



International Civil Aviation Organization

MIDANPIRG/20 and RASG-MID/10 Meetings

(Muscat, Oman, 14-17 May 2023)

Agenda Item 6.2: MIDANPIRG Work Programme - AIM

AIP DATASET CREATION

(Presented by United Arab Emirates/General Civil Aviation Authority)

SUMMARY

This information paper outlines the UAE GCAA high-level plan with the main activities to set up the stage for the operational and technical implementation of the ICAO AIP Digital Dataset as part of the strategic GCAA plan for enhancing AIM system capabilities.

REFERENCES

- Annex 15 “Aeronautical Information Services”
- DOC 10066 “PANS-AIM”

1. INTRODUCTION

1.1 AIP Dataset Content Creation is one of the most challenging and demanding activities that the UAE GCAA overcame. The challenges lie in mapping the needed requirements and filling the gaps with precise solutions to assure the completeness of the final product i.e. AIP Digital Dataset.

1.2 Enhancing AIM system capabilities are improvement stages and the natural result of UAE AIM continuous services development process. These have created a solid platform of functionalities allowing better, quality-controlled and standardized interaction with other internal and external (third party) stakeholder systems.

1.3 The main driver for the phased approach employed by UAE and described in this paper, is the regulatory compliance and alignment with ICAO SARPs (Annex 15 and PANS-AIM) as well as with the revised MID Region AIM implementation roadmap.

2. DISCUSSION

2.1 To a large extent, ICAO Digital Datasets are Recommended Practices (“should”) i.e. their implementation is left at the discretion of the Member States.

2.2 UAE decided to proceed with the implementation activities for the AIP dataset due to the availability of a SWIM interface and UAE AIP aeronautical data in AIXM format.

2.3 AIP Dataset content creation was a challenge due to the lack of clear guidance. UAE has created an AIP Dataset implementation plan and AIP Dataset technical specification documents.

2.4 The implementation was divided into two phases:

- (1) Set the stage phase – including detailed Implementation Plan, Operational and Technical Specifications, adapting data capture process for temporary information (AIP SUPPs), SWIM Service definition, mapping AIP to PANS-AIM, test sample file and full file;
- (2) Operational phase (SWIM Service) - including a Transition Period i.e. co-existence of AIP electronic format together with digital files.

2.5 Decision Matrix (High-level Plan) for AIP Dataset Provision:

UAE AIP Dataset Plan			
Section	Elements	Tech Specs/ Implementation Plan	Description
How	Implementation Scenarios	Implementation Plan	<ul style="list-style-type: none"> ✓ In-house/stand-alone application; ✓ Prepare the Dataset (new AIM product); ✓ Query AIM system (SWIM interface); ✓ Expose as SWIM service;
	Content	UAE AIP Dataset Technical Specification	<ul style="list-style-type: none"> ✓ Resolve PANS-AIM inconsistencies i.e. filling the gaps; ✓ Mapping PANS-AIM to AIXM 5.1.1 database; ✓ Separate Technical Specs for mapping, metadata and database AIXM 5.1.1 Business Rules; ✓ “Upgrade/Enlarging” content list in two-way manner; ✓ More than the minimum list of properties/sub-properties based on Aeronautical Data Catalogue; ✓ Content adapted to specific UAE AIP content; ✓ Every data integrity class added in AIM Database; ✓ Consistency assured between AIP dataset file vs. #AIP-DS#;
	Completeness	UAE AIP Dataset Technical Specification	Full UAE AIP dataset, not sub-set or data grouping; AIP SUPPs can be encoded in AIM Database (TempDelta);

	Delivery mechanism (SWIM)	UAE AIP Dataset Technical Specification	<ul style="list-style-type: none"> ✓ Request/reply for accessing UAE AIP Dataset as complete “information package”; ✓ Pub/Sub pattern for regularly notification of consumers; ✓ Advanced SWIM interface capability i.e. query/retrieve at feature level (at later stage). ✓ Initially, AIP Dataset will be posted parallel as SWIM service + GCAA extranet website; ✓ Service Overview; ✓ Service Registry;
When	Datasets	Timeframe	Description
	UAE AIP	2021	Set the stage for implementation
	Digital Data	2024	Expected Implementation (in operations)

Transition Plan

Section	Elements	Timeframe	Description
Transition	Time	2024 - 2026	<ul style="list-style-type: none"> ✓ Transition period for provision of eAIP <u>in parallel</u> with AIP Dataset; ✓ The AIP content removal will be done in close coordination with the users; ✓ Co-existing time of eAIP format with Datasets files will be decided based on an assessment (national survey & questionnaire); ✓ Envisaged transition period estimated to be min. 1½ - 2 years.
Publication	AIC	2023	<ul style="list-style-type: none"> ✓ UAE AIM alignment with ICAO SARPS; ✓ Duration of the “grace period” (AIP Datasets & UAE AIP);
	GEN 3.1.6 Notification	2023	<ul style="list-style-type: none"> ✓ Brief description in UAE AIP following PANS-AIM, Appendix 2;

3. ACTION BY THE MEETING

3.1 The meeting is invited to take note of UAE experience and consider such procedures in implementation planning.