International Civil Aviation Organization

MIDANPIRG/21 & RASG-MID/11 Meetings

(Abu Dhabi, UAE, 4 – 8 March 2024)

Agenda Item 5.3: ANS (AIM, PBN, AGA-AOP, ATM-SAR, CNS and MET

AIM MATTERS

(Presented by the Secretariat)

SUMMARY

This paper presents the outcome of the AIM SG/10 meeting and the Workshop on Terrain and Obstacle Datasets (TOD).

Action by the meeting is at paragraph 3.

REFERENCES

– AIM SG/10 Report

1. INTRODUCTION

1.1 The Workshop on Terrain and Obstacle Datasets (TOD) has been conducted on 26-27 February 2024 at the ICAO MID Office in Cairo, Egypt. The workshop was held back-to-back with the Tenth Meeting of the Aeronautical Information Management Sub-Group (AIM SG/10) successfully organized at the same location from 28 to 29 February 2024, to facilitate participation of AIM experts who are planning to attend both events.

1.2 The workshop and the meeting were attended by a total of seventy-five (40) participants from 7 States (Egypt, Iran, Jordan, Libya, Oman, Saudi Arabia and UAE), (2) Organizations (IATA and IFATCA) and the industry (Boeing and ADL).

2. DISCUSSION

Workshop on Terrain and Obstacle Datasets (TOD)

2.1 The workshop recognized that there are significant challenges for States in achieving compliance with SARPs related to TOD. These challenges are wide-reaching in scope and relate to technical, institutional and implementation aspects which represent the main impediments to the advancement of TOD provisions in the MID Region:

- TOD Resources: Limited/scarce funding for Regulator/ANSP;
- Lack of training and qualified staff :
- Technical challenges (AIDB);
- Cross-border coordination issues ;
- Lack of guidance on TOD validation and verification, data maintenance and oversight;

- Lack of regulatory expertise to establish a National TOD policy in close coordination with the main TOD stakeholders identified at national level, e.g. National Geodetic Authority, Aerodrome Operators, Air Navigations Services Provider, etc..and
- Lack of TOD awareness and education to decision makers within States to create the political will to invest.

2.2 In order to facilitate TOD implementation and compliance, the participants asked that support and guidance be provided to address these issues and agreed that:

- Additional workshops and training focused on Digital Data sets including Terrain and Obstacle Data are essential and needed to ensure States compliance;
- Every State should develop a detailed TOD policy;
- Agreements with Data Originators and their certifications are key elements for successful implementation of TOD;
- Data Originators shall take the responsibility of the quality of the data produced and published;
- Data Sets alone is not sufficient as TOD deliverable in the digital environment. Absence of any element of Digital Data Set means data is incomplete (completeness includes DPS, Schema, Metadata, data sets and Exchange Model);
- The transition of AIS officers to data managers and the evolution of Aeronautical Information Management present exciting opportunities for the integration and use of advanced technologies, but it also demands a workforce equipped with new skills in information technology; and
- State CAA policy planners and decision-makers should be closely involved in the planning and implementation of TOD

Global/Regional Developments related to AIM

2.3 The AIM SG/10 meeting was apprised of the global and regional developments related to AIS/AIM, including relevant outcome of the WG-A of the ICAO Information Management Panel (IMP). The meeting was provided with a brief overview of the ICAO survey results on Moving from a Magnetic to a True North Reference System for Heading and Tracking in Aviation Operations.

ASBU Thread DAIM Implementation Monitoring

2.4 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 AIM implementation in MID Region and based on the info provided by States updated the MID eANP Volume III (DAIM Tables).

2.5 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	56.66 %	40 %	37.77 %

DAIM Thread Average	44.8 %

2.6 The AIM SG/10 meeting recalled that ICAO MID eANP Vol. III contains a section dedicated to AIM: B0-DATM related to the Service Improvement through Digital Aeronautical Information Management. The meeting consented that the monitoring tables became obsolete for the following reasons:

- The sixth edition of GANP replaces the thread DATM with the DAIM Digital Aeronautical Information Management, refining AIM implementation elements in a more consistent and comprehensive manner.
- The provision of these tables plans duplicates similar action at the ICAO MID regional level with the AIRM
- The monitoring should follow the evolution of the GANP and the revision of the MID Air Navigation Strategy.
- B0 does not exist anymore since the GANP Sixth Edition.

2.7 Consequently, the meeting agreed on the need to analyse the changes in the GANP and review the structure of -MID- B0-DATM Tables, develop appropriate tables for inclusion in ICAO eANP Vol. III. These tables should then be reviewed by the RANP/NANP TF and submitted for approval by the MIDANPIRG.

2.8 The meeting recalled that the first meeting of RANP/NANP TF (Cairo, Egypt, 19 - 22 February 2024) underlined the need for the MIDANPIRG Sub Groups to allocate enough time in their agenda for the detailed discussion of the ASBU Threads relevant to their technical areas, including the identification of priorities, definition of applicability areas, indicators, metrics, targets, etc.

2.9 In this regard, AIM SG/10 meeting agreed to create an action group to

- review the structure of ASBU-MID- B0-DATM Tables and develop appropriate tables for inclusion in ICAO eANP Vol. III; and
- analyse the ASBU DAIM Thread and Elements, including the identification of priorities, definition of applicability areas, indicators, metrics, targets, as well as the development of a SWOT analysis (Strengths, Weaknesses, Opportunities, Threats) for the ICAO ASBU (Aviation System Block Upgrade) DAIM (Data Analysis and Information Management) as well as the identification of KPAs and KPIs to enable States to organize the preparation of the ASBU DAIM Thread/Elements for its implementation, measure and document the efficiency benefits of the DAIM elements implemented.

2.10 Based on the above, the meeting agreed to the following Draft Decision:

Why	To review the structure of ASBU-MID- B0-DATM Tables and develop appropriate tables for inclusion in ICAO eANP Vol. III and analyse the ASBU DAIM Thread and Elements, including the identification of priorities, definition of applicability areas, indicators, metrics, targets,
What	To establish an Action Group

Who	MIDANPIRG/21
When	March 2024

DRAFT DECISION 10/X: MID REGION ASBU D-AIM ACTION GROUP

That:

a) *the ASBU D-AIM Action Group is established to:*
   i. *review and propose amendments to the MID Air Navigation Strategy parts related to AIM, including the identification of priorities, definition of applicability areas, indicators, metrics, targets, etc.,*
   ii. *review and update the structure of the current ASBU-MID- B0-DATM Tables;*
   iii. *support States in the development of their National Air Navigation Plans (NANP) parts related to AIM, through the development of sample SWOT analysis, identification of KPIs, baselines, solutions and targets*

b) *the Action Group is composed of the following Experts nominated by States/Organizations:*

— *Chairperson of the AIM SG*
— *Mr. Ali Tammam (Egypt)*
— *Mr. Eslam Elsayed Abdel Fatah (Egypt)*
— *Mr. Rouhallah Salehi (Iran)*
— *Mr. Mahmmad Mahanpour (Iran)*
— *Ms. Hind A. Almohaimeed (KSA)*
— *Mr. Ibrahim Alshaya (KSA)*
— *Mr. Hamed Al Zubaidi (UAE)*
— *Mr. Ahmed Saleh Alshehhi (UAE)*
— *Ms. Lindi-Lee Kirkman (IATA)*
— *ICAO Secretariat (rapporteur)*

NOTAM Template on GNSS interference

2.11 The AIM SG/10 meeting noted that, in recent times, the Middle East region has experienced an uptick in GPS spoofing events, raising concerns about potential security threats and navigational disruptions. These incidents involve the broadcast of GNSS-like signals that cause avionics to calculate erroneous positions and provide false guidance. The meeting recalled that the MIDANPIRG/20 endorsed through MIDANPIRG Conclusion 20/18 a NOTAM TEMPLATE FOR GNSS INTERFERENCE. Based on the recent new entry of GNSS Spoofing, the PBN SG/8 meeting held in Doha, Qatar, 12 - 13 December 2023, invited the AIM SG to consider updating the NOTAM Template for GNSS Interference to reflect the spoofing activities and its effect on safety of flight operations - for instance, ″GNSS MAY BE MISLEADING WITHIN″ for spoofing events.

2.12 Based on the above, the meeting agreed to the following Draft Conclusion:

DRAFTCONCLUSION 10/XX: REVISED NOTAM TEMPLATE FOR GNSS INTERFERENCE

Why	To update the NOTAM Template for GNSS Interference to reflect the spoofing activities and its effect on safety of flight operations.
What	Revised NOTAM template for GNSS interference
Who	MIDANPIRG/21
When	March 2024

DRAFT CONCLUSION 9/2: REVISED NOTAM TEMPLATE FOR GNSS INTERFERENCE

That,

a) ICAO and IATA in coordination with AIM SG Chairpersons to develop revised NOTAM template for GNSS interference including jamming and spoofing considering the global and regional developments ; and

b) ICAO MID Office circulate the revised NOTAM Template for GNSS interference through State Letter for implementation by States.

NOTAM TEMPLATE TO DISSIMINATE INFORMATION RELATED TO RISKS TO CIVIL AVIATION OVER OR NEAR CONFLICT ZONES

2.13 The AIM SG/10 meeting noted that following the outcome of the 41st Session of the ICAO Assembly in 2022, which supported the proposal to prioritize the review of Doc 10084 Risk Assessment Manual on Civil Aircraft Operations Over or Near Conflict Zones, taking into consideration the work conducted by international and regional groups and organizations, the ICAO Doc 10084 was then reviewed, amended and published in 2023 as a third edition of Doc 10084.

2.14 With the new Appendix G, Doc 10084 describes a systematically coordinated risk assessment and risk communication model that can be used by States. The model consists of three (3) risk levels with correlating governmental security measures expressed in a consistently structured risk communication text (including content, sequence and vocabulary).

2.15 Recalling that the twentieth Meeting of the Middle East Air Navigation Planning and Implementation Regional Group MIDANPIRG/20 (Muscat, Oman, 14 – 17 May 2023), endorsed through MIDANPIRG CONCLUSION 20/19, the NOTAM template to be used to disseminate information related to risks to civil aviation over or near conflict zones including the nature and extent of threats arising from the conflict and its consequences for civil aviation. The AIM SG/10 meeting has rightly recognised the need to follow the standardized lexicon in the publication of AIP, NOTAM or AIC products for a conflict zone to reduce operator confusion with understanding various State issued information-sharing and further agreed to the Draft Conclusion to replace and supersede the MIDANPIRG Conclusion 20/19:

Why	To reduce operator confusion with understanding various State issued information-sharing
What	Harmonized risk communication model and a standardized

	lexicon in the publication of AIP, NOTAM or AIC products to disseminate information related to risks to civil aviation over or near conflict zones
Who	MIDANPIRG/21
When	March 2024

DRAFT CONCLUSION 10/3: RISK COMMUNICATION MODEL TO DISSEMINATE INFORMATION RELATED TO RISKS TO CIVIL AVIATION OVER OR NEAR CONFLICT ZONES

That, the guidance contained in the Appendix G of the ICAO Doc 10084, Risk Assessment Manual on Civil Aircraft Operations Over or Near Conflict Zones, Third Edition, 2023, be used to disseminate information regarding the nature and extent of threats arising from the conflict and its consequences for civil aviation.

Digital Datasets Planning and Implementation

2.16 The meeting may wish to recall 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.

2.17 Based on the regional best practices and available provisions in ICAO and Eurocontrol guidance material, the DDI Ad-hoc WG finalised the drafting of Regional Implementation Plan for Digital Datasets at Appendix A , which is organised in several Parts, as follows:

Part 1 : General Aspects of Digital Aeronautical Data Sets

Part 2 : Provision of Terrain and Obstacle Data Sets

Part 3 : Provision of Aerodrome Mapping Data Sets (AMD)

Part 4 : Provision of Aeronautical Information Publication (AIP) Data Sets

Part 5 : Provision of Instrument Flight Procedure Data Sets

Part 6 : Database Driven Charting Implementation in MID Region

Part 7 : Coordinated Deployment of the Digital Data Sets in Mid Region

2.18 Each part provides information about coding rules, guidelines, limitations and possible workarounds for the data set. In addition, and to avoid complexity and reproduction of the existing material, relevant information are included together with the links to the websites as reference to help States finding useful resources. On top of that, the plan contains implementation steps of the digital data sets along with Data Set Specimen, as appropriate.

2.19 In order 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 DDI Ad-hoc WG provided the Scope, Format, Coding Specification, and timelines for the provision of Digital Data Sets in MID Region.

2.20 During the AIM SG/10 meeting, the progress report of the Digital Datasets Implementation Ad-hoc Working Group (DDI Ad-hoc WG) was thoroughly examined, considering the challenges identified by the states in the process. Recognizing the importance of addressing these challenges and the necessity to overcome them, the meeting proposed that the Working Group persist in its efforts towards devising unified solutions for the region

2.21 A consensus was also reached on a revised composition for the Digital Datasets Implementation Ad-hoc Working Group (DDI Ad-hoc WG). The objective is to guarantee active engagement and contributions from all the members since this task requires committed effort and buy-in from multiple stakeholders.

2.22 Based on the above, the AIM SG/10 meeting agreed to the following Draft Decision to replace and supersede the MIDANPIRG Decision 18/17:

Why	To finalise the Regional Implementation Plan for Digital Datasets taking into account the best practices and identified challenges and considering the Global and Regional developments
What	MID Regional Implementation Plan for Digital Datasets
Who	MIDANPIRG/21
When	March 2024

DRAFT DECISION 10/4: MID REGIONAL IMPLEMENTATION PLAN FOR DIGITAL DATASETS

That the DDI Ad-hoc WG,
a) finalise the Regional Implementation Plan for Digital Datasets taking into account the best practices and identified challenges and considering the Global and Regional developments; and
b) be composed of:

- *Chairperson of the AIM SG*
- *Ms. Hind A. Almohaimeed (KSA)*
- *Mr. Ibrahim Alshaya (KSA)*
- *Mr. Mohamed Ali Ben Abdessalem*
- *Mr. Hamed Al Zubaidi (UAE)*
- *Mr. Kedari Manthanwar (UAE)*
- *Mr. Taha Mohamed Taha (Egypt)*
- *Mr. Ali Tammam (Egypt)*
- *Mr. Mohamed Yasser Gawish (Egypt)*
- *Ms. Lindi-Lee Kirkman (IATA)*
- *Ms. Christine Groos (Boeing)*
- *Mr Sumit Khinvasara (IFAIMA)*
- *ICAO Secretariat (rapporteur)*

PBN Charting: SID/STAR

2.23 The AIM SG/10 meeting noted the outcomes of the PBN SG/8 in particular the discrepancies identified in PBN SID/STAR charts published in MID States' AIPs, including issues related to chart title, chart identification and PBN Box.

2.24 The AIM SG/10 meeting resoundingly endorsed the draft decision of the PBN SG/8 meeting to establish Ad Hoc Working Group, underscoring its commitment to proactively address pertinent issues. The meeting further supported the nomination of experts to join this crucial initiative.

3. ACTION BY THE MEETING

3.1 The meeting is invited to:

a) take of note of the major outcomes of the AIM SG/9 meeting and the Workshop on Terrain and Obstacle Datasets (TOD);

b) urge States to expedite implementation of DAIM Thread/Elements to achieve the regional targets included in the MID Region Air Navigation Strategy; and

c) endorse the proposed Draft Conclusions and Decision.

- END -