International Civil Aviation Organization

MIDANPIRG/22 & RASG-MID/12 Meetings

(Doha, Qatar, 4 – 8 May 2025)

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 key outcome of the AIM SG/11 meeting.

Action by the meeting is at paragraph 3.

REFERENCES

– AIM SG/11 Report

1. INTRODUCTION

1.1 The Eleventh Meeting of the MIDANPIRG AIM Sub-Group (AIM SG/11) was graciously hosted by IATA AME and CARC Jordan in Amman, Jordan from 22 to 23 January 2025. 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).

2. DISCUSSION

Global/Regional Developments related to AIM

2.1 The AIM SG/11 meeting was apprised of several critical updates and outcomes of the Information Management Panel (IMP/3). First, it acknowledged the publication of two foundational ICAO documents in 2024: the Manual on Systemwide Information Management (SWIM) (Doc 10203) and the Procedures for Air Navigation Services – Information Management (PANS-IM) (Doc 10199). Both documents are accessible on the ICAO-NET portal, marking a significant step toward a global air navigation system network as described in the Global Air Navigation Plan (GANP, Doc 9750).

2.2 Additionally, the meeting reviewed Amendment 1 to the Aeronautical Information Services Manual (Doc 8126, 7th edition), effective from 30 July 2024. This 50-page amendment introduces revised specifications for AIP Amendments, Supplements, and Aeronautical Information Circulars, along with updated procedures for trigger NOTAM origination and usage. It also refines Appendix A (explanatory notes on AIP specimens) and Appendix F (NOTAM code and abbreviation guidelines), enhancing clarity and operational alignment.

2.3 Finally, the AIM SG/11 meeting was apprised of the outcomes of the AN-Conf/14, focusing on four pivotal recommendations:

- Recommendation 3.1/3 – Enabling successful deployment of trajectory-based operations
- Recommendation 3.1/6 – Addressing the safe integration of space transport operations into the airspace system
- Recommendation 3.2/2 – Transition to flight and flow – information for a collaborative environment services and cessation of ICAO 2012 flight plan by 2034
- Recommendation 4.2/1 – Aviation cybersecurity

Moving from a Magnetic to a True North Reference System for Heading and Tracking in Aviation Operations

2.4 The AIM SG/11 meeting was apprised of the activities of the ICAO True North Advisory Group (TRUE-AG), an expert group established by the Air Navigation Commission (ANC) comprising representatives from states, international organizations, and industry. Key deliverables for the group include the creation of a Concept of Operations (CONOPS), a detailed transition plan, and strategic recommendations to guide ICAO's preparations for the 2027 Air Navigation Conference (AN-Conf/15) and the 2028 Assembly.

NOTAM template for GNSS RFI

2.5 The AIM SG/11 meeting addressed escalating GNSS interference challenges in the Middle East, driven by rising GPS spoofing incidents. In response, the meeting highlighted prior efforts, including the MIDANPIRG/20-endorsed NOTAM template (Conclusion 20/18) for GNSS disruptions. However, due to evolving threats, MIDANPIRG/21 (Conclusion 21/30) tasked *ICAO and IATA* with revising the template to explicitly address jamming/spoofing.

2.6 Additionally, the AIM SG/11 meeting noted that the AN-Conf/14 mandated ICAO to introduce new NOTAM codes for Jamming and Spoofing events.

2.7 The AIM SG/11 meeting formally endorsed the revised GNSS Radio Frequency Interference (RFI) NOTAM template at **Appendix A**, which had been reviewed and validated by the PBN SG/9.

ACR/PCR implementation Status in MID

2.8 The meeting may wish to recall that in 2020, ICAO adopted with Amendment 15 to Annex 14, Volume I Aerodromes — Aerodrome Design and Operations, a new method for expressing and calculating the bearing strength of a pavement, called the Aircraft Classification Rating (ACR) - Pavement Classification Rating (PCR). A transition period of 4 years had been set by ICAO and the new method has become applicable on 28 Nov 2024, replacing the current Aircraft Classification Number (ACN) - Pavement Classification Number (PCN) method.

2.9 The AIM SG/11 meeting noted that ICAO MID has developed and disseminated through SL File Ref.: ME 3/2.5 – 24/172 dated 7 November 2024, a Survey on the implementation/publication of the new Aircraft Classification Rating (ACR) - Pavement Classification Rating (PCR) method . This survey aimed to gather valuable feedback from Member States on the status of implementation/publication of the new ACR-PCR method. The following key findings were highlighted:

- Most States (9 out of 10) have endorsed the new ACR-PCR. Only one State has not endorsed it.
- Several States (7 out of 10) have confirmed that airport operators are determining and providing the PCR. Three States have not yet reached this stage.

- Only one State (Qatar) has completed the publication of the PCR and three States (Egypt, Saudi Arabia and UAE) have started publication process.
- Estimated Time for Publication:

  - Five States estimate a timeline of 1-2 years for publication.

  - One State estimates a longer timeline of more than 2 years for publication.

2.10 It was pointed out that that, in order to achieve effective implementation, it is essential for Civil Aviation Authorities (CAAs) and Aeronautical Information Service Providers (AISPs) to take immediate action to address the identified gaps and accelerate progress. These actions should focus on:

States Should:

1. Ensure effective coordination between the Aeronautical Information Service Providers (AISP) and Airport Operators (AP) regarding the implementation and publication of the ACR-PCR method.
2. Establish a well-coordinated National ACR-PCR Implementation and Publication Plan, providing necessary support to all relevant stakeholders throughout the process.
3. Submit a detailed action plan for the implementation and Publication of the new ACR-PCR method to the ICAO MID Office. Additionally, States should regularly update the MID Office on the progress and status of implementation.

AISP should:

1. Ensure that all relevant AIS personnel are formally updated about the content of the relevant provisions concerning the PCR values to be published in the AIP (AD 2.8 and AD 2.12), and on the aerodrome charts, and update the applicable AISP operating procedures and the formal arrangements with AP, as necessary;
2. Ensure that any software tools used for data handling and aeronautical product publication purposes are able to accommodate the new pavement strength method.
3. Receive the PCR values by the aerodrome operators and prepare the relevant information for publication.
4. Report any delay concerning PCR data originated by aerodrome operators to the CAA.
5. Ensure that PCR information is published for all aerodromes with priority be given to International Aerodromes.

2.11 To promote and foster the effective implementation and publication of the ACR/PCR methodology in a timely and uniform manner across the MID Region, the AIM SG/11 meeting agreed to the following Draft Conclusion:

Why	To promote and foster the effective implementation and publication of the ACR/PCR methodology in a timely and uniform manner across the MID Region
What	Adoption of targeted measures to bridge identified gaps and expedite the implementation, standardization, and publication of the ACR/PCR methodology
Who	MIDANPIRG22
When	2025

DRAFT CONCLUSION 11/1: PUBLICATION OF THE PCR IN STATES AIPS

That, States be urged to:

a) ensure effective coordination between the Aeronautical Information Service Providers (AISP) and Airport Operators (AOs) regarding the implementation and publication of the ACR-PCR method;

b) establish a well-coordinated National ACR-PCR Implementation and Publication Plan, providing necessary support to all relevant stakeholders throughout the process; and

c) Submit a detailed action plan for the implementation and Publication of the new ACR-PCR method to the ICAO MID Office; and regularly update the MID Office on the progress achieved and status of implementation.

and AISPs be urged to:

a) ensure that all relevant AIS personnel are formally updated about the content of the relevant provisions concerning the PCR values to be published in the AIP (AD 2.8, AD 3.8 and AD 2.12), and on the aerodrome charts, and update the applicable AISP operating procedures and the formal arrangements with AP, as necessary;

b) ensure that any software tools used for data handling and aeronautical product publication purposes are able to accommodate the new pavement strength method;

c) receive the PCR values by the aerodrome operators, and prepare the relevant information for publication;

d) report any delay concerning PCR data to be originated by aerodrome operators to the CAA; and

e) ensure that PCR information is published for all aerodromes with priority given to International Aerodromes.

GNSS Elements in MID States AIPs

2.12 The AIM SG/11 meeting recalled ICAO's standards for publishing GNSS information in State AIP, particularly in sections AD 2.19 (Radio Navigation and Landing Aids) and ENR 4.3 (GNSS). The meeting also referenced ICAO Doc 9849 (GNSS Manual), which outlines requirements for AIPs to include:

- a clear statement of terms and conditions, procedures and such things as training requirements;
- background information about GNSS technology and its operational applications;
- current information that can assist AOs in planning for the acquisition of avionic;
- information updates; and
- WGS-84 coordinate system.

2.13 The AIM SG/11 meeting highlighted that a Secretariat review of MID States' Aeronautical Information Publications (AIPs) revealed only Saudi Arabia had published mandatory GNSS information. The meeting urgently called on States to promptly update their AIPs—specifically sections AD 2.19 (Radio Navigation and Landing Aids) and ENR 4.3 (GNSS)—to align with ICAO Standards and Recommended Practices (SARPs) and guidelines. Consequently, the meeting endorsed the following Draft Conclusion:

Why	To promote and foster the harmonization and consistency in the publication of GNSS-related information within MID States' Aeronautical Information Publications (AIPs)
What	Publication of GNSS-related information within MID States' Aeronautical Information Publications (AIPs)
Who	MID States
When	2025

DRAFT CONCLUSION 11/2: PUBLICATION OF GNSS-RELATED INFORMATION IN STATES' AIPS

That,

a) States that have not yet done so are urged to promptly publish GNSS information in the relevant sections of their AIPs, including AD 2.19 (Radio Navigation and Landing Aids) and ENR 4.3 (Global Navigation Satellite System - GNSS), ensuring full compliance with ICAO Standards and Recommended Practices (SARPs) and associated guidelines.

b) ICAO MID monitor the publication status of GNSS-related information in States' AIPs and regularly report progress to the relevant subsidiary bodies of MIDANPIRG.

The Need for Guidance Material on publishing Remote Digital Aerodrome Air Traffic Services

2.14 The AIM SG/11 meeting was informed that Saudi Arabia has pioneered the Remote Digital Aerodrome Air Traffic Services (RDATS) with the successful launch of a Virtual Tower System at Al-Ula Aerodrome (OEAO), operated remotely from Jeddah ATC Tower (OEJN). This initiative aligns with ICAO's Global Air Navigation Plan (GANP) under the RATS-B1/1 framework for remote aerodrome services.

2.15 The AIM SG/11 meeting highlighted critical gaps in ICAO guidance for publishing Remote Digital ATS/AFIS information in State AIPs, particularly detailing how to incorporate remote ATC/AFIS data into these publications and charts, as well as establishing standardized symbology for remote/mobile tower operations in aerodrome charts.

2.16 The AIM SG/11 meeting invited Saudi Arabia to share lessons learned and user feedback from its RDATS implementation. Simultaneously, the Secretariat was tasked with collaborating with ICAO's ANC Panels to assess existing guidance materials and identify gaps, fostering global best practices for remote tower operations.

Review of Air Navigation Deficiencies in AIM Field

2.17 The AIM SG/11meeting recalled that the total number of air navigation deficiencies recorded in MANDD was 98 deficiencies. The AIM field accounts for the largest share, representing 46% of the total deficiencies, underscoring its critical importance in addressing systemic challenges.

2.18 The number of air navigation deficiencies by state and in the AIM field is presented in Table below:

	Bahrain	Egypt	Iran	Iraq	Jordan	Kuwait	Lebanon	Libya	Oman	Qatar	Saudi Arabia	Sudan	Syria	UAE	Yemen	Total
AIM	0	2	3	6	3	0	4	5	3	0	0	2	9	0	8	**45**

2.19 The AIM SG/11 meeting highlighted that numerous deficiencies have persisted for over a decade, with many States failing to update their Corrective Action Plans (CAPs). To resolve these long-standing challenges, the group agreed to collaborate with IATA and Boeing/Jeppesen to organize a targeted workshop. This initiative aims to bolster awareness, share best practices, and equip States with actionable strategies to resolve longstanding deficiencies. Consequently, the AIM SG/11 meeting endorsed the following Draft Conclusion:

Why	To bolster awareness, share best practices, and equip States with actionable strategies to resolve longstanding deficiencies
What	Conduct a workshop on advancing aeronautical information services in MID Region
Who	ICAO, IATA and Boeing/Jeppesen and MID States
When	2025

DRAFT CONCLUSION 11/3: AIM-ING FOR EXCELLENCE WORKSHOP: ADVANCING AERONAUTICAL INFORMATION SERVICES

That the ICAO MID Office, in collaboration with IATA, Boeing/Jeppesen, and Member States, organize a workshop to strengthen States' understanding and capabilities in Aeronautical Information Services, address existing deficiencies, enhance the effectiveness of AIM, and promote regional cooperation through best practices and knowledge sharing.

Collaborative Exchange: States, International Organizations, and Industry Share Experiences and Lessons Learned

2.20 The AIM SG/11 meeting expressed sincere appreciation to all participating States, international organizations, and industry stakeholders, particularly Egypt, Jordan, Oman, Saudi Arabia, UAE, IATA AME, ADL (IFATIMA member), and NGA for their active contributions, insightful presentations, and sharing of best practices. These inputs fostered a collaborative environment, advancing the subgroup's goals.

2.21 To ensure sustained progress and alignment with the AIM SG's Terms of Reference, the meeting stressed the critical need for all States to:

- Contribute actively to future AIM SG discussions,
- Participate consistently in meetings to share challenges and lessons learned, and
- Submit annual progress reports for review, enabling the subgroup to monitor implementation, address gaps, and refine priorities.

2.22 This collective engagement is vital to maintaining momentum, harmonizing regional efforts, and achieving the operational safety and efficiency objectives outlined in the subgroup's mandate.

3. ACTION BY THE MEETING

3.1 The meeting is invited to:

a) take of note and discuss the major outcomes of the AIM SG/11 meeting; and

b) endorse the proposed Draft Conclusions.

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:

TBD (additional NOTAM codes for GNSS interference events)

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 coordinates of the interference source or weighted centre point of the impacted area. 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:

JAMMING :

GNSS JAMMING REPORTED. GNSS MAY BE UNUSABLE WITHIN …. INSTANCES OF GNSS JAMMING SHOULD IMMEDIATELY BE REPORTED TO ATC.

SPOOFING :

GNSS SPOOFING REPORTED. GNSS MAY BE MISLEADING WITHIN… INSTANCES OF GNSS SPOOFING SHOULD IMMEDIATELY BE REPORTED TO ATC.

GNSS INTERFERANCE

GNSS INTERFERENCES REPORTED. GNSS MAY BE UNUSABLE WITHIN …. INSTANCES OF GNSS INTERFERENCES SHOULD IMMEDIATELY BE REPORTED TO ATC.

WITHIN: specify route / geographical area (coordinates / waypoints)

- END -