



**INTERNATIONAL CIVIL AVIATION ORGANIZATION
WESTERN AND CENTRAL AFRICAN OFFICE**

TWELFTH APIRG ATM/AIM/SAR/SG/12 MEETING

(Dakar, Senegal, 25- 29 July 2011)

Agenda Item 8: Review of the outcomes of the Regional QMS for AIS/MAP Services Implementation Workshop, Second AFI e-TOD Working Group Meeting and the First Meeting of the APIRG AIM Implementation TF.

(Presented by the Secretariat)

Summary

This Paper presents the Summary Report of the Regional (SIP) QMS for AIS/MAP Services Implementation Workshop, Second AFI e-TOD Working Group Meeting, and the First Meeting of the AFI AIM Implementation Task Force, pursuant to the implementation of Decision 17/87 of the APIRG/17 Meeting concerning planning for the transition from AIS to AIM, APIRG/17 Conclusion 17/92 concerning Development and Management of a National e-TOD Programme respectively, taking into account AFI RAN/8 Meeting Recommendations 6/11 and 6/25 which call for the complete implementation of WGS-84, e-TOD and the elimination of AIS-MAP deficiencies.

The Sub-Group is required to review and adopt Draft Conclusions emanating from this Paper.

References :

APIRG/17 – Report

AFI/8 RAN Report (Doc.)

AFI e-TOD WG/2 Meeting Report - Report of the Second Meeting (Dakar, 19 July 2011)

AFI AIM Implementation Task Force/1 – Report of First Meeting (Dakar, 20-22 July 2011)

1. Introduction

1.1 The First meeting of the AFI AIM Implementation Task Force was convened in Dakar, Senegal from 20-22 July 2011 by the International Civil Aviation Organization (ICAO). The main objective of this meeting is to provide guidance to States, in accordance with the requirements of the AFI Air Navigation Plan, for the implementation of the above-mentioned APIRG/17 Conclusion and Decision, AFI RAN/8 Meeting Recommendations and to provide efficiency and cost-effectiveness in the development of a standardized integrated and automated AFI AIS system in order to provide harmonized quality products and services to users.

2. Review of the Report of the Regional (SIP) QMS for AIS/MAP Services Implementation Workshop

2.1 In an effort to measure the level of awareness and commitment of AIS/MAP Service providers in the AFI Region, regarding the need for application of Standards and Recommended Practices (SARPs) and to foster the implementation of AIS/AIM QMS, the ICAO Regional Offices of Dakar and Nairobi agreed to assist States to implement this ICAO requirement by organizing from 17 to 19 May 2011, the above-mentioned workshop in collaboration with Eurocontrol and Jeppesen for the AIS/AIM Services of States in the AFI Region, pursuant to Conclusion 15/41 of the APIRG/15 meeting held in Nairobi, Kenya from 26 -30 September 2005.

2.2 The Seminar/Workshop noted that in accordance with Eurocontrol's experience, the accomplishment of QMS in AIS/MAP Services would involve the following issues to be raised and understood by CAA Administrations

- High level mandates are a must ;
- Misconception : ISO 9000 = Paper;
- Management System (not a quality control system);
- Do it yourself
- Cost (rules of thumb)
 - 10% of Working Force
 - External fees on consulting/training + Auditor
 - 18 months duration period
- Note that all would do it again.
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2.3 Seminar/Workshop was apprised on the following when ISO 9001 is implemented in an organization:

- Well defined and documented procedures improves the consistency of output
- Quality is constantly measured
- Procedures ensure corrective action is taken whenever defects occur
- Defect rates decrease
- Defects are caught earlier and are corrected at a lower cost
- Definition of procedures identifies current practices that are obsolete or inefficient
- Documented procedures are easier for new employees to follow
- Operational efficiency is increased
- Customer satisfaction rises

2.4 Following its review of the Findings of the AFI QMS Implementation Seminar/Workshop Report, AFI AIM Task Force the Meeting, drafted the following Draft Conclusion:

Draft Conclusions XX: QMS Implementation and Establishment of Service Level Agreements

That:

a) States should take relevant action to note that if the ISO 9001:2008 implementation project is to be successful, then there MUST be support and commitment from Top Management.

b) States which are more advanced in the implementation of QMS systems are encouraged to share their experience and offer assistance with neighbouring States which are making efforts to implement QMS.

c) AFI States are required to establish Service Level Agreements to be signed and maintained between data originators and AIS Providers.

3. Review of the Report of the Second AFI e-TOD Working Group Meeting.

3.1 The Second Meeting of the AFI Region Electronic Terrain and Obstacle Data Working Group (eTOD WG/2) was held on 19 July 2011 at the new ICAO Office Building in Dakar (Yoff), Senegal. The meeting noted the relevant APIRG/17 Conclusions and Decisions related to e-TOD Implementation and agreed on the adopted follow-up actions to be taken by concerned parties including the deliverables and target dates of implementation pursuant to State letter ref. T2/7-0476 of 16 June 2011. The meeting agreed to retain all the APIRG/17 Conclusions pertaining to e-TOD implementation with an extension of the deadline date for States to provide follow-up action not later than 31 October 2011.

3.2 The meeting reviewed and adopted the proposed amendment to include the Draft FASID Table prepared by the Secretariat to be included into the AFI FASID, Part VIII (AIS), with necessary amendments as appropriate with the following Draft Conclusion;

DRAFT CONCLUSION XX: PROPOSAL FOR AMENDMENT TO THE AFI BASIC ANP (DOC 7474) RELATED TO eTOD

That,

*a) AFI States review the draft proposal for amendment to the AFI Basic ANP (Part VIII) at **Appendix XX** and send their comments and updates to the ICAO WACAF and ESAF Regional Offices before **31 October 2011**; and*

b) That APIRG will further review and adopt the proposal, as necessary, for its inclusion in the AFI Basic ANP/FASID, in accordance with standard procedure.

3.3 The meeting agreed that a State Letter should be issued by the ICAO WACAF Regional Office inviting States to comment on the draft proposal for amendment to the AFI Basic ANP (Part VIII). The meeting further recalled that APIRG/17, through Conclusion 17/90 (b), invited ICAO to consider the inclusion of a Draft FASID Table related to the implementation of e-TOD into the AFI FASID, Part VIII (AIS).

3.4 The meeting then endorsed the following text of the draft proposal for amendment as per Appendix XX:

Proposal for Amendment to the AFI Basic ANP (Doc 7474 Vol.I) for the introduction of a new Section related to eTOD
World Geodetic System – 1984 (WGS-84)

xx In order to ensure that quality (accuracy, resolution and integrity) and traceability requirements for the WGS-84 related geographical coordinate data are met, States must take measures to develop and introduce a quality system programme. This programme containing procedures, processes and resources should be in conformity with the International Organization for Standardization (ISO) 9000 series of quality assurance standards.

(Insert the following new Text)

Electronic Terrain and Obstacle Data (eTOD) Requirements
(FASID Table AIS 9)

i) Recognizing that significant safety benefits for international civil aviation will be provided by in-flight and ground-based applications that rely on quality electronic Terrain and Obstacle Data (eTOD), States should make every effort to implement the eTOD provisions in accordance with Chapter 10 of Annex 15 and Doc 9881.

ii) FASID Table AIS-X sets out the requirements for the provision of Electronic Terrain and Obstacle Data (eTOD) to be provided by States.

iii) The implementation of eTOD should involve different Administrations within and outside the Civil Aviation Authority i.e.: AIS, Aerodromes, Military, National Geographic and Topographic Administrations/Agencies, procedure designers, etc.

iv) States, while maintaining the responsibility for data quality and availability, should consider to which extent the provision of electronic terrain and obstacle data could be delegated to national geodetic Institutes/Agencies, based on Service Level Agreement reflecting such delegation.

v) States should consider carefully the required level of details of collected terrain and obstacle data with particular emphasis on obstacle data and associated cost.

vi) States should take into consideration the requirements for update/maintenance of data, especially related to obstacles.

vii) States should work co-operatively with regard to the cross-border issue, for the sake of harmonization and more efficient implementation of eTOD.

3.5 The meeting then provided a follow-up of the APIRG/17 Conclusion17/90 (c) relevant to the AFI Region e-TOD implementation strategy under Appendix 3.6G of the APIRG/17 report. The meeting then noted the deliberations of APIRG/17 Meeting and endorsed AFI Region e-TOD implementation strategy contained in APIRG/17 Appendix 3.6G. The meeting further noted the new ICAO provisions introduced particularly by Amendment 33 to Annex 15, then reviewed and updated the proposed AFI Region e-TOD implementation timelines under Appendix XX, to be adopted by the APIRG/18 Meeting;

3.6 Based on the above the meeting agreed that States should organize awareness campaigns and training events (workshops) involving all concerned personnel from within and outside the CAA in order to provide an overview of the technical, legal, institutional and financial issues related to eTOD as well as of the actions that need to be taken in implementing eTOD and to bring a high-level understanding of the associated topics. Accordingly, the meeting drafted the following Conclusion:

DRAFT CONCLUSION XX: SIP for AFI Region e- TOD implementation Seminar/Workshop

That,

a) For the sake of an efficient and harmonized implementation of eTOD, ICAO assist AFI States at the National Level and, to the extent possible co-operatively, organize a Regional SIP Seminar/Workshop to raise awareness campaigns and training programs to promote and expedite the process of e-TOD implementation.

b) AFI States to participate actively in this Workshop

DRAFT CONCLUSION XX: Provision of updates to the proposed AFI Region e-TOD implementation timelines under Appendix -XX

That,

a) AFI States review the proposed AFI Region e-TOD implementation timelines under Appendix -XX and send their updates/comments to the ICAO WACAF and ESAF Regional Offices before 31 October 2011; and

b) That APIRG will further review and adopt the e-TOD implementation timelines, as necessary, for its inclusion as an Appendix in the APIRG/18 Report, in accordance with standard procedure.

3.7 The meeting agreed that a State Letter should be issued by the ICAO WACAF and ESAF Regional Offices inviting States to provide updates on the AFI Region implementation time-lines.

4. Review of the Report of the First Meeting of the AFI AIM Implementation Task Force

4.1 The First AFI Region AIM Implementation Task Force Meeting was convened at the new ICAO Office Building in Dakar (Yoff), Senegal from 20-22 July 2011. In accordance with the ICAO global ATM operational concept and the ICAO roadmap for the transition from AIS to AIM, the AFI AIM Implementation Task Force convened in order to develop performance goals for the transition from AIS to AIM in the AFI Region and identify achievable milestones and carry out a review of the AIS parts of the AFI basic ANP and FASID in order to introduce/develop planning material related to the transition from AIS to AIM, pursuant to Decision 17/87 of the Seventeenth APIRG Meeting (APIRG/17).

4.2 The meeting urged States that have not yet done so, to ensure that replies to the State Letters issued by the ICAO WACAF Regional Office as follow-up actions to the APIRG/17 Conclusions and Decisions are sent to the ICAO Regional Offices WACAF and ESAF, in a timely manner, to provide feedback on the follow-up action taken by States. The meeting then agreed to retain all the APIRG/17 Conclusions pertaining to e-TOD implementation with an extension of the deadline date for States to provide follow-up action pursuant to State letter T2/7-0476 not later than 31 October 2011.

4.3 The AFI AIM TF meeting recalled the appreciation by the ANC and the Council on the efforts of APIRGs in identifying, assessing, tracking and reporting air navigation deficiencies. Following the concerns raised by the ANC and the Council on the serious impact of unresolved deficiencies on safety. In connection with the above, the meeting urged States to take necessary follow-up actions and drafted the following:

DRAFT CONCLUSION xx: ELIMINATION OF AIR NAVIGATION DEFICIENCIES IN AIM

That, AFI States be urged to:

a) review their respective lists of identified deficiencies in AIM, define their root causes and forward an action plan for rectification of outstanding deficiencies to the ICAO WACAF and ESAF Regional Office prior to 31 October 2011;

4.4 The meeting recalled that the Performance-Based Approach (PBA) adheres to strong focus on results through adoption of performance objectives and targets; collaborative decision making driven by the results; and reliance on facts and data for decision making. The assessment of achievements is periodically checked through a performance review, which in turn requires adequate performance measurement and data collection capabilities. In this regard, one of the key aspects of the performance based approach to air navigation planning is the development of performance objectives with related measurable indicators and metrics.

4.5 Taking into consideration the latest developments in the AIM field, especially the transition from AIS to AIM, the meeting reviewed and updated the AIM Performance Framework Forms (PFF) as at **Appendix xx**.

4.6 Whilst reviewing of the AIS Parts of the AFI Basic ANP and FASID in order to introduce/develop Planning material related to the transition from AIS to AIM, the meeting supported the following ANP material related to AIM, which was developed by the Secretariat based on the work carried out in the European Region:

- a)** **Appendix xx** : draft version of the AFI Basic ANP, Part xx-AIM;
- b)** **Appendix xx** : draft version of the Introduction part of the AFI FASID Part xx-AIM;
- c)** **Appendix xx** : FASID Table AIM-1 setting out the responsibilities for the provision of AIM services in the AFI Region;
- d)** **Appendix xx** : FASID Table AIM-2 setting out the requirements for the Provision of AIM products and services based on the Integrated Aeronautical Information Database (IAID);
- e)** **Appendix xx** : FASID Table AIM-3 setting out the requirements for the provision of Terrain and Obstacles datasets and Airport mapping Databases (AMDB);
- f)** **Appendix xx** : FASID Table AIM-4 setting out the requirements for aeronautical data quality;
- g)** **Appendix xx**: FASID Table AIM-5 setting out the requirements for the implementation of the World Geodetic System – 1984 (WGS-84);
- h)** **Appendix xx** : FASID Table AIM-6 setting out the requirements for the production of aeronautical charts;

- i) **Appendix xx:** FASID Table AIM-7 setting out the responsibilities for the production of the sheets of the World Aeronautical Chart 1: 1 000 000;
- j) **Appendix xx :** FASID Table AIM-8 setting out the requirements for the provision of pre-flight information services; and
- k) **Appendix xx :** FASID Table AIM-9 setting out the requirements for AIM Certification.

4.7 Based on the above, the meeting urged all the members of the Task Force to review the new Basic ANP and FASID AIM Parts and Tables, and provide their comments to the Secretariat. The meeting then concluded the following:

Draft Conclusion: ANP Materials related to the Transition from AIS to AIM

That:

ANP/FASID Materials related to the Transition from AIS to AIM comprising the new FASID Tables be adopted by States as necessary planning material and for inclusion in the Basic AFI ANP and FASID.

DRAFT CONCLUSION: PROPOSAL FOR AMENDMENT TO THE AFI BASIC ANP (DOC 7474Vol.II) for inclusion of materials related to transition from AIS to AIM.

That,

a) AFI States review the draft proposal for amendment to the AFI Basic FASID at Appendix XX and provide comments/updates to the ICAO WACAF and ESAF Regional Offices before 31 October 2011; and

b) APIRG will further review and adopt, as necessary, and propose its inclusion in the AFI Basic ANP/FASID, in accordance with standard procedure.

4.8 The meeting agreed that a State Letter should be issued by the ICAO WACAF Regional Office inviting States to provide comments/updates on the draft proposal for amendment to the AFI Basic FASID for inclusion of planning material related to the transition from AIS to AIM.

4.9 Whilst reviewing the AFI-CAD Business Plan as per Appendix 3.6 I (AFI-CAD Doc. 007) of the APIRG/17 Report, the meeting was informed that Study Group in collaboration with the designated ICAO Consultant have submitted the results of the project which is the final AFI-CAD Business Plan to the APIRG/17 Meeting for consideration and endorsement. This activity was pursued personally by RO AIS/MAP Dakar and the designated ICAO Consultant in making a combine briefing and petition visit to ICAO TCB Director in Montreal in October 2010, for possible assistance in search of funding of the Project. However, up to this date no response has been received regarding the possibilities on initiating a funding for the AFI-CAD Project.

4.10 Following a review of the Action agreed by the Air Navigation Commission on 8 March 2011 (ANC 186-6 refers); the Commission noted that the transition in the AFI Region will benefit if a robust communication infrastructure exist. The Commission further called upon the Secretariat to support/monitor the transition of AIS to AIM through regional mechanism.

4.11 The meeting was then invited to consider the proposal of South Africa, inviting AFI States to join the South African Regional AIS Database as an alternative to enhance the AIM implementation process within the AFI Region, and to note that Australia has maintained a similar Project called the Mercury Project in which States in the Asia Pacific Region were invited to join the Australian Regional Data base. The Meeting was further informed that ASECNA is planning to develop a Regional AIS Database to accommodate all the States in the Western and Central African Region.

4.12 Whilst reviewing measures to develop and improve State National Plans in accordance with the Roadmap for the transition from AIS to AIM the meeting noted that the “ICAO Roadmap for the Transition from AIS to AIM” provides States with a strategic framework to transition from traditional product-centric AIS to the data-centric AIM. The roadmap indicates twenty-one steps in three Phases and AIS-AIMSG has been working to develop related SARPS and guidance materials to facilitate implementation in a worldwide harmonized manner.

4.13 The meeting noted that some States that have already achieved some steps in the roadmap. Some States established a national AIM implementation plan in accordance with the roadmap and, are advancing necessary action as planned. It is unavoidable that there might be a large gap between the States in the regions regarding an approach for AIM because of size of an organization or budget problem etc. However, it is important to share information of each State regarding AIM implementation and to consider how AFI AIM Implementation TF will provide further support in the regions.

4.14 In view of the above, it was agreed that the Task Force conduct a survey to gain a better understanding of the current status of AIM implementation of the States and the meeting drafted the following Draft Conclusion:

Draft Conclusion xx: National Plans for the Transition from AIS to AIM

That States provide their national plans related to the transition from AIS to AIM or as a minimum, a status report against the 21 steps of the ICAO Roadmap for the transition from AIS to AIM prior to 31 October 2011

4.15 The meeting noted that as a consequence of the lessons learned by the European States and AFI AIS organisations regarding the need for harmonisation in management of NOTAM related to a volcano eruption events, the ICAO AISAIM Study group proposed that the ICAO guidance material be enhanced to include examples of a series of NOTAM related to the operational impact and limited access of airspace and routes affected by volcanic ash.

4.16 Finally the meeting endorsed the NOTAM templates which covers the following areas for:

- airspace warnings
- airspace restrictions
- aerodrome/heliport closure
- route portion restriction/flight levels
- recommended NOTAM codes for the relevant subject

5. ACTION BY THE MEETING

5.1 The meeting is invited to:

- a)** note the information provided in this working paper;
- b)** review and adopt the draft conclusions to enhance the AIM implementation process within the AFI Region;
- c)** review and agree on Appendices under this paper for endorsement.