International Civil Aviation Organization

MIDANPIRG ATM/SAR/AIS Sub-Group

Thirteenth Meeting (ATM/AIM/SAR SG/13)
(Cairo, Egypt, 30 September – 3 October 2013)

Agenda Item 6:   **AIM Issues**

AIM GLOBAL DEVELOPMENTS

(Presented by the Secretariat)

SUMMARY

This paper highlights the AIM global developments.

Action by the meeting is at paragraph 3.

REFERENCES

- AIM TF/7 Report
- AIS-AIM SG/6 Report
- AIS-AIM SG/7 Report

1.   INTRODUCTION

1.1   The Seventh Meeting of the MIDANPIRG AIM Task Force was held in Cairo, Egypt, from 25 to 27 September 2012. The meeting was attended by a total of thirty three (33) participants, including experts from ten (10) States (Bahrain, Egypt, Islamic Republic of Iran, Jordan, Kuwait, Oman, Qatar, Saudi Arabia, United Arab Emirates and Yemen) and two (2) Organizations (AACO & CANSO).

1.2   The Sixth meeting of the Aeronautical Information Services-Aeronautical Information Management Study Group (AIS-AIMSG/6) was held from 21 to 25 May 2012 in Buenos Aires, Argentina.

1.3   The AIS-AIMSG/7 meeting was held in Montreal, Canada, 14-18 January 2013.

2.   DISCUSSION

2.1   The AIM TF/7 meeting was apprised of the outcome of the AIS-AIMSG/6 meeting, in particular regarding the following subjects:

- Status of Annex 15 Amendment 37;
- Global AIM Concept and Roadmap;
- Annex 15 and PANS-AIM Development;
- Information Management (IM) Roadmap development;
- AIM Domain Functions;
- Legal and Institutional Issues;
- AIM Quality;

- Data Integrity;
- eTOD;
- Airport Mapping Database (AMDB);
- Charting;
- System Wide Information Management (SWIM); and
- AIS-AIMSG Future Work Programme.

2.2   The meeting agreed that the global AIM developments should be taken into consideration during the discussion of the progress made towards AIM implementation in the MID Region.

2.3   Based on the above, the meeting urged States to follow-up the AIM developments at the global level, especially, by keeping an eye on the documentation/information posted on the AIS-AIM SG website: http://www2.icao.int/en/ais-aimsg.

2.4   The meeting may wish to note that the AIS-AIMSG/7 meeting noted that in continuing its work, consensus on the "big issues" identified in Buenos Aires would be necessary to progress the work. The group recalled that the issues include:

- What is the Scope of AIM?

- What is the role of AIM?

- What are the functions of AIM?

- What are the products and services of AIM?

- What is the future of messaging and operational reporting?

- What is the future of the AIRAC cycle?

2.5   The AIS-AIMSG/7 meeting considered that the future requirements for information security would involve at least the following issues:

- Integrity, confidentiality and authenticity will be the corner stones of data security. Inputs and outputs will need to be protected;
- Security Infrastructure;
- Digital certificates;
- Asymmetric cryptography;
- Digital signature;
- Encryption;
- Traceability and Non-Repudiation;
- PKD: Public Key directory;
- Consideration for an AIM specific PKD, for securing aeronautical data exchange (leveraging the existing use of PKD); and
- Trusted Computing platforms.

2.6   The AIS-AIMSG/7 meeting recognized that issues with respect to the proper use of the NOTAM system were becoming of increasing importance. In this respect, the meeting observed that NOTAM proliferation resulted from a number of factors including:

- the need to report on more aeronautical infrastructure in areas of development;

- the need to report on an expanding list of conditions (GNSS integrity was cited as an example;

- the use of NOTAM in place of AIRAC compliance; and

- the perception that NOTAM must be issued to ensure legal protection from liability.

2.7   The AIS-AIMSG/7 meeting noted that the matter of NOTAM evolution and the need to review the performance of the NOTAM system was examined at the 12th Air Navigation Conference (AN-Conf/12) and that a recommendation was adopted with regard to the need to review the system:

> *Recommendation 3/8 – Review of NOTAM system and development of options for replacement*

> *That ICAO initiate a review of the current NOTAM system, building further on the digital NOTAM activities, including the development of options for a replacement system that would enable web-based applications and compliant with the system-wide information management principles that are being developed for the air traffic management system*

2.8   The AIS-AIMSG/7 meeting noted the progress made on work items, and updated the timetable produced at AIS-AIMSG/6 (included below):

Dates(s)/Timeframe		Event/ milestone	Work Deliverables
2013	Q3/4 2013	Secretariat review of completed manuals	o AIS Manual Amdt3 o Quality Manual o Training Manual o AIM Concept o eTOD Manual o WGS-84 Manual (accuracy & heighting) → o Charting Manual update Q2/2013
	1-5 July 2013	Ad hoc group mtg Chapter 4-6 Charting	
	4-8 Nov 2013	AIS-AIMSG/8 (Montreal)	
	November 2013	Annex 15 Amendment 37 applicable	
2014	Q1/Q2 2014	AIS-AIMSG/9 (….)	
	September 2014	AIS-AIMSG/10 (Montreal)	Finalised (by SG) Amendment 38, PANS-AIM
2015	February 2015	AIM/IM Divisional Meeting (Montreal)	Draft Pans-AIM Draft Amendment 38 + SWIM elements?
2016	November 2016	Annex 15 Amendment 38 applicable & PANS-AIM introduced	Completion of AIS-AIMSG work program

2.9   The AIM TF/7 meeting recalled that the proposed amendment to Annex 15 (Amendment 37) and consequential amendments to Annexes 4, 11 and 14, Volumes I and II were issued by ICAO HQ on 23 August 2012 as Attachments to State Letter Ref.: AN 2/2.3-12/52.

2.10   The meeting noted that the amendment proposal to Annex 15 included, inter alia, amendments in regard to responsibilities of States and Aeronautical Information Service (AIS) Providers; use of the terms "aeronautical information" and "aeronautical data"; integrity classification and levels; data protection; use of automation enabling digital data exchange; electronic terrain and obstacle data; new provisions related to aerodrome mapping data; aeronautical information publication (AIP) format; and NOTAM codes.

2.11   It was highlighted that the following Definition of AIM was included in the proposal:

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

2.12   The meeting noted that to accomplish the global transition from traditional AIS provision to AIM-enabled services, it will be necessary to develop sequential and successive changes to Annex 15. The reorganization of the first three chapters as part of Amendment 37 is an evolutionary step in this process. It will facilitate a more complete incorporation of AIM-related provisions scheduled for adoption as part of Amendment 38 in 2016.

2.13   In particular, it was highlighted that the original Section 3.6.5 "Use of automation" renumbered as 3.6 was revised from a recommendation to a standard. New paragraphs are added to address consistency in the formats for delivery and provide performance requirements to enable digital data exchange and the use of aeronautical information and data exchange models to be globally interoperable.

2.14   Through Draft Decision 7/1, the meeting agreed that the AIM TF Chairperson collect comments on the proposed amendment from the Task Force Members and send the consolidated version to all concerned before 15 October 2012.

2.15   In connection with the above, the AIM TF/7 meeting urged States to send their comments on the proposed Amendment to Annex 15 to ICAO-HQ by 23 October 2012 and to take into consideration the new AIM SARPs in the development/update of the National Plans for the transition from AIS to AIM. The meeting underlined also the need to start the process of amendment of the AIS/AIM National Regulations, as a consequence to the Amendment 37 to Annex 15 and other AIM developments, in a timely manner. Accordingly, the meeting agreed to the following Draft Conclusion:

> DRAFT CONCLUSION 7/2:   NATIONAL AIS/AIM REGULATIONS
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> *That, States be urged to:*
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> a) *include in the national plans for the transition from AIS to AIM actions related to the amendment of national AIS/AIM regulations as a consequence to the Amendment of Annex 4, Annex 15 and other AIM developments; and*
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> b) *take necessary action for a timely amendment of the national AIS/AIM regulations as a consequence to the proposed Amendment 37 to Annex 15.*

2.16   The AIM TF/7 meeting was apprised of the objectives and agenda of the Twelfth Air Navigation Conference (AN-Conf/12), Montreal, Canada, 19 - 30 November 2012. The meeting noted that a number of AIM/SWIM related papers would be discussed by the Conference. The meeting encouraged States and International Organizations to:

- attend the AN-Conf/12;
- ensure that their Delegation to the AN-Conf/12 includes AIM Experts;
- review the papers related to AIM/SWIM prior to the Conference; and
- participate actively in the discussions of these papers during the Conference.

2.17   The meeting may wish to note the following Recommendation of the AN-Conf/12:

Recommendation 3/7 – State actions relating to service improvement through aeronautical information management as well as digital air traffic management information

That States:

a) *accelerate transition from aeronautical information service to aeronautical information management by implementing a fully automated digital aeronautical data chain;*

b) *implement necessary processes to ensure the quality of aeronautical data and information from the origin to the end users;*

c) *engage in intraregional and interregional cooperation for an expeditious transition from aeronautical information service (AIS) to aeronautical information management (AIM) in a harmonized manner and digital data exchange and consider regional or sub-regional AIS databases as an enabler for the transition from AIS to AIM; and*

d) *review their NOTAM publication procedures, provide appropriate guidance to NOTAM originators and ensure adequate oversight of the NOTAM publication process is conducted.*

3.   ACTION BY THE MEETING

3.1   The meeting is invited to:

a) note the information contained in this paper;

b) take into consideration the AIM global developments during the discussion of the progress made towards AIM implementation in the MID Region;

c) urge Sates to follow-up the activities of the AIS-AIMSG through the documentation/ information posted on its website: http://www2.icao.int/en/ais-aimsg; and

d) task the AIM TF to review the outcome of the AN-Conf/12 related to AIM and SWIM and take necessary follow-up action.

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