



International Civil Aviation Organization

**The Twentieth Meeting of the APANPIRG ATM/AIS/SAR Sub-Group
(ATM/AIS/SAR/SG/20)**

Singapore, 05 – 09 July 2010

Agenda Item 4: Review and Progress the Tasks Assigned to the ATM/AIS/SAR/SG by APANPIRG

**OUTCOMES OF THE FIFTH MEETING OF THE AIS-AIM IMPLEMENTATION
TASK FORCE**

(Presented by the Secretariat)

SUMMARY

This paper presents the outcomes of AAITF/5. AAITF/5 had reviewed their TOR to be approved by the Sub-Group, and the outcomes of AIS-AIMSG/2 and the Global AIM Congress. The meeting was of view that the MET function of Sub-Group should go along with AIS either under the ATM/AIS/SAR Sub-Group or as a new separate Sub-Group.

This paper relates to

Strategic Objectives:

A: Safety – Enhance global civil aviation safety

D: Efficiency – Enhance the efficiency of aviation operations

Global Plan Initiatives:

GPI-18 Aeronautical information

GPI-20 WGS-84

1. INTRODUCTION

1.1 The Fifth Meeting of ICAO AIS-AIM Implementation Task Force (AAITF/5) was held at Beijing International Convention Centre in Beijing, China on 25 and 26 June 2010.

2. DISCUSSION

Review of AAITF Terms of Reference

2.1 The meeting reviewed the Terms of Reference (TOR) of the Task Force. A suggestion was made that consideration, implementation and reporting on the regional performance framework performance objectives contained in the Performance Framework Form (PFF) should be included in the TOR.

2.2 Consequently, the meeting agreed to the new TOR as in **Attachment A** to this paper. The Secretariat was tasked to report to ATM/AIS/SAR/SG/20 for their adoption.

Review of APANPIRG/20

Review of the Report of APANPIRG/20, and Follow-up on Decisions and Conclusions Relevant to the AIS Field

2.3 The meeting noted the outcomes of APANPIRG/20 (September 2009, Bangkok) and ATM/AIS/SAR/SG/19 (June 2009, Bangkok). Full details of both meetings are available on the ICAO Regional Office website.

2.4 The Chairman accepted a task to complete the Performance Framework Form (PFF) in sufficient time for its presentation at ATM/AIS/SAR/SG/20 in July. The PFF updated by the Chairman is at **Attachment B** to this paper for the review by the meeting. Further, a task has been added to the AAITF Task List to provide clear representation and detail more suited to the monitoring of AIM performance in the region over time (especially in relation to the sub-tasks that will be necessary).

Review of Recent ICAO Developments and Deliberations in Regard to the Work of the Aeronautical Information Services-Aeronautical Information Management Study Group (AIS-AIMSG)

Report on AIS-AIMSG/2

2.5 China reported the outcomes of the second meeting of AIS-AIMSG (AIS-AIMSG/2, November 2009) which was held at the ICAO headquarters in Montréal, Canada.

Actions Concerning Annex 15

Action 2/5: Including AIM in Annex 15 and Relevant Guidance Material (Amendments 37 and 38)

2.6 The Secretary of AIS-AIMSG informed the group that the objective of the MET/AIM Divisional Meeting planned for 2014 would be to present a restructured Annex 15 – *Aeronautical Information Services*. Amendment 37, scheduled for applicability in 2013, would need also to include AIM elements. Some key elements may be included as Recommended Practices which may be upgraded to Standards in a subsequent amendment after consideration by the divisional meeting. It was further considered that the need to include elements of AIM in Annex 15 (Amendment 37) would form a parallel activity to the actual restructuring of the Annex (Amendment 38).

Action 2/8: Proposed Note in Annex 15 Related to Provision of Aeronautical Data using Data Link (Amendment 37)

2.7 The group reviewed a draft note for inclusion in Amendment 37 to Annex 15 related to supplying aeronautical data directly to flight crews via data link.

Actions Concerning Doc.8126

Action 2/7: Changes to Amendment No. 2 to Doc 8126

2.8 The changes focused on AIRAC late postponement; harmonization with Operating Procedures for AIS Dynamic Data (OPADD) 3.0; guidance on AIRAC adherence; update of NOTAM Selection Criteria; Annex 15 Amendments 34, 35 & 36 consequential changes, etc. The group also noted that one of the current difficulties of the NOTAM format was that it allowed for flight level (FL) to be used in item Q) and another unit of measurement to be used in Items F) and G). It was agreed that the *Aeronautical Information Manual* (Doc 8126) should align with the provisions in

Annex 15 and the Secretary of the group take into account comments provided during AIS-AIMSG/2 in relation to Amendment No. 2 to the manual.

Actions Concerning the World Geodetic System — 1984 (WGS-84) Manual

Action 2/15: Guidance on the Use of Coordinates Transformation (Amendment No. 2 to Doc 9674)

2.9 The group reviewed a proposed amendment to the *World Geodetic System — 1984 (WGS-84) Manual* (Doc 9674). It was noted that the proposed new wording which recommended that “once WGS-84 coordinates had been obtained, the use of transformation be avoided” needed to be amended, since it was considered that coordinates would continued to be transformed for survey purposes. It was agreed that the Secretary would study this matter further and provide new text.

2.10 The group discussed guidance on the transformation of 1/10 min into degrees, minutes and seconds and suggested wording that “The charting and data publication resolution ranges from the highest resolution requirement of 1/100 sec to the lowest resolution requirement of 1 min (i.e. 1/100 sec, 1/10 sec, sec and min). Applications or messages processing or transmitting coordinates may have different resolution requirements (e.g. flight plan, coordinate entry in FMS by the pilot).”

Action Concerning eTOD Guidance Material

Action 2/23: eTOD Guidance Material

2.11 The group was informed that Eurocontrol was developing electronic Terrain and Obstacle Data (eTOD) guidance material which would be made available to ICAO in the second half of 2010. The guidance material was expected to include advice on implementation planning, data quality, metadata, assessment of obstacle representation, determination of areas for specific aerodromes, and data collection techniques. The eTOD guidance material would be provided to the group for comment as soon as the first version is available expected in the first quarter of 2010.

Actions Concerning AIXM Governance

Action 2/3: AIXM Governance

2.12 It was agreed that the group would take the recommendations from the United States Federal Aviation Administration (FAA) and Eurocontrol as to an appropriate body to govern the further development of the AIXM/AICM model. Such a body would need to represent all appropriate international stakeholders. The members from Eurocontrol and the FAA were asked to develop a proposal for the establishment of an appropriate body with technical and broad-based representation to support the governance of the evolution of the AIXM model for review by AIS-AIMSG/3.

Actions Concerning Information on NextGen and SESAR

Actions 2/30 and 2/31: Information on NextGen and SESAR

2.13 In view of the numerous data domains to be modeled and possible spill over into AIXM, concern was expressed that AIXM should not be allowed to expand to an unmanageable extent. There was also discussion on the total cost of SESAR and associated cost savings including those that may be brought about by enterprise architecture methodology. The meeting recognized that it should monitor developments concerning NextGen and SESAR, and members should endeavor to share information in this regard with the group at the next meeting.

*Actions Concerning MET***Action 2/32: Review of Draft Guidance Material on the Display of Graphical (Meteorological) Information in the Cockpit**

2.14 The group noted that draft guidance material in support of the provision in alphanumeric or graphical form had been developed by the former Meteorological Information Data Link Study Group (METLINKSG) and was awaiting publication pending adoption of Amendment 75 in February 2010.

Review of Air Navigation Deficiencies in the AIS Field & Proposed Action

2.15 The meeting reviewed the List of Deficiencies adopted by APANPIRG/20 and noted that Cook Islands, Kiribati, Nauru and Papua New Guinea were the listed States in regard to AIP Format. New Zealand informed the meeting that they were assisting the first three in that list and expected to complete the work by end 2011. The list should be updated only after the AIPs have been published.

Outcomes of Global AIM Congress – Beijing

2.16 Mr. Ken Reid, Eurocontrol, summarised the topics covered during the preceding four day Congress and workshop. He emphasised that the challenges were global and needed global leadership from ICAO and advised that Director of Air Navigation Bureau, ICAO had taken on the baton. ICAO had established the AIS-AIMSG and planned a MET/AIS Divisional meeting late in 2014. He also provided the meeting with the draft recommendations adopted by the Congress. The recommendations along with all presentations and information papers would be published on the Eurocontrol website.

Latest Developments in AIS FieldsAdoption of Amendment 36 to Annex 15 and Amendment 56 to Annex 4

2.17 Australia informed that Amendment 36 to Annex 15 was adopted by the Council at the fifth meeting of its 189th Session on 22 February and Amendment 56 to Annex 4 – *Aeronautical Charts* was adopted at the sixth meeting on 24 February 2010. The meeting noted that the changes introduced by Amendment 36 to Annex 15 and Amendment 56 to Annex 4 would become applicable on 18 November 2010. Any differences which exist are to be notified by 18 October 2010. An exception was that the proposals related to eTOD contained in Annex 15 paragraphs 10.1.4 and 10.1.5, and Annex 4 paragraph 5.2.1 were to become applicable on 12 November 2015 and any differences which would exist were to be notified by 12 October 2015.

AIS Regulation in Australia

2.18 Australia informed the meeting that the Civil Aviation Safety Authority (CASA) of Australia was currently creating a new Civil Aviation Safety Regulation (CASR) Part 175 – Aeronautical Information Services. The development of CASR Part 175 took into consideration the following issues:

- a requirement for the AIS provider to publish an IAIP and aeronautical charts in accordance with the SARPs of ICAO Annexes 15 and 4;
- authorisation of data service providers to publish or supply aeronautical information and aeronautical data the same as that published in the IAIP and aeronautical charts;

- RTCA DO-200A aeronautical data processing standards applied to the AIS provider and data service providers;
- requirement for the AIS provider to supply data service providers authorised under Part 175 with aeronautical data subject to a licence agreement;
- aeronautical data originators supplying aeronautical data to the AIS provider subject to a Service Level Agreement (SLA) and the nomination of responsible and authorised persons to act on their behalf;
- a requirement for the AIS provider and data service providers to establish a Safety Management System, incorporating a Quality Management System; and
- the AIS provider and data service providers to nominate an accountable manager responsible for ensuring their organisation's compliance with CASR Part175.

AIMNet Collaboration

2.19 Australia informed the meeting that the Executive of Airservices Australia (AsA) and Airways Corporation New Zealand (ACNZ) agreed to progress a collaboration strategy to improve service delivery outcomes, and to create greater value for the owners and customers of each organisation in early 2008. The operating principles and objectives of this relationship were established under an agreement called the “Bowral Accord”.

2.20 AIM was recognised as an important Air Traffic Management (ATM) capability enabler, with the potential to deliver significant near-term benefits through collaboration. In early 2009, AsA and ACNZ specialists from ATM planning, AIS operations and the Information Technology planning areas established a relationship called the “AIM Network” (abbreviated to AIMNet).

Any Other Business

Adoption of Eurocontrol Operating Procedures for AIS Dynamic Data Edition 3.0

2.21 Japan informed the meeting that Eurocontrol had published the Eurocontrol OPADD Edition 3.0. To ensure global harmonization, the Asia/Pacific procedures now required updating.

2.22 The meeting thanked Japan for their continuous work to undertake the updating work and agreed to review the draft Chapter 3. States were required to contact Japan if there are comments. Unless there are comments sent to Japan by the time of APANPIRG/21 in September, the Eurocontrol OPADD Edition 3.0 (except for Chapter 6, 6.2 Procedures using an Item x) would be adopted for Chapter 3 of the *Guidance Manual for Aeronautical Information Services (AIS) in the Asia/Pacific Region* (Edition 3.0). Subsequently, the Secretariat would upload the regional guidance Manual on the Regional Office's website after incorporating the OPADD Edition 3.0 in Chapter 3. The Republic of Korea fully supported the work of Japan to update Asia/Pacific OPADD as presented in WP/5, basing Eurocontrol OPADD 3.0 to enhance global harmonization.

Airservices Australia Mercury Project

2.23 Australia informed the meeting that Airservices Australia initiated the Mercury Project in 2008, with the objective of procuring and implementing a contemporary Aeronautical Information Management (AIM) capability. The scope of this project was defined by the requirement to replace Airservices ageing (and legacy) Aeronautical Data Management System (ADMS) with an

AIXM compliant data store (or “Reference Data Store (RDS)”), and associated static data management tools. In addition, Airservices sought to acquire a range of AIXM compliant AIM applications (AIP, eTOD, Charts, Airspace and Procedure Design, etc), facilitating integration with the Mercury RDS.

NOTAM Geographical Reference Qualifiers “COORDINATES & RADIUS”

2.24 Republic of Korea advised the meeting that qualifier 'Coordinates & Radius' for geographical reference in Item Q) helps user easily recognize the area of influence.

Qualifier Coordinates & Radius Used in the Republic of Korea

2.25 In case that, for example, a prohibited, restricted or danger area is activated in the form of circle shape and its center coordinates is given in degrees, minutes and seconds, coordinates can only be inserted to one minute according to Chapter 5, 5.2.1 and the Appendix 6 of Annex 15. By doing so, a gap between the originally affected area and the area resulting from item Q) occurs. In order to prevent the gap, the Republic of Korea adds additional 1 NM to original given radius value in Item Q).

2.26 Maximum 0.65 NM difference occurred from originally affected area. It is necessary for users to have more precise information in order to prepare their flight efficiently. In this regards, the present resolution for 'Coordinates & Radius' should be changed to one second resolution in order to meet requirements for the future navigation. The Secretariat informed the meeting that Annex 15 provided sufficient guidance and the actual position should be indicated in Item E).

Issue of Difference of AIRAC Effective Time between Japan and the Republic of Korea

2.27 Japan advised that the best way to solve the issue of the 24 hour difference was to move the AIRAC effective time of the Republic of Korea as close as possible to those of China and Japan. For the purpose of regional harmonization, the Republic of Korea expressed its intension to move the AIRAC effective time of the Republic of Korea a day earlier from 15:00 UTC to 16:00 UTC in the near future. The meeting thanked Japan and the Republic of Korea for the information.

New AIRAC Effective Time of the Republic of Korea

2.28 Discussions to find a single AIRAC date/time among States concerned had been placed during APANPIRG/20, but a rigid specific time to suit all States' circumstances was not achievable. Immediate dialogue among the concerned States to find a solution was urged by APANPIRG/20. To follow up this urgent request, the Republic of Korea held a series of internal and external meetings to find the best way to bridge the time gap. Among the five States applying a different AIRAC application time, the Republic of Korea was the only one that issues AIRAC later than 0001 UTC of the AIRAC date. As to application time, the Republic of Korea learned from its study presented to AAITF/4 that no single time satisfied the concerned State's needs.

2.29 In this regards, the new AIRAC effective time of the Republic of Korea was decided as 1600 UTC. This new AIRAC date and time will come into force as soon as possible, but no later than end of this year. The Chairman congratulated Japan and the Republic of Korea for the collaborative efforts to resolve issue of different AIRAC time.

AIM Implementation Plan of the Republic of Korea

2.30 Republic of Korea's AIM will be consisted of six components, which are AIP, NOTAM, PIB, TOD, AMDB and Weather. All these aeronautical information products will be developed by 2016 along with AIM DB in accordance with the national roadmap through the seven work plans:

Structure of Sub-Group

2.31 Australia proposed a discussion where AIS and MET could be matched together in a single Sub-group of APANPIRG. New Zealand advised the meeting that APANPIRG/20 had considered similar a working paper. Following discussion where a few different ideas were tested that following Draft Decision emerged for consideration by the Sub-Groups and APANPIRG. The meeting also agreed that a joint working paper would be presented by Australia and New Zealand to APANPIRG/21 regarding the reorganization of AIS and MET within the Sub-Groups.

Draft Decision – Reorganization of AIS and MET

That, in light of the close relation for the development of the digital exchange of information and SWIM/CDM concepts, MET function come under ATM/AIS/SAR SG or AIS and MET form a new Sub-group.

Date and Venue of the Next Meeting

2.32 The Chairman and the Secretariat initiated discussion regarding the value of the continuation of AAITF, in particular because the active numbers of true contributors was little, the number of working papers was low and the number of directly attributable tangible benefits was low. All States present contributed to the discussion and all were in favour of the AAITF to be continued although the option for a separation of AIS-AIM into a separate Sub-Group with MET emerged and was further developed into the specific Draft Decision.

2.33 The principal arguments in favour of the AAITF continuing were:

2.33.1 Global AIM Congresses will be discontinued following the Beijing Congress 2010 and ICAO has accepted the "baton" and challenge of maintaining the emphasis and learning in AIM domain. In this regard, the ICAO headquarters advised in her presentation to the AIM Congress that that "continuation" work would fall to the "volunteer" staff in the AIS-AIMSG and the supporting regional Task Force. Consequently, ICAO noted a continuing role for the regional Task Force in the AIM domain.

2.33.2 New work coming through to the AIS-AIMSG will be the development of SARPS relating to the content and format of pilot briefing information. AAITF proposed to contribute to these developments. Whilst the Regional Office has limited resources, particularly of a dedicated AIS/AIM practitioner, AAITF can provide the necessary expertise.

2.33.3 ATM/AIS/SAR/SG will consider PFF for the application and guidance of AAITF. Consequently there is work to be continued in the development and implementation of the monitoring framework.

2.33.4 There will be many new developments in the transition from AIS to AIM, and many consequential changes to Annexes 4 and 15 under review and consideration by the AIS-AIMSG. AAITF saw a continuing role in contributing to AIS-AIMSG (four Asia/Pacific States are represented at AIS-AISSG). Whilst it was accepted that some of the AAITF benefits were intangible, there has

been much success and modernisation occurring in the AIS-AIM field, and all the States reported their commitments to the implementation for AIM.

3. ACTION BY THE MEETING

3.1 The meeting is invited to:

- a) adopt the revised TOR as in Attachment A;
- b) note the outcomes of AIS-AIMSG/2 and the Global AIM Congress. The full reports are available at the ICAO headquarters and the Eurocontrol websites, respectively;
- c) note that revised Chapter 3 of the Guidance Manual for Aeronautical Information Services (AIS) in the Asia/Pacific Region was proposed and will be adopted by the time of APANPIRG/21; and
- d) consider the proposal from the Task Force on the reorganization of AIS and MET.

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AAITF/5
Appendix C to the Report

DRAFT

Terms of Reference of the AIS-AIM Implementation Task Force (AAITF)

The objectives of the Task Force are to:

- a) study means of aeronautical data management by civil aviation authorities and/or ATS providers in other regions including the aeronautical information exchange model (AIXM) and the electronic AIP (eAIP), and consider the feasibility in making use of these methods/models in the Asia/Pacific Region;
- b) examine the means of aeronautical data exchange used in other regions and application in the Asia/Pacific Region;
- c) assist States to implement Quality Systems for aeronautical information in an expeditious manner;
- d) develop training material and conduct workshops on the Guidance Manual for AIS in the Asia/Pacific Region;
- e) develop guidance material for Static Data Procedures and the AIS Automation Plan;
- f) review and update the Guidance Manual taking into account amendments to ICAO SARPs, guidance material;
- g) monitor and review technical and operating developments in the AIS field especially in the area of automation and database management; and
- h) monitor the transition from AIS to AIM, and in particular monitor development of the replacement of Annexes 4 & 15 and guidance documents under development by ICAO.

To achieve the above objectives, the Task Force shall consider:

- a) results of the ICAO Aeronautical Information Services – Aeronautical Information Management Study Group (AIS-AIMSG);
- b) amendments to Annex 4, Annex 5, the AIS Manual (Doc 8126), and the Aeronautical Chart Manual (Doc 8697); and
- c) revisions to the EUROCONTROL *Operating Procedures for AIS Dynamic Data* (OPADD); and
- d) implementation of the regional performance framework performance objectives contained in the Performance Framework Form (PFF).

The Task Force will report to the ATM/AIS/SAR Sub-Group of APANPIRG

(Adopted by the 14th Meeting of the Asia/Pacific Air Navigation Planning and Implementation Regional Group, 2003, and amended by the 18th 20th Meeting of the ATM/AIS/SAR/SG, ~~2008~~2010)

ASIA/PACIFIC REGION

PERFORMANCE FRAMEWORK FORM
 (REGIONAL)

(amended 11 September 2009)

REGIONAL PERFORMANCE OBJECTIVE: <u>APAC Objective 6</u>				
ENHANCED PROVISION OF AIS/AIM				
Benefits				
Efficiency	<ul style="list-style-type: none"> enhanced collaboration between flight crew and the ATM system, improved collaborative decision making, improved predictability, and reduction of workload for aircrew and ATC. 			
Strategy				
Short to Medium term (2010 – 2016)				
ATM OC COMPONENTS	TASKS	TIME FRAME	RESPONSIBILITY	STATUS
SDM (ATM Service Delivery Management)	<ul style="list-style-type: none"> Implement the enhanced provisions for AIM becoming available through the work of the Aeronautical Information Services-Aeronautical Information Management Study Group (AIS-AIMSG); Monitor implementation progress 	2009-2016	AAITF	In progress TF will develop <u>detailed monitoring framework to track States implementation of AIM (AAITF Task List – Action Item 6 refers)</u>
	<u>Consolidation:</u> (Refer AIM Roadmap) 1. <u>Monitoring of Annex differences</u> 2. <u>AIRAC adherence monitoring</u> 3. <u>Quality</u> 4. <u>WGS-84 implementation</u>	<u>2009 - 2013</u>	<u>AAITF</u>	<u>As above</u>
	<u>Going Digital:</u> (Refer AIM Roadmap) 1. <u>Data integrity monitoring</u> 2. <u>Data quality monitoring</u> 3. <u>Aerodrome mapping</u> 4. <u>Electronic AIP</u> 5. <u>Obstacles</u> 6. <u>Terrain</u> 7. <u>Integrated aeronautical information database</u> 8. <u>Unique identifiers</u> 9. <u>Aeronautical information conceptual model</u>	<u>2009 - 2014</u>	<u>AAITF</u>	<u>As above</u>

	<u>Information Management:</u> (Refer AIM Roadmap) 1. <u>Aeronautical data exchange</u> 2. <u>Digital NOTAM</u> 3. <u>Communication networks</u> 4. <u>Aeronautical information briefing</u> 5. <u>Training Interoperability with meteorological products</u> 7. <u>Electronic aeronautical charts</u> 8. <u>Agreements with data originators</u>	<u>2013 - 2016</u>	<u>AAITF</u>	<u>As above</u>
GPIs	GPI/18: Aeronautical Information			
References	<ul style="list-style-type: none"> • <i>Annex 4 – Aeronautical Charts</i> • <i>Annex 15 – Aeronautical Information Services</i> • <i>AIS Manual (Doc 8126)</i> • <i>Aeronautical Chart Manual (Doc 8697)</i> • <i>EUROCONTROL Operating Procedures for AIS Dynamic Data (OPADD)</i> • <i>APANPIRG Conclusion 20/16</i> 			