International Civil Aviation Organization

MIDANPIRG/20 and RASG-MID/10 Meetings

(Muscat, Oman, 14 – 17 May 2023)

Agenda Item 6.2: AIM

AIM MATTERS

(Presented by the Secretariat)

SUMMARY

This paper presents the outcome of the AIM SG/9 meeting.

Action by the meeting is at paragraph 3.

REFERENCES

– AIM SG/9 Report

1. INTRODUCTION

1.1 The Ninth Meeting of the MIDANPIRG AIM Sub-Group (AIM SG/9) was successfully held virtually from 20 to 21 September 2022.

1.2 The meeting was attended by a total of seventy-five (75) participants from fourteen (14) States (Bahrain, Egypt, Iran, Iraq, Jordan, Kuwait, Lebanon, Libya, Oman, Qatar, Saudi Arabia, Syria, UAE and Yemen) and three (3) Organizations (IATA, IFATCA and ICAO).

2. DISCUSSION

ICAO DOC 9991 – TRNG MANUAL

2.1 The AIM SG/9 meeting was apprised of the first edition (2023) of ICAO Doc 9991 Manual on Aeronautical Information Services Training, which has been published on ICAO portal. The meeting noted that this manual is aiming at individuals and organizations involved in the planning, design, delivery or evaluation of aeronautical information services (AIS) training or converting established training programmes to a competency-based approach. This manual describes also how the aeronautical information services providers (AISPs) can use the ICAO competency framework to establish an adapted competency model that is appropriate for regulatory, operational, technical, and organizational environments of an AIS.

2.2 To learn about and become familiar with the new AIS training Manual Doc9991 and to provide States and AISPs with guidance on how to identify the competencies necessary for their environment and how to design the training and assessment needed for various AIS training phases, the meeting proposed to conduct a webinar to provide insights on process for analysing local training needs and designing an adapted competency-based training and assessment (CBTA) model that is based on the

ICAO competency framework for AIS technical personnel. Accordingly, the meeting agreed to the following Draft Conclusion:

Why	To provide insights on the first edition (2023) of ICAO Doc 9991 Manual on Aeronautical Information Services Training.
What	Conduct a Webinar on Aeronautical Information Services Training Manual; First Edition, 2023.
Who	ICAO
When	2023

DRAFT CONCLUSION 9/1: WEBINAR* on AIM *TRAINING MANUAL, FIRST EDITION, 2023

That, a Webinar on the new ICAO DOC 9991 – Training Manual and competency-based training and assessment (CBTA) methodology for AIS be organized in 2023.

NOTAM Template on GNSS interference

2.3 The AIM SG/9 meeting recalled that GNSS/GPS Interference was published in 10th MID Annual Safety Report (2021) as one of the emerging safety risks in ICAO MID region and that the RASG-MID released the guidance material on GNSS vulnerabilities to mitigate the safety and operational impact of GNSS service disruption. The guidance recommends pilots to report GNSS interference and ANSP to issue appropriate advisories and NOTAM.

2.4 The AIM SG/9 meeting noted that a huge number of outage events were reported by pilots in 2021. NOTAM had been issued by Member States' NOFs for the purposes of reporting GNSS service status notification. Furthermore, the promulgated NOTAM related to GNSS had various Q codes and terminologies (GPS unreliable, GPS Signal interference, GPS Jamming, Loss of GPS Signal, etc.,) making it difficult for operators to filter and search through the NOTAM and hence, the MIDANPIRG/19 meeting tasked the AIM SG in coordination with IATA to develop a standard NOTAM template to be used for GNSS Interference and to be attached to the RSA-14.

2.5 The AIM SG/9 meeting reviewed and updated the proposed GNSS RFI NOTAM template as developed by the AIM NOTAM go-team.

2.6 To facilitate operators in filtering and searching through the NOTAM on GNSS Interference, the meeting agreed to the following Draft Conclusion:

Why	To provide States with a standard NOTAM template to be used for GNSS Interference to facilitate operators in filtering and searching through the NOTAM on GNSS Interference.
What	Standard NOTAM template to be used for GNSS Interference
Who	MIDANPIRG/20
When	May 2023

DRAFT CONCLUSION 9/2: NOTAM TEMPLATE FOR GNSS INTERFERENCE

*That, the NOTAM template at **Appendix A** be used to disseminate information on GNSS Interference*

NOTAM Template to Disseminate Information Related to Risks to Civil Aviation over or near Conflict Zones

2.7 The AIM SG/9 meeting recalled that the MID Region Safety Strategy is included in MID-RASP 2020-2022 Edition, which identified Safety Enhancement Initiatives (SEIs) mapped to the Strategy including their respective actions; and in order to address organizational challenges/issues, regional operational risks, and emerging risks, 16 SEIs and 51 actions have been included in the MID-RASP.

2.8 The AIM SG/9 meeting noted that Action 4 of the G2-SEI-06 related to the Impact of security on safety tasked the AIM SG to develop a standard NOTAM text template to be used to share threats information emanated from conflict zones within State's airspace to be presented for review to the SEIG/4 scheduled to held during period 23-25 Oct 2022, and further included in the MID-RASP 2023-2025 Edition.

2.9 The AIM SG/9 meeting reviewed and updated the proposed NOTAM template to be used to disseminate Conflict Zone Information developed by the AIM NOTAM go-team.

2.10 In line with the above and to support the regional effort for exchange and promulgation of information regarding the nature and extent of threats arising from the conflict and its consequences for civil aviation, the meeting agreed to the following Draft Conclusion:

Why	To provide States with a standard NOTAM text template to be used to share threats information emanated from conflict zones within MID State's airspace.
What	Standard NOTAM Template to disseminate information related to risks to civil aviation over or near Conflict Zones
Who	MIDANPIRG/20
When	May 2023

DRAFT CONCLUSION 9/3: NOTAM TEMPLATE TO DISSEMINATE INFORMATION RELATED TO RISKS TO CIVIL AVIATION OVER OR NEAR CONFLICT ZONES

*That, the NOTAM template at **Appendix B** 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.*

CCO CDO Publication and Charting Template

2.11 The AIM SG/9 meeting recalled that the Middle East Air Navigation Planning and Implementation Regional Group MIDANPIRG/19 (Riyadh, Saudi Arabia, 14 – 17 February 2022)

recognized the need for a harmonized AIP content related to CCO/CDO to ensure that identified good practices are shared and that Flight Crew / Flight Planners know where CCO/CDO-related text may be found in an AIP. MIDANPIRG/19 meeting agreed through MIDANPIRG Decision 19/11, to establish the CCO/CDO Ad Hoc Working Group tasked to develop guidance related to the publication of CCO/CDO information (text and Charts) in the AIP, in coordination with the relevant MIDANPIRG and RASG MID subsidiary bodies.

2.12 The Ad-hoc Working Group has developed a proposal for harmonized AIP location (ENR1.5 for high level content and AD2.21 / 2.22 for Airport specific content), structure and content, and database coding as per ICAO Doc8168 PANS-OPS, Volume II, Part III, Section 2, and Chapter 5 and based on the work undertaken by the European CCO/CDO Task Force.

2.13 The AIM SG/9 and the PBN SG/7 meetings reviewed the Ad-hoc Working Group proposal of harmonized location, structure and content of CCO/CDO material in the AIP along with charting and database coding.

2.14 Based on the foregoing, and in order to provide ANSPs and Aerodrome Operators with guidance on where to publish, what content to publish and the requisite information for airspace users to enable the further implementation of CCO/CDO in airspace under their jurisdiction, the meeting is invited to endorse the following Draft Conclusion:

Why	To ensure that identified good practices are shared and that Flight Crew / Flight Planners know where CCO/CDO-related text may be found in the State AIP
What	CCO/CDO harmonized AIP location, structure and content, Charting and database coding.
Who	MIDANPIRG/20
When	May 2023

DRAFT CONCLUSION 9/4: CCO/CDO PUBLICATION, CHARTING & DATABASE CODING

*That, the AIP CCO/CDO material, structure and content along with the Database coding and Charting at **Appendix C** are recommended for the dissemination of information on CCO/CDO.*

MID AIM Forum

2.15 The AIM SG/9 meeting recalled that under the MID RPTF Work Stream #4 the MID AIM Forum was established to allow for collaborative engagement on aeronautical information matters pertaining to the COVID restrictions and recovery. The MID RPFT work Stream #4 has since completed its mandate and been frozen.

2.16 The AIM SG/9 recognized that high quality Aeronautical Information is dependent on the cooperation and collaboration of data originators and data publishers to meet the data users' needs.

2.17 Based on the above, and given the need for collaborative discussion and engagement on aeronautical information in MID Region, the meeting agreed to the following Draft Decision:

Why	To strengthen and expand collaborative discussions and engagement on aeronautical information in MID Region
What	To establish MID AIM Forum
Who	MIDANPIRG/20
When	May 2023

DRAFT DECISION 9/5: ESTABLISHMENT OF MID AIM FORUM

That, MID AIM Forum:

a) be established to improve collaboration aiming at improving the Quality of Aeronautical Information through identifying and addressing the availability, consistency and accuracy of published aeronautical information and sharing of best practices and challenges in the MID Region; and

b) be composed of:
- *IATA, ICAO, IFAIMA and CANSO*
- *MID States (CAA and ANSP)*
- *Data users*
- *Organizations, with interests in MID aeronautical information/data and who provide subject matter experts as may be required, such as, but not limited to ACI, EUROCONTROL / Group EAD, IFALPA, IFATCA and IFATSEA.*

Digital Datasets Planning and Implementation

2.18 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.

2.19 The AIM SG/9 meeting reviewed the progress Report of the Digital Datasets Implementation Ad-hoc Working Group (DDI Ad-hoc WG), in particular, the proposed harmonized deployment of the Digital AIS data sets in MID Region, 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") and agreed to the following Draft Conclusion:

DRAFT CONCLUSION 9/6: MID REGIONAL IMPLEMENTATION PLAN FOR DIGITAL DATASETS

That,

a) the DDI Ad-hoc WG complete the Regional Implementation Plan for Digital Datasets by 31 December 2022;

b) the Regional Implementation Plan for Digital Datasets be circulated to Member States for review; and

c) the Regional Implementation Plan for Digital Datasets be consolidated and presented to MIDANPIRG/20 for endorsement.

2.20 The meeting may wish to note that, last year saw little progress towards finalising the draft MID Regional Implementation Plan for Digital Datasets. The lack of guidance and best practices, in

particular the Doc 8126, Part IV publication was delayed until summer 2023 and the relatively low level of worldwide implementation of Digital Data sets greatly impeded the progress. As a result, the Implementation Plan for Digital Datasets may lack consistency and may not produce reliable outcomes and may not provide guidance and tools for DDS planning and implementation at the Regional and National levels.

2.21 Based on the above, the meeting is invited to provide the DDI Ad-hoc WG with additional time to finalize the MID Regional Implementation Plan for Digital Datasets, and accordingly, agree to the following Draft Conclusion instead of the AIM SG/9 Draft Conclusion 9/6:

Why	To ensure reliable outcomes that add value to the MID Regional Implementation Plan for Digital Datasets
What	To finalize MID Regional Implementation Plan for Digital Datasets based on guidance and best practices to guide States along the way.
Who	DDI Ad-hoc WG
When	December 2023

DRAFT CONCLUSION 20/XX: MID REGIONAL IMPLEMENTATION PLAN FOR DIGITAL DATASETS

That,

a) the DDI Ad-hoc WG complete the Regional Implementation Plan for Digital Datasets by 31 December 2023; and

b) the Regional Implementation Plan for Digital Datasets be reviewed by the AIM SG before submission to MIDANPIRG for endorsement.

c)

ASBU Thread DAIM Implementation Monitoring

2.22 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).

2.23 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	70%	35%	35.5%
DAIM Thread Average	46.8%		

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;

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.

APPENDIX A

NOTAM TEMPLATE FOR GNSS INTERFERENCE

Item Q – Qualifier: the following qualifiers shall be mentioned in item Q:

Qualifier FIR: This Item shall contain the ICAO location indicator of the FIR within which the flights may be impacted by the RFI. If more than one FIR of the same country is impacted, the ICAO nationality letters of that country (e.g. OE) should be followed by 'XX'.

Qualifier NOTAM CODE: the following NOTAM code qualifiers (second and third letter) shall be used as appropriate for GNSS RFI event notification in the case of:

GNSS airfield specific operations – QGA [GNSS AIRFIELD]

GNSS area wide operations – QGW [GNSS AREA]

Followed by the appropriate fourth and fifth letters from the below list:

LF – interference from [INTERFERENCE FM]

AU – Not available (specify reason if appropriate) [NOT AVBL]

For cancellation NOTAM the following 4TH and 5th letters shall be used:

AK – Resumed normal operations [OKAY]

AL – Operative (or re-operative) subject to previously published limitations/conditions [OPR SUBJ PREVIOUS COND]

Qualifier TRAFFIC: the « IV » should be used as a traffic qualifier, indicating that both IFR and VFR traffic may be impacted by the RFI

Qualifier PURPOSE: the code NBO should be used to notify RFI events:

Qualifier SCOPE: Depending on the impacted area, one of the following codes should be used:

- A = if the event only impacts aerodrome(s) operations (used QGA)
- E = if the event only impacts en-route traffic (used QWA)
- AE = if the event impacts both Aerodrome and En-route traffic (used QWA)

Qualifier LOWER/UPPER: Depending on the jamming range and the traffic in the impacted area.

Qualifier GEOGRAPHICAL REFERENCE – Coordinates: this qualifier indicates the interference source coordinates. For NOTAM with 'Scope' 'A' the Aerodrome Reference Point (ARP) coordinates should be

inserted. For NOTAM with 'Scope' 'AE' or 'E' the centre of a circle whose radius encompasses the whole area of interference should be inserted.

Qualifier 'GEOGRAPHICAL REFERENCE' – Radius*: The radius of the impacted area should be inserted in this field.

Item A – Location

All FIR location indicators affected by the information should be entered in Item A), each separated by a space. In the case of a single FIR, the Item A) entry must be identical to the 'FIR' qualifier entered in Item Q). When an aerodrome indicator is given in Item A), it must be an aerodrome/heliport situated in the FIR entered in Item Q).

Item B – Start of Activity

A ten-digit date-time group giving the year, month, day, hour and minutes, at which the NOTAM comes into force, should be mentioned in Item B).

Item C – End of Validity

A ten-digit date-time group giving the year, month, day, hour and minute, at which the NOTAM ceases to be in force and becomes invalid, should be mentioned in Item C). This date and time should be later than that given in Item B).

Item E – NOTAM Text

The following standard text should be used according to Q-code:

QGAAU – GNSS NOT AVBL

QGWAU – GNSS NOT AVBL WITHIN: {specify route / geographical area (coordinates / waypoints)

or

QGALF – GNSS INTERFERANCE

QGWLF – GNSS INTERFERANCE WITHIN: specify route / geographical area (coordinates / waypoints)

When cancelling the NOTAM, the following standard text shall be used:

QGAAK or QGWAK – GNSS OKAY {when resuming normal operations}

QGAAL or QGWAK – GNSS OPR SUBJ PREVIOUS COND. {only to be used where conditions have been published}.

APPENDIX B

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

Item Q – Qualifier: the following qualifiers should be mentioned in item Q:

Qualifier FIR: This Item should contain the ICAO location indicator of the FIR within which the flights may be impacted.

Qualifier NOTAM CODE: the "QAFXX" should be used for conflict zone information.

Qualifier TRAFFIC: the « IV » should be used as a traffic qualifier, indicating that both IFR and VFR traffic are impacted

Qualifier PURPOSE: the code NBO should be used:

N = NOTAM selected for the immediate attention of flight crew members. Due to their importance, these NOTAM require the immediate attention of flight crew members. Flight crew members may request specific delivery of such NOTAM or their inclusion in specific Pre-flight Information Bulletins.

B = NOTAM of operational significance selected for PIB entry. The NOTAM will appear in a Pre-flight Information Bulletin containing all NOTAM relevant to a general Pre-flight Information Bulletin query. NOTAM qualified B, BO, or NBO will appear in the Pre-flight Information Bulletin.

O = NOTAM concerning flight operations. The NOTAM will appear in a PIB containing all relevant NOTAM. NOTAM with qualifiers BO or NBO will appear in the PIB.

Qualifier SCOPE: Navigation Warnings (W)

Qualifier LOWER/UPPER: Depending on the impacted area.

Qualifier GEOGRAPHICAL REFERENCE – Coordinates:

Item A – Location

The location indicators of FIR affected by the information should be entered in Item A

Item B – Start of Activity

A ten-digit date-time group giving the year, month, day, hour and minutes, at which the NOTAM comes into force, should be mentioned in Item B).

Item C – End of Validity

A ten-digit date-time group giving the year, month, day, hour and minute, at which the NOTAM ceases to be in force and becomes invalid, should be mentioned in Item C). This date and time should be later than that given in Item B).

Item E – NOTAM Text

SECURITY - HAZARDOUS SITUATION WI [State] / [name]FIR / AREA BOUND BY[coordinates/waypoints].

POTENTIAL RISK TO AVIATION FROM [REASON[1]]. FLIGHT OPERATIONS IN TO, OUT OF, WITHIN OR OVER THE DEFINED AREA ARE: RESTRICTED TO FLIGHTS AT OR ABOVE FLIGHT LEVEL [FL] WITH THE EXCEPTION[2] OF [ATS route designators] / PROHIBITED EXCEPT FOR [type of operations[3]]

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[1] Reason e.g. anti-aviation weaponry, military operations and armed conflicts
[2] Exceptions only included where applicable
[3] Types of operations e.g. military, humanitarian etc

APPENDIX C

CCO-CDO PUBLICATION, CHARTING & DATABASE CODING

Recommended AIP structure and content: ENR1.5

CCO/CDO application

- In every airport, where operationally feasible, RNAV SIDs and STARs will be published in order to facilitate CCO/CDO procedures. Where the publishing of CCO/CDO procedures is not available, CCO/CDO will be provided on a tactical basis wherever possible.

- Therefore, all aircraft are expected to fly a CCO/CDO profile to the extent possible. Compliance with CCO/CDO procedures is recommended provided they are compatible with ATC instructions and weather conditions are favourable.

- For more detailed information for each airport, see section 2.21 and 2.22 in the AD section of each aerodrome.

Recommended AIP structure and content: AD 2.21 / 2.22

Availability of published STAR procedures

- When the traffic situation permits and subject to ATC instructions, inbound aircraft are expected to fly a CDO profile during the hours of operation of each CDO arrival procedure to maintain as high an altitude as practical and adopt a low power, low drag, continuous descent approach profile.

- Outside of the published hours of operation and if the traffic situation allows, crews can ask specifically to perform CDO profiles and to maintain the speed as appropriate to facilitate the CDOs. This authorisation will be given whenever possible outside of those hours.

Published CDO arrival Procedures

- All published STARs can potentially be flown with a CDO profile, because STARs have mainly “at or above” altitude restrictions not forcing the aircraft to fly steady segments or to cross fixes at specified altitudes. Specified minimum procedure altitudes must be adhered unless cancelled by ATC.

- The crew shall comply with speed and altitude restrictions published or provided for the destination airport, unless specifically amended by ATC.

The above-proposed content should be considered an example with inclusion optional, depending on local needs and requirements. Figures are examples that can be tailored to specific ATM values depending upon local conditions.

Charting of Speed Constraint, Level Constraint and Distance-to-Go information

An example of Speed Constraint, Level Constraint and Distance-to-Go information chart depiction is provided at appendix 3A.

Note : Distance-to-Go (DTG) abbreviation should be added in the State AIP section GEN 2 with (*) to indicate that this Abbreviations is not contained in, PANS-ABC (Doc 8400).

Database Coding:

Continuous Climb Operations (CCO): Unless operational requirements dictate otherwise, procedures should use track to fix (TF) legs. Direct to fix (DF) and course to fix (CF) legs are also used to a more limited extent and may provide operational flexibility in situations where a TF leg does not meet operational requirements.

Continuous Descent Operations (CDO): Unless operational requirements dictate otherwise, the following database conventions should be used:

Closed path CDO procedures*: These procedures should be coded with track to fix (TF) legs and fly-by waypoints. STARs that terminate with a link to an instrument approach procedure should terminate at a flyby*

- Closed path CDO procedures: These procedures should be coded with track to fix (TF) legs and fly-by waypoints. STARs that terminate with a link to an instrument approach procedure should terminate at a fly-by waypoint.

- Open path CDO procedures: After the Downwind termination waypoint (DTW) an FM path terminator should be coded. If ATC requires a defined path, a VM path terminator can be used instead.

- END -