International Civil Aviation Organization

The First Meeting of the Aeronautical Information Management Digitalization & Planning Task Force (AIMDP TF1)

(Amman, Jordan, 20 – 21 January 2025)

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

MID Air Navigation Strategy and eANP Volume III (DAIM Tables)

(Presented by the secretariat)

SUMMARY

This paper proposes the introduction of new monitoring tables for the Aviation System Block Upgrades (ASBU) framework, as part of the updates to MID eANP Volume III.

Action by the meeting is at paragraph 3.

REFERENCES

- GANP 7th edition
- MID Region Air Navigation Strategy MID Doc 002 Edition March, 2024
- MIDANPIRG/21 Report

1. INTRODUCTION

1.1 The ICAO Assembly at its 41st Session, through Resolution A41-6, endorsed the 2023-2025 edition of the Global Air Navigation Plan (GANP) as the global strategic directions for safety and the evolution of the air navigation system.

1.2 Consequently, the first meeting of the RANP/NANP TF/1 held in Cairo, Egypt, 19-22 February 2024, reviewed and endorsed the draft of new edition of the MID Air Navigation Strategy (ICAO MID Doc 002) in line with GANP 7th Edition.

1.3 The meeting may wish to recall 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

2. DISCUSSION

2.1 The meeting may wish to note that the ASBU DAIM Thread/Elements and the monitoring table were updated in the revised MID Region Air Navigation Strategy (ICAO MID Doc 002), in line with the Global Air Navigation Plan (GANP 7th edition).

2.2 It should be reminded that ICAO MID eANP Vol. III contains dynamic/flexible plan elements related to the implementation of the air navigation system and its modernization in line with the ICAO Aviation System Block Upgrades (ASBUs) and associated technology roadmaps described in the Global Air Navigation Plan (GANP). The information contained in Volume III is related mainly to:

- Planning: objectives set, priorities and targets planned at regional or sub-regional levels;
- Implementation monitoring and reporting: monitoring of the progress of implementation towards targets planned. This information should be used as the basis for reporting purposes (i.e.: global and regional air navigation reports and performance dashboards); and/or
- Guidance: providing regional guidance material for the implementation of specific system/procedures in a harmonized manner.

2.3 The management of Volume III is the responsibility of the MIDANPIRG and should be used as a tool for monitoring and reporting the status of implementation of the elements planned here above, through the use of tables/databases. The status of implementation is updated on a regular basis as endorsed by the MIDANPIRG.

2.4 ICAO MID eANP Vol. III contains a section dedicated to AIM: B0-DATM related to the Service Improvement through Digital Aeronautical Information Management. It consists of the following tables:

- **Table B0-DATM 3-1** Provision of AIS/AIM products and services based on the Integrated Aeronautical Information Database (IAID)
- **Table B0-DATM 3-2** Aeronautical Data Quality
- **Table B0-DATM 3-3** World Geodetic System-1984 (WGS-84)
- **Table B0-DATM 3-4-1** Provision of Terrain and Obstacle data sets for Areas 1 and 4
- **Table B0-DATM 3-4-2** Provision of Terrain and Obstacle data sets for Area 2.
- **Table B0-DATM 3-4-3** Provision of Terrain and Obstacle data sets for Area 3 and Airport Mapping Databases (AMDB)

2.5 The above 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.

2.6 The MIDANPIRG/21 acknowledged the need to analyze the changes in the GANP, to review the structure of -MID- B0-DATM Tables and to develop appropriate tables for inclusion in ICAO eANP VolIII.

2.7 Therefore, as tasked by MIDANPIRG, the AIMDP TF should 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 following tables have been updated in alignment with the Seventh Edition of the Global Air Navigation Plan (GANP), now renamed B-DAIM, and are proposed as follows:

a) Table DAIM 3-1 Automated Data-Centric Environment and DAIM 3-2: Aeronautical Data Quality

These tables are developed to monitor the status of implementation of DAIM-B1/1 : Provision of quality-assured aeronautical data and information
This element ensures that processes, procedures and systems are improved to allow for an enhanced quality of aeronautical information products and services. This element includes:

1. Full move into an automated data-centric environment so that the management, processing, verification, usage and exchange can be done in a structured, automatic manner and human intervention is reduced.

State	Level of Automation (Overall)	Automated Processes			Action Plan	Remarks
		Data collection (interfaces with data originators)	Data Processing	Data provision/ distribution		
1	2	3	4	5	6	7

2. Aeronautical data and information is of high quality if it is aggregated and provided by authoritative sources. This requires to properly control relationships along the whole data chain from the origination to the distribution to the next intended user (formal arrangements with data originators, neighbouring States, data and information service providers and others).

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

b) Table DAIM 3-3: Provision of required Terrain and Obstacle data sets

This table is developed to monitor the status of implementation of DAIM-B1/3 related to the Provision of digital terrain data sets and DAIM-B1/4 related to the Provision of digital obstacle data sets.

DAIM-B1/3 element consists in the replacement of existing terrain data by digital terrain data sets. Therefore, this element supports the migration to a data-centric environment where terrain data will be provided in a digital form and in a structured way
DAIM-B1/4 element consists in the replacement of existing obstacle data by digital obstacle data sets. Therefore, this element supports the migration to a data centric environment where obstacle

data will be provided in a structured and digital form through the use through the use of information exchange models (e.g. AIXM).

State	Terrain data sets					Obstacle 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

2.9 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.

2.10 Following the review of the updated tables, the proposed changes, aligned with the Seventh Edition of the Global Air Navigation Plan (GANP) and renamed B-DAIM, will be submitted to the RANP-NANP TF for their review and consideration and will be forwarded to the MIDANPIRG for further discussion and endorsement.

3. ACTION BY THE MEETING

3.1 The meeting is invited to:

a) note and discuss the content of this working paper; and

b) review, update as necessary, and approve the proposed monitoring tables for the DAIM thread/elements, as outlined in **Appendix A**

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 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.

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

State	**Level of Automation (Overall)**	**Automated Processes**			**Action Plan**	**Remarks**
		Data collection (interfaces with data originators)	Data Processing	Data provision/ distribution		
1	***2***	***3***	***4***	***5***	***6***	***7***

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 required Terrain and Obstacle 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 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 for Terrain and Obstacle data sets, it is shown by: FC (Fully Compliant), PC (Partially Compliant), NC (Not Compliant), N/A (Not Applicable)

State	Terrain data sets					Obstacle 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

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