International Civil Aviation Organization

Sixteenth Meeting of the ICAO Aeronautical Information Services – Aeronautical Information Management Implementation Task Force (AAITF/16)

Video Teleconference, 07 – 11 June 2021

Agenda Item 4: AIS-AIM Updates

AIS TO AIM UPDATES

(Presented by CIVIL AVIATION AUTHORITY OF THE PHILIPPINES)

SUMMARY

This paper presents Philippines AIS to AIM roadmap. Completion of some Roadmap steps, progress and challenges in achieving AIM. This paper will also present the achievements and difficulties in transitioning from European AIS Database (EAD) System to Aeronautical Information Service System (AISS) as part of AIS to AIM.

1. INTRODUCTION

AIS to AIM Update

1.1 The AIS Philippines Roadmap from AIS to AIM has been very challenging for CAAP since 2013. We have almost completed Phase One *(Consolidation)* P-03,P-04,P-05, P-17 *81%*(Quality Management System) has been placed and implemented and awaiting for our scheduled audit from our state regulator on May 26, 2021.

1.2 On Phase Two *(Going Digital)*, P-01,P-02,P-06, P-08 and P-07 have been completed. Since we have 90 airports in the Philippines we are planning to prioritize our 8 International airports to address the P-13 (Terrain), P-14 (Obstacles) and P-15 (Aerodrome Mapping) deficiency on our roadmap.Our Static Database (SDO) for the new AISS is up and running, though we are still using EAD Pro for publication of AIP and Charts, Electronic AIP (P-11) is one of our targets this 2021.

1.3 On Phase Three *(Information Exchange)* We have completed P-10*(Communication Networks)*and P-09 *(Aeronautical Data Exchange)*,currently Philippine AIS is on AIXM 4.5, budget allocation for AIXM 5.1 training has been placedagain this year. Planned trainings last 2020 didn't took place due to pandemic. P-18 *50%(Agreements with Data Originators)*, we have already conducted seminars and drafted Service level Agreements and awaiting for their feedback. P-12 *80%(Aeronautical Information Briefing)* we are now using the AISS for flight planning and flight briefing, we are now able store world wide NOTAM, but still have issues on how to manage other NOTAMs that are non-ICAO compliant. P-16 *50%(Training)* Since the merging of three facilities (International Flight Operations Briefing Service (IFOBS), Domestic Flight Operations Briefing Service (DFOBS) and Aeronautical Information Service (AIS)) last July 2018, we are now conducting cross trainings for personnel, updating of training manuals and target date for completion is by the end

of 2021. P-19 *(Interoperability with meteorological products)*, P-20 *(Electronic Aeronautical Charts)* and P-21 *(Digital NOTAM)*though intend to comply, procedures are still to be discussed in the near future and most of them will require AIXM 5.1.

1.4 Targets to roadmap positioning steps to achieve this year 2021 is P-16 (training) and P-17 (Quality).

1.5 Further details of transition progress are provided in **Attachment A**.

Transition from EAD to AISS

1.6 AIS Philippines are still maintaining two systems right now, the EAD System and AISS.AIP and Charting still have some issues with regards to the layouts required for publication hence we have extended our subscription to EAD system in order to cope with our current publication requirements until we have fully transitioned to the AISS.

1.7 Last 2019 AIS Operations has been able to handle world wide NOTAM and stored it in the AISS database in Manila.AISSSDO are now up and running, the SDO XS between AISS and EAD has been resolved.We are now using the AISS INO DU My flight plan management application for flight planning/briefing processing, for flight plan proposals only selected remote facilities are currently using the Internet Briefing Service (IBS).

2. DISCUSSION

2.1 AIS Philippines is committed in achieving AIM, we plan to complete/target two roadmap steps every year. Transitioning from EAD to AISS has been very challenging because of difference in functionality, features and versions. More trainingis required for the personnel handling the new role as administrator, operator and user.

2.2 Due to COVID-19 pandemic, most of the AIS scheduled plans, projects and amendments will be re-scheduled. Alternative Operations work schedule is being implemented; new procedures have also been drafted and will be refined for the new normal operations of AIS.

3. ACTION BY THE MEETING

3.1 The meeting is invited to note the information contained in this paper.

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Philippines Road Map of AIS to AIM

RoadMap Phase	Expected Implementation	RoadMap Steps		Description	Remarks
Phase 1 Consolidation	**IMMEDIATELY**	**P-03**	AIRAC Adherence Monitoring	As defined in Annex 15, AIRAC defines a series of common dates and an associated standard aeronautical information publication procedure for stages. This is to allow for the updating of information in electronic systems like Flight Management Systems (FMS) and Air Traffic Control (ATC) Systems.	**100% Complied** *(Philippine AIS follows the AIRAC calendar published by ICAO)*
		P-04	Monitoring of States' November 2010 differences to Annex 4 & 15	Differences to the ICAO SARP's need to be clearly defined in the AIP of the state under GEN 1.7 as defined in ICAO Doc 8126, Chapter 5, section 5.8	**100% Complied** *(Role of Aerodrome and Air Navigation Safety Oversight Office (AANSOO), published in the AIP)*
		P-05	WGS-84 implementation	WGS-84 Standard with respect to the international civil aviation must be defined in each states national regulation to ensure compliance.	**100% Complied** *(published in the AIP)*
		P-17	Quality Management	State must implement national regulation on the requirement for all organization involved in aeronautical data processing and publication, to have a Quality Management System in place, which shall manage the safety of all their services.	**81%** Initial QMS Audit Conducted by AANSOO last October 16-18, 2019 *(Attached AANSOO Audit Report)*

RoadMap Phase	Expected Implementation	RoadMap Steps		Description	Remarks
Phase 2 Going Digital	**November 2019**	**P-01**	Data Quality Monitoring	Data quality monitoring is the monitoring of data to ensure it meets the ICAO annex publication resolution and integrity requirements. A quality management system should be implemented to define all activities relating to processing and publication of aeronautical information in procedures and processes.	**100% Complied** (All Information meets the ICAO publication resolution and data integrity) *(published in the AIP)*
		P-02	Data integrity monitoring	Data integrity monitoring is the monitoring of the data from the originator, through the data process chain. To eventual publication. Data integrity monitoring can be facilitated by the implementation of processes like CHAIN (Controlled and Harmonized Aeronautical Information Network)	**100% Complied** *(Aeronautical data flow process is in place)*
		P-06	Integrated aeronautical information database	An Integrated Aeronautical database is a single, centralized repository of aeronautical information where digital aeronautical data from a state are integrated and used to produce current and future AIM products and services.	**100% Complied** *(AIS Operations has its own database which is located at the Air Traffic Management Center and one in Vienna Austria)*
		P-07	Unique identifiers	The Aeronautical Database should be able to use the cyclic redundancy check (CRC) mechanism as defined in ICAO Annex 15 during the transfer of data to guarantee that the unique identifiers are not corrupted during the process.	**100% Complied** *(supported by EAD System and AISS)*

RoadMap Phase	Expected Implementation	RoadMap Steps		Description	Remarks
		P-08	Aeronautical information conceptual model (AICM)*	The Aeronautical Information Conceptual Model , also known as "AICM", provides a formal description of the aeronautical information items, using a standard data modeling language. This standard data model enables the automated processing of aeronautical information by the end users. Automated processing of data limits the occurrence of human induced errors. AICM forms the basis of the Aeronautical Information Exchange Model (AIXM)	**100% Complied** *(supported by EAD System and AISS)*
		P-11	Electronic AIP	The Electronic AIP (eAIP) is the html version of the AIP which consists of a set of XML files. (it is not a PDF version of the AIP). The applications used to create the AIP must be able to create it in accordance with the eAIP specification.	**0%** *(E-AIP is approved by the Aeronautical Information and Communications Department (AICD)t but not yet implemented due to system updating)*
		P-13	Terrain	States must establish a national digital elevation model (DTM) or digital surface model (DSM) which meets the ICAO Annex 15 requirements for terrain data.	0% *(not yet implemented)*
		P-14	Obstacle	States must establish a national regulations for controlling and monitoring of obstacles in the vicinity of an aerodrome. These regulations should include the four areas as specified in Annex 1, Chapter 10 and clearly define the process of approval of the obstacle through the civil aviation authority of the state	0% *(not yet implemented)*

RoadMap Phase	Expected Implementation	RoadMap Steps		Description	Remarks
		P-15	Aerodrome Mapping	An AMDB is a Geographic Information System (GIS) database of an airport describing: Spatial layout of airport; the geometry of features (e.g. runways, taxiways, buildings); further information characterising the features and their functions which are stored as attributes.	0% *(not yet implemented)*
Phase 3 Information Exchange	**November 2025**	**P-09**	Aeronautical data exchange	The Aeronautical Information Exchange Model (AIXM) is a specification designed to enable the encoding and the distribution in digital format of the aeronautical information, which has to be supplied by the national AIS Providers in accordance with the ICAO Convention	**100%** *(AIS Operations is currently in AIXM 4.5)* *(AIM should be in AIXM 5.1)*
		P-10	Communication networks	Networks utilizing Internet protocol for the transmission and dissemination of aeronautical data and information should be implemented	**100% Complied**
		P-12	Aeronautical information Briefing	This entails digitalizing the traditional paper based pre-flight NOTAM briefing and expanding it to include other aeronautical information/data elements such as charts and other graphical products as well as meteorological data and charts.	**80%** *(Though the PIB is available in AISS, the data is not updated because of the world wide data (dynamic) is not fully stored in the database)*
		P-16	Training	Training requirements for AIS staff must be expanded to include the new requirements of databases, AIXM, XML, HTML, etc.	**50%** *(Basic AIS training complied but Training Manual needs to be updated with new system and additional function Flight Information Briefing Service (FOBS))*

RoadMap Phase	Expected Implementation	RoadMap Steps		Description	Remarks
		P-18	Agreements with data originators	Agreements with data originators are usually made up in the form of Service Level Agreements (SLA's). The SLA package is a series of interrelated elements to facilitate the establishment of agreements between aeronautical data originators and Aeronautical Information Services (AIS). The SLA requirement must be included into the national regulations to ensure compliance.	**50%** *(Only ATMID and AIS Operations has Service Level Agreement) (AIS Operations has started the Internal and External Stakeholders Seminar for Data Originators last April 4, 2019 and February 20, 2020. Service Level Agreements among Data Originators from CAAP and Airport Authorities has been drafted and awaiting feedback.)*
		P-19	Interoperability with meteorological products	The established and implementation of an exchange model like WXXM would ensure that data in products like METAR/SPECI/TAF/SIGMET is exchange in digital form in accordance with a globally interoperable information exchange model which will use extensible mark-up language (XML) and geography mark-up language (GML).	0%
		P-20	Electronic aeronautical charts	A dataset of GML and XML aeronautical, terrain and obstacle data that can be interpreted by systems to produce a graphical representation of the applicable data	0%
		P-21	Digital NOTAM	A Dataset of AIXM/XML encoded NOTAM that can be exchanged through multiple media and with multiple systems for the updating (temporarily or permanent) of "published"/stored data.	0% not yet implemented (AIS Operations is still at AIXM 4.5)
		Note: AIS Operations is currently in the transition phase from EAD pro to AISS. Both systems are maintained by AIS Operations.			

Note: Three (3) Road Map Positioning Steps for the year 2021 will be committed namely **P16 – Training**, **P17 – Quality** and **P11 – Electronic AIP**
10 out of 21 steps in the AIM Roadmap has been completed for year 2019, other Roadmap steps have been partially initiated and will be updated.