	100	FC	FI	FI	100	**100**
YEM	NI	NI	0	NC	N/A	NI	0	NC	N/A	NI	0	**0**
Regional Implementation			**60**	**Regional Implementation**			**37.7**	**Regional Implementation**			**35.5**	**44.4**

Module	Elements	Bahrain	Egypt	Iran	Iraq	Jordan	Kuwait	Lebanon	Libya	Oman	Qatar	Saudi Arabia	Sudan	Syria	UAE	Yemen
B1-DAIM	B1/1															
	B1/3															
	B1/4															

Average Regional Implementation is **44.4%**.

Calculation of DAIM implementation (% rate)

SAMPLE

B1/1 – Provision of quality-assured aeronautical data and information					
State	**Sub-Elements**	***component***	***weighting factor***	***% of implementation***	***B1/1 implementation Σ (1, 2,3, 4)/4***
X	AIXM			100	100%
	SLA (50% of data originators)			100	
Y	AIXM			0	50%
	SLA (50% of data originators			100	
Z	AIXM			100	50%
	SLA(50% of data originators)			0	
Regional average Implementation status of DAIM B1/1 (provision of quality-assured aeronautical data and information)					**Σ (%)/number of States = 66.6%**

Table 2

SAMPLE

State	B1/3 : Provision of digital terrain data sets			% of Terrain digital datasets implementation Σ (1, 2 4)/3x % or Σ (1, 2)/2x %	B1/4: Provision of digital obstacle data sets			% of Terrain digital datasets implementation Σ (1, 2 4)/3x % or Σ (1, 2)/2x %
	Area 1	Area 4	2a/TOFP/OLS		Area 1	Area 4	2a/TOFP/OLS	
X	100%	100%	100%	100%	100%	100%	100%	100%
Y	100%	N/A[1]	0%	50%	0%	0%	0%	0%
Z	100%	50%[2]	40%[3]	63%[4]	100%	0%	20%[5]	40%
Regional average Implementation status of DAIM B1/3 (Provision of Terrain digital datasets)				**Σ (%)/number of States = 76.7%**	**Regional average Implementation status of DAIM B1/4 (Provision of obstacle digital datasets)**			**Σ (%)/number of States = 46.7%**

(1) N/A: Not Applicable
(2) 50% of international aerodrome where digital terrain data sets are provided for Area 4.
(3) 40% of international aerodrome where digital terrain data sets are provided for areas 2a/TOFP/OLS.
(4) 63%: the percentages in the table is calculated as the sum of percentages of implementation (100%+50%+ 40%= 190/3)
(5) 20% of international aerodromes where digital obstacle data sets are provided for areas 2a/TOFP/OLS.

DAIM Digital Aeronautical Information Management

In order to assist States in the planning for the transition from AIS to AIM in an expeditious manner, the following Tables, should be used:

1- **Table DAIM 3-1** sets out the requirements for the Provision of AIS/AIM products and services based on the Integrated Aeronautical Information Database (IAID). It reflects the transition from the current product centric AIS to data centric AIM. For the future digital environment, it is important that the authoritative databases are clearly designated and such designation must be published for the users. This is achieved with the concept of the Integrated Aeronautical Information Database (IAID), a single access point for one or more authoritative databases (AIP, Terrain, Obstacles, AMDB, data-driven charting, etc.) for which the State is responsible. This Table will be used for the monitoring of the GANP and MID Region Air Navigation Strategy element DAIM-B1/1.

2- **Table DAIM 3-2** sets out the requirements for aeronautical data quality. It will be used for the monitoring of the GANP and MID Region Air Navigation Strategy element DAIM-B1/1.

3- **Table DAIM 3-3** sets out the requirements for the implementation of the World Geodetic System – 1984 (WGS-84). The requirement to use a common geodetic system remains essential to facilitate the exchange of data between different systems. The expression of all coordinates in the AIP and charts using WGS-84 is an important first step for the transition to AIM. This Table will be used for the monitoring of the GANP and MID Region Air Navigation Strategy element DAIM-B1/1.

4- **Table DAIM 3-4-1** sets out the requirements for the provision of Terrain and Obstacle data sets for Area 1 and Area 4. It will be used for the monitoring of the GANP and MID Region Air Navigation Strategy elements DAIM-B1/3 and DAIM-B1/4.

5- **Table DAIM 3-4-2** sets out the requirements for the provision of Terrain and Obstacle data sets for Area 2. It will be used for the monitoring of the GANP and MID Region Air Navigation Strategy elements DAIM-B1/3 and DAIM-B1/4.

6- **Table DAIM 3-4-3** sets out the requirements for the provision of Terrain and Obstacle data sets for Area 3 and implementation of Airport Mapping Databases (AMDB). It will be used for the monitoring of the GANP and MID Region Air Navigation Strategy elements DAIM-B1/3, DAIM-B1/4 and B1/5.

Table DAIM 3-1

Provision of AIS/AIM products and services based on the Integrated Aeronautical Information Database (IAID)

EXPLANATION OF THE TABLE

Column:

1 Name of the State or territory for which the provision of AIS/AIM products and services based on the IAID is required.

2 Requirement for the implementation and designation of the authoritative IAID, shown by:
FI – Fully Implemented
PI – Partially Implemented
NI – Not Implemented

Note 1 — The IAID of a State is a single access point for one or more databases (AIP, Terrain, Obstacles, AMDB, etc.). The minimum set of databases which should be integrated is defined in Annex 15.

Note 2 — The information related to the designation of the authoritative IAID should be published in the AIP (GEN 3.1)

3 Requirement for an IAID driven AIP production, shown by:
FI – Fully Implemented (eAIP: Text, Tables and Charts)
PI – Partially Implemented
NI – Not Implemented

Note 3 — AIP production includes, production of AIP, AIP Amendments and AIP Supplements

Note 4 — Charts' GIS-based database should be interoperable with AIP database

4 Requirement for an IAID driven NOTAM production, shown by:
FC – Fully Compliant
NC – Not Compliant

5 Requirement for an IAID driven SNOWTAM processing, shown by:
FI – Fully Implemented
NI – Not Implemented

6 Requirement for an IAID driven PIB production, shown by:
FC – Fully Compliant
PC – Partially Compliant
NC – Not Compliant

7 Requirement for Procedure design systems to be interoperable with the IAID, shown by:
FI – Fully Implemented
PI – Partially Implemented
NI – Not Implemented

Note 5 — full implementation includes the use of the IAID for the design of the procedures and for the storage of the encoded procedures in the IAID

8 Requirement for ATS systems to be interoperable with the IAID, shown by:
FI – Fully Implemented

PI – Partially Implemented

NI – Not Implemented

9 Action Plan — short description of the State's Action Plan with regard to the provision of AIM products and services based on the IAID, especially for items with a "PC", "PI", "NC" or "NI" status, including planned date(s) of full compliance, as appropriate.

10 Remarks — additional information, including detail of "PC", "NC", "PI" and "NI", as appropriate.

TABLE DAIM-3-1

Provision of AIS/AIM products and services based on the Integrated Aeronautical Information Database (IAID)

State	IAID	AIP	NOTAM	SNOWTAM	PIB	Procedure Design	ATS	Action Plan	Remarks
1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*
BAHARAIN	FI	FI	FC	FI	FC	FI	FI		**AIXM:** 5.1
EGYPT	FI	PI	FC	FI	FC	PI	PI		**AIXM:** 5.1 (by 2020) 3 and 7 by 2020
IRAN,	NI	NI	NC	NI	NC	NI	NI		**AIXM:** NI Separate semi-automated NOTAM/SNOWTAM system is operative
IRAQ	NI	NI	NC	NI	NC	NI	NI		**AIXM:** NI
JORDAN	FI	NI	FC	FI	FC	NI	NI	2021	**AIXM:** 4.5 (through EAD)
KUWAIT	NI	NI	FC	NI	PC	NI	NI		**AIXM:** NI (5.1 in progress)
LEBANON	NI	NI	NC	NI	NC	NI	NI		**AIXM:** 4.5
LIBYA	NI	NI	NC	NI	NC	NI	NI		**AIXM:** NI
OMAN	NI	NI	NC	NI	NC	NI	NI	Apr 2021	**AIXM:** NI (5.1 in progress)
QATAR	PI	PI	FC	NI	FC	PI	NI	2021 – Data Integration (AIP, Terrain, Obstacle, Procedure Design and AMDB)	**AIXM:** 5.1
SAUDI ARABIA	NI	NI	NC	NI	NC	NI	NI	AIXM 5.1 & NOTAM: 2020	**AIXM:** 4.5
SUDAN	FI	FI	FC	NI	FC	FI	FI		**AIXM:** 5.1
SYRIA	NI	NI	NC	NI	NC	NI	NI	No Action Plan	**AIXM:** NI
UAE	FI	FI	NC	NI	PC	NI	PI	PIB: AVBL at OMAA, OMDB, OMDW, OMFJ, other	**AIXM:** 5.1.1

State	IAID	AIP	NOTAM	SNOWTAM	PIB	Procedure Design	ATS	Action Plan	Remarks
1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*
								ADs 2025 onwards Procedure Design: 2025 onwards ATS: ACC AVBL, ADs 2025 onwards NOTAM and SNOWTAM: 2027 onwards	
YEMEN	NI	NI	NC	NI	NC	NI	NI	No Action Plan	**AIXM:** NI

Table DAIM-3-2
Aeronautical Data Quality

EXPLANATION OF THE TABLE

Column:

1 Name of the State or territory.

2 Compliance with the requirement for implementation of QMS for Aeronautical Information Services including safety and security objectives, shown by:

FC – Fully compliant

NC – Not compliant

3 Compliance with the requirement for the establishment of formal arrangements with approved data originators concerning aeronautical data quality, shown by:

FC – Fully compliant

PC – Partially compliant

NC – Not compliant

4 Implementation of digital data exchange with originators, shown by:

FI – Implemented

PI – Partially Implemented

NI – Not implemented

Note 1 — Information providing detail of "PI" and "NI" should be given in the Remarks column (percentage of implementation).

5 Compliance with the requirement for metadata, shown by:

FC – Fully compliant

PC – Partially compliant

NC – Not compliant

6 Compliance with the requirements related to aeronautical data quality monitoring (accuracy, resolution, timeliness, completeness), shown by:

FC – Fully compliant

PC – Partially compliant

NC – Not compliant

7 Compliance with the requirements related to aeronautical data integrity monitoring, shown by:

FC – Fully compliant

PC – Partially compliant

NC – Not compliant

8 Compliance with the requirements related to the AIRAC adherence, shown by:

FC – Fully compliant

NC – Not compliant

9 Action Plan — short description of the State's Action Plan with regard to aeronautical data quality requirements implementation, especially for items with a "PC", "PI", "NC" or "NI" status, including planned date(s) of full compliance, as appropriate.

10 Remarks — additional information, including detail of "PC", "NC", "PI" and "NI", as appropriate.

TABLE DAIM-3-2
Aeronautical Data Quality

State	QMS	Establishment of formal agreements	Digital data exchange with originators	Metadata	Data quality monitoring	Data integrity monitoring	AIRAC adherence	Action Plan	Remarks
1	2	3	4	5	6	7	8	9	10
BAHARAIN	FC	FC	FI	FC	FC	FC	FC		
EGYPT	FC	FC	PI	FC	PC	PC	FC	4, 6 and 7 by 2022	
IRAN,	FC	PC	NI	NC	FC	FC	FC		
IRAQ	NC	PC	NI	NC	NC	NC	FC		
JORDAN	FC	PC	NI	FC	FC	FC	FC	3, 4: 2021	
KUWAIT	FC	PC	NI	NC	NC	NC	FC		
LEBANON	NC	PC	NI	PC	PC	PC	FC		
LIBYA	NC	NC	NI	NC	NC	NC	NC	No Action Plan	
OMAN	FC	PC	NI	NC	PC	PC	FC	Apr 2021	
QATAR	FC	PC	NI	FC	FC	FC	FC	4: 2021, 3: 2020	
SAUDI ARABIA	FC	FC	NI	FC	FC	FC	FC	4: 2020	
SUDAN	FC	FC	PI	FC	FC	FC	FC	4: 2021	
SYRIA	NC	NC	NI	NC	NC	NC	NC	No Action Plan	
UAE	FC	FC	PI	FC	FC	FC	FC	Digital data exchange with originators: implemented for some of internal stakeholders. Completion by 2027 onwards	
YEMEN	NC	NC	NI	PC	NC	NC	NC	No Action Plan	

Table DAIM-3-3

World Geodetic System-1984 (WGS-84)

EXPLANATION OF THE TABLE

Column:

1 Name of the State or territory for which implementation of WGS-84 is required.

2 Compliance with the requirements for implementation of WGS-84 for FIR and En-route points, shown by:

FC – Fully compliant

PC – Partially compliant

NC – Not compliant

3 Compliance with the requirements for implementation of WGS-84 for Terminal Areas (arrival, departure and instrument approach procedures), shown by:

FC – Fully compliant

PC – Partially compliant

NC – Not compliant

4 Compliance with the requirements for implementation of WGS-84 for Aerodrome, shown by:

FC – Fully compliant

PC – Partially compliant

NC – Not compliant

5 Compliance with the requirements for implementation of Geoid Undulation, shown by:

FC – Fully compliant

PC – Partially compliant

NC – Not compliant

6 Action Plan — short description of the State's Action Plan with regard to WGS-84 implementation, especially for items with a "PC", "PI", "NC" or "NI" status, including planned date(s) of full compliance, as appropriate.

7 Remarks — additional information, including detail of "PC" and "NC", as appropriate.

TABLE DAIM-3-3
World Geodetic System-1984 (WGS-84)

State	FIR/ENR	Terminal	AD	GUND	Action Plan	Remarks
1	2	3	4	5	6	7
BAHARAIN	FC	FC	FC	FC		
EGYPT	FC	FC	FC	FC		
IRAN	FC	FC	FC	FC		
IRAQ	FC	FC	FC	NC		
JORDAN	FC	FC	FC	FC		
KUWAIT	FC	FC	FC	FC		Last survey FEB 2015
LEBANON	FC	FC	FC	FC		
LIBYA	PC	PC	NC	NC	No Action Plan	
OMAN	FC	FC	FC	FC		
QATAR	FC	FC	FC	FC		Annual Validation/Survey
SAUDI ARABIA	FC	FC	FC	FC		
SUDAN	FC	FC	FC	FC		
SYRIA	FC	FC	FC	NC	No Action Plan	
UAE	FC	FC	FC	FC		
YEMEN	FC	FC	FC	FC		

Table DAIM-3-4-1
Provision of Terrain and Obstacle data sets for Areas 1 and 4

EXPLANATION OF THE TABLE

Column

1 Name of the State or territory for which Terrain and Obstacle data sets for Areas 1 and 4 are required.

2 Compliance with requirement for the provision of Terrain data sets for Area 1, shown by:
FC – Fully Compliant
PC – Partially Compliant
NC – Not Compliant

3 Compliance with requirement for the provision of Terrain data sets for Area 4, shown by:
FC – Fully Compliant
PC – Partially Compliant
NC – Not Compliant
N/A – Not Applicable

4 Compliance with requirement for the provision of Obstacle data sets for Area 1, shown by:
FC – Fully Compliant
PC – Partially Compliant
NC – Not Compliant

5 Compliance with requirement for the provision of Obstacle data sets for Area 4, shown by:
FC – Fully Compliant
PC – Partially Compliant
NC – Not Compliant
N/A – Not Applicable

6 Action plan — short description of the State's Action Plan with regard to compliance with the requirements for provision of Terrain and Obstacle data sets for Areas 1 and 4, especially for items with a "PC" or "NC" status, including planned date(s) of full compliance, as appropriate.

7 Remarks— additional information, including detail of "PC" and "NC", as appropriate.

TABLE DAIM-3-4-1

Provision of Terrain and Obstacle data sets for Areas 1 and 4

State	Terrain data sets		Obstacle data sets		Action Plan	Remarks
	Area 1	Area 4	Area 1	Area 4		
1	2	3	4	5	6	7
BAHARAIN	FC	FC	FC	FC		
EGYPT	FC	FC	NC	NC	Completion of area 4 (HECA & HESH): Dec. 2019	
IRAN	FC	FC	FC	FC		
IRAQ	NC	NC	NC	NC		
JORDAN	PC	PC	NC	NC	2021	
KUWAIT	FC	FC	FC	FC		
LEBANON	NC	N/A	NC	N/A	2 & 4: Q2-2019	
LIBYA	NC	N/A	NC	N/A		
OMAN	NC	N/A	NC	N/A	Apr 2021	
QATAR	FC	FC	FC	FC		
SAUDI ARABIA	FC	FC	FC	FC		
SUDAN	NC	N/A	NC	N/A	2021	
SYRIA	NC	N/A	NC	N/A	No Action Plan	
UAE	FC	FC	FC	FC		
YEMEN	NC	N/A	NC	N/A	No Action Plan	

Table DAIM-3-4-2

Provision of Terrain and Obstacle data sets for Area 2, the take-off flight path area (TOFP) and the obstacle limitation surfaces (OLS)

EXPLANATION OF THE TABLE

Column

1 Name of the State or territory for which Terrain and Obstacle data sets for Area 2 are required.

2 Compliance with requirement for the provision of Terrain data sets for Area 2a, shown by:
FC – Fully Compliant
PC – Partially Compliant
NC – Not Compliant

3 Compliance with requirement for the provision of Terrain data sets for Area 2b, shown by:
FI – Fully Implemented
PI – Partially Implemented
NI – Not implemented
N/A – Not Applicable

4 Compliance with requirement for the provision of Terrain data sets for Area 2c, shown by:
FI – Fully Implemented
PI – Partially Implemented
NI – Not Implemented
N/A – Not Applicable

5 Compliance with requirement for the provision of Terrain data sets for Area 2d, shown by:
FI – Fully Implemented
PI – Partially Implemented
NI – Not Implemented
N/A – Not Applicable

6 Compliance with requirement for the provision of Terrain data sets for the take-off flight path area (TOFP), shown by:
FI – Fully Implemented
PI – Partially Implemented
NI – Not Implemented
N/A – Not Applicable

7 Compliance with requirement for the provision of Terrain data sets for the obstacle limitation surfaces (OLS) shown by:
FI – Fully Implemented
PI – Partially Implemented
NI – Not Implemented
N/A – Not Applicable

8 Compliance with requirement for the provision of Obstacle data sets for Area 2a, shown by:

FC – Fully Compliant
PC – Partially Compliant
NC – Not Compliant

9 Compliance with requirement for the provision of Obstacle data sets for Area 2b, shown by:

FI – Fully Implemented
PI – Partially Implemented
NI – Not implemented
N/A – Not Applicable

10 Compliance with requirement for the provision of Obstacle data sets for Area 2c, shown by:

FI – Fully Implemented
PI – Partially Implemented
NI – Not Implemented
N/A – Not Applicable

11 Compliance with requirement for the provision of Obstacle data sets for Area 2d, shown by:

FI – Fully Implemented
PI – Partially Implemented
NI – Not Implemented
N/A – Not Applicable

12 Compliance with requirement for the provision of Obstacle data sets for the take-off flight path area (TOFP), shown by:

FI – Fully Implemented
PI – Partially Implemented
NI – Not Implemented
N/A – Not Applicable

13 Compliance with requirement for the provision of Obstacle data sets for the obstacle limitation surfaces (OLS), shown by:

FI – Fully Implemented
PI – Partially Implemented
NI – Not Implemented
N/A – Not Applicable

14 Action plan — short description of the State's Action Plan with regard to compliance with the requirements for provision of Terrain and Obstacle data sets for Area 2, especially for items with a "PC", "PI", "NC" or "NI" status.

15 Remarks— additional information, including detail of "PC", "PI" and "NC", "NI", as appropriate.

TABLE DAIM-3-4-2

Provision of Terrain and Obstacle data sets for Area 2, the take-off flight path area (TOFP) and the obstacle limitation surfaces (OLS)

State	Terrain data sets						Obstacle data sets						Action Plan	Remarks
	Area 2a	Area 2b	Area 2c	Area 2d	TOFP	OLS	Area 2a	Area 2b	Area 2c	Area 2d	TOFP	OLS		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
BAHARAIN	FC	NI	NI	NI	FI	FI	FC	FI	FI	FI	FI	FI		
EGYPT	PC	PI	PI	PI	NI	NI	NC	NI	NI	NI	NI	NI	To be completed by 2022	
IRAN,	FC	FI	FI	FI	NI	NI	FC	FI	FI	FI	NI	NI		
IRAQ	NC	NI	NI	NI	NI	NI	NC	NI	NI	NI	NI	NI	To be completed by 2024	
JORDAN	NC	NI	NI	NI	NI	NI	NC	NI	NI	NI	NI	NI	To be completed by 2022	Area 2a, 2b and 2c implemented for OJAI RWY 26R/08L
KUWAIT	NC	NI	NI	NI	NI	NI	NC	NI	NI	NI	NI	NI		
LEBANON	NC	NI	NI	NI	NI	NI	NC	NI	NI	NI	NI	NI	To be completed by Dec 2021	
LIBYA	NC	NI	NI	NI	NI	NI	NC	NI	NI	NI	NI	NI	No Action Plan	
OMAN	NC	NI	NI	NI	NI	NI	NC	NI	NI	NI	NI	NI	Apr 2021	
QATAR	FC	FI	FI	FI	FI	FI	FC	FI	FI	FI	FI	FI		

SAUDI ARABIA	PC	PI	PI	PI	PI	PI	FC	FI	FI	FI	PI	PI	To be completed by 2021	Obstacle and terrain data sets for area 2a, TOFP and OLS are provided in: OERK, OEDF, OEMA, and OEJN
SUDAN	NC	NI	NI	NI	NI	NI	NC	NI	NI	NI	NI	NI	2021	
SYRIA	NC	NI	NI	NI			NC	NI	NI	NI			No Action Plan	
UAE	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC		
YEMEN	NC	NI	NI	NI	NI	NI	NC	NI	NI	NI	NI	NI	No Action Plan	

Table DAIM-3-4-3
Provision of Terrain and Obstacle data sets for Area 3 and Airport Mapping Databases (AMDB)

EXPLANATION OF THE TABLE

Column

1 Name of the State or territory for which Terrain and Obstacle data sets for Area 3 and AMDB are required.

2 Compliance with requirement for the provision of Terrain data sets for Area 3, shown by:
FI – Fully Implemented
PI – Partially Implemented
NI – Not Implemented
N/A – Not Applicable

3 Compliance with requirement for the provision of Obstacle data sets for Area 3, shown by:
FI – Fully Implemented
PI – Partially Implemented
NI – Not Implemented
N/A – Not Applicable

4 Implementation of AMDB, shown by:
FI – Fully Implemented
PI – Partially Implemented
NI – Not Implemented
N/A – Not Applicable

5 Action plan — short description of the State's Action Plan with regard to compliance with the requirements for provision of Terrain and Obstacle data sets for Area 3 and AMDB implementation, especially for items with a "PC", "PI", "NC" or "NI" status.

6 Remarks— additional information, including detail of "PI" and "NI", as appropriate.

TABLE DAIM-3-4-3

Provision of Terrain and Obstacle data sets for Area 3 and Airport Mapping Databases (AMDB)

State	Terrain data sets (Area 3)	Obstacle data sets (Area 3)	AMDB	Action Plan	Remarks
1	2	3	4	5	6
BAHARAIN	NI	FI	NI	To be completed by 2021	
EGYPT	NI	NI	NI	To be completed by 2022	
IRAN	FI	FI	NI	AMDB 2021	
IRAQ	NI	NI	NI		
JORDAN	PI	PI	NI		Area 3 implemented for OJAI RWY 26R/08L
KUWAIT	FI	FI	NI		
LEBANON	NI	NI	NI	Area 3: Q4-2019 AMDB: no plan	
LIBYA	NI	NI	NI	No Action Plan	
OMAN	NI	NI	NI	Apr 2021	
QATAR	FI	FI	PI	AMDB: 2021	
SAUDI ARABIA	PI	PI	NI	Area 3 2022	
SUDAN	NI	NI	NI	2021	
SYRIA	NI	NI	NI	No Action Plan	
UAE	FI	FI	NI	2025 onwards	AMDB technical infrastructure (metadata, model) implemented in IAID, pending compatibility analysis AIXM 5.1 with revised AMDB model (RTCA DO-272D) when released.
YEMEN	NI	NI	NI	No Action Plan	

-

DAIM: Digital Aeronautical Information Management

TABLE ASBU-MID-DAIM 3-1

Automated Data-Centric Environment

EXPLANATION OF THE TABLE

Column:

1 Name of the State or territory.

2 *Level of Automation*, shown by:

0 – Manual
1 – Data Centric
2 – Automated Workflow
3 – Full AIM Integration

Note 1 – Guidance on automation and description of different levels of automation are contained in Doc 8126 (Aeronautical Information Services Manual), Part II, Chapter 7 (7.4).

3 Implementation of *Automated processes - Data collection (interfaces with data originators)*, shown by:

FI – Fully Implemented: *when Data collection is at level 3 automation*
PI – Partially Implemented: *when Data collection is at level 1 or 2 automation*
NI – Not Implemented: *when Data collection is at level 0 automation*

Note 2 — Guidance on the levels of automation are contained in Doc 8126 (Aeronautical Information Services Manual), Part II, 7.4.

Note 3 — Additional guidance on the components of an automated AIM system (Data Input) are contained in Doc 8126 (Aeronautical Information Services Manual), Part II, 7.5.1.

4 Implementation of *Automated processes - Data processing*, shown by:

FI – Fully Implemented: *when Data processing is at level 3 automation*
PI – Partially Implemented: *when Data processing is at level 1 or 2 automation*
NI – Not Implemented: *when Data processing is at level 0 automation*

Note 5 — Guidance on the levels of automation are contained in Doc 8126 (Aeronautical Information Services Manual), Part II, 7.4.

Note 6 — Additional guidance on the components of an automated AIM system (Core Processing System and Data Storage) are contained in Doc 8126 (Aeronautical Information Services Manual), Part II, 7.5.2 and 7.5.3.

5 Implementation of *Automated processes - Data provision/distribution*, shown by:

FI – Fully Implemented: *when Data provision/distribution is at level 3 automation*
PI – Partially Implemented: *when Data provision/distribution is at level 1 or 2 automation*
NI – Not Implemented: *when Data provision/distribution is at level 0 automation*

Note 7 — Guidance on the levels of automation are contained in Doc 8126 (Aeronautical Information Services Manual), Part II, 7.4.

Note 8 — Additional guidance on the components of an automated AIM system (Data Product Preparation) are contained in Doc 8126 (Aeronautical Information Services Manual), Part II, 7.5.4.

6 Implementation of Automated data-centric environment based on (AIXM V5.1+), shown by:

FI – Fully Implemented: when State has migrated to AIM automated data-centric environment based on (AIXM V5.1+)

NI – Not Implemented: when no AIS database available or when State has not migrated to an AIM automated data-centric environment based on AIXM V5.1+

7 Action Plan – short description of the State's Action Plan with regard to the implementation of the items 2 to 5, especially for items with a "PI" or "NI" status, including planned date(s) of full implementation, as appropriate.

8 Remarks – additional information, including detail of "PI" and "NI", as appropriate.

State	**Level of Automation (Overall)**	**Automated Processes**			**Automated data-centric environment based on (AIXM V5.1+)**	**Action Plan**	**Remarks**
		Data collection (interfaces with data originators)	Data Processing	Data provision/ distribution			
1	***2***	***3***	***4***	***5***	***6***	***7***	***8***

TABLE ASBU-MID- DAIM-3-2

Aeronautical Data Quality

EXPLANATION OF THE TABLE

Column:

1 Name of the State or territory.

2 Implementation of Quality Assurance and Quality Control, shown by:

FC – Fully Compliant
PC – Partially Compliant
NC – Not Compliant

Note 1 – Guidance on the implementation of Quality Assurance and Quality Control are contained in Doc 8126 (Aeronautical Information Services Manual), Part II, Chapter 6.

3 Establishment of formal arrangements with originators, shown by:

FC – Fully Compliant
PC – Partially Compliant
NC – Not Compliant

Note 4 – Provisions and guidance on formal arrangements with originators are contained in Annex 15, 2.1.5 and Doc 8126, 3.3.
Note 5 – Fully compliant (FC) means that the AIS has established formal arrangements with all data originators.
Note 6 – Relevant data quality requirements should be considered in the formal arrangements with originators. Since the Aeronautical Data Catalogue contains all the data elements that the AIS manages, each one being assigned an owner, the AIS can use the Aeronautical Data Catalogue to systematically establish and document formal arrangements with all identified data originators.
Note 7 – Formal arrangements with originators should include requirements related to the provision of metadata.

4 Action Plan – short description of the State's Action Plan with regard to aeronautical data quality requirements implementation and the establishment of formal arrangements with originators, especially for items with a "PC" or "NC" status, including planned date(s) of full compliance, as appropriate.

5 Remarks – additional information, including detail of "PC" and "NC", as appropriate.

State	Quality Assurance /Quality Control	Formal Arrangement with Originators	Action Plan	Remarks
1	*2*	*3*	*4*	*5*

TABLE ASBU-MID - DAIM-3-3

Provision of Digital Data Sets

EXPLANATION OF THE TABLE

Column

1 Name of the State

2 Terrain Data Set for area 1

3 Terrain Data Sets for airports (area 4, as applicable)

4 Terrain Data Sets for airports (area 2a)

5 Terrain Data Sets for airports (TOFP area)

6 Terrain Data Sets for airports (OLS)

7 Obstacle Data Set for area 1

8 Obstacle Data Sets for airports (area 4, as applicable)

9 Obstacle Data Sets for airports (area 2a)

10 Obstacle Data Sets for airports (TOFP area)

11 Obstacle Data Sets for airports (OLS)

12 AIP data sets

12 Action plan — short description of the State's Action Plan with regard to compliance with the requirements for provision of Terrain and Obstacle data sets "PC" and "NC" status.

13 Remarks— additional information, including detail of "PC" and "NC"

Note – when status of implementation is reflected in the table, it is shown by: FC (Fully Compliant), PC (Partially Compliant), NC (Not Compliant), N/A (Not Applicable)

State	Terrain data sets					Obstacle data sets					AIP data sets	Action Plan	Remarks
	Area 1	Area 4	Area 2a	TOFP	OLS	Area 1	Area 4	Area 2a	TOFP	OLS			
1	2	3	4	5	6	7	8	9	10	11	12	13	14

APPENDIX 6A

AIMDP TF

LIST OF MAIN FOCAL POINT AND ALTERNATES

INDICATE: full name, title and organization, email address, and telephone number.

STATE	MAIN FOCAL POINT	ALTERNATE
BAHRAIN **REPLY EMAIL** **16/3/2025**	Ms. Hanan Hasan Falamarzi Chief AIM & Airspace Planning Bahrain Civil Aviation Affairs P.O. Box 586 Kingdom of Bahrain Tel: +973 17 321 180 Mob: +973 33364445 E-mail : hanan.falamarzi@mtt.gov.bh	Mohammed Ahmed Bu Zayed Head Aeronautical Information Operation Bahrain Civil Aviation Affairs P.O. Box 10325 Kingdom of Bahrain Tel: (+973) 17329037 Mob: (+973) 39684688 E-mail : mohammed.buzayed@mtt.gov.bh
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STATE	MAIN FOCAL POINT	ALTERNATE
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SYRIA		
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YEMEN		

ATTACHMENT A

ICAO MID

ATTACHMENT A

AIMDP TF/1

(Amman, Jordan, 20 – 21 January 2025)

List of Participants

State		Name	Title
Egypt	1.	Ehab Moheyeldin Hussin Azmy	Chairman of the Board of National Air Navigation Comp.
	2.	Tarek Abdellatif Hamed	AIS General Manager
	3.	Mootaz Abdelaziz A. Elnaggar	Head of AIS Sector
	4.	Abdelaziz Mahmoud Abdelaziz	General Manager of Airspace Affairs
	5.	Sameh Samir Mohamed Ahmed	ANS Inspector
Iraq	6.	Sabreen Ali Oudah	AIS
	7.	Hassan Hammoodi Ali	AIS
Jordan	8.	Raed Ghazawi	Chief AIS HQ
	9.	Tareq Okleh Abdalah Al Momani	Chief AIS
	10.	Munther Farhan Al-Qaisi	AIS NOF Office A.Chief
	11.	Tarik Mohammed Khalil Al-Rabee	AIS Officer
	12.	Mohammad Faris M. Obeidat	AIS Officer
	13.	Natasha Hanna Haddadin	AIS Officer
	14.	Areej Al Ajou	ANS Inspector
	15.	Mohieb Khaled Mohammad Bani Melhem	AIS Officer
	16.	Salameh.Alzboon	AIS officer
	17.	Mahmoud Mohammed Al-Ramini	AIS Officer
	18.	Hamzeh BaniSalamah	AIS officer
	19.	Asem Moh'd Uweineh	AIS officer
	20.	Tuqa Alamr	AIS officer
	21.	Sara Abu Rumman	AIS officer
Libya	22.	Said Ahmed Azabi	Head of Libyan AIP Unite
	23.	Emad Miftah Elqaddafi	Head of Notam Unit
	24.	Nagi Zaghdun	Head of Libyan AIS
	25.	Abdalhadi Abdallah Arebi	AIS Officer
	26.	Samir R. Rayes	AIS Auditor
Oman	27.	Mashaal Abdul Aziz Al-Balushi	AIM Director
	28.	Samiya Salim Al-Battashi	Act. Chief of Aeronautical Data Management
	29.	Ahmed M. Othman Al-Nabbani	AIS Senior Officer

State		Name	Title
Saudi Arabia	30.	Hadi Ahmad Alghamdi	AIP Head Section
	31.	Ibrahim S. Alshaia	AIM Manager
	32.	Mohamed Ali Ben Abdessalem	AIM Strategy Specialist
	33.	Hind Abulaziz Almohaimeed	ANS Senior Inspector
	34.	Sarah Alotaibi	AIP Analyst
	35.	Osama O. Alshotairi	AIP Supervisor
UAE	36.	Abdalla Al Rashdi	Director - AIM
	37.	Hamed Ali Al Zubaidi	Assistant Manager PANS-OPS
Organization/Industries			
ADI	38.	Sumit Khinranara	MD
IATA	39.	Lindi-Lee Kirkman	Head of Operations, ATM, and Infrastructure - AME
NGA	40.	Matthew Bourvic	International Aeronautical Representative
ICAO MID	41.	Mr. Radhouan Aissaoui	Regional Officer, Information Management (IM)

- END -