



الهيئة العامة للطيران المدني
GENERAL CIVIL AVIATION AUTHORITY



Third Meeting of the Aeronautical Information Management Sub-Group (AIM SG/3)

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**UNITED ARAB
EMIRATES**



Outline

- **UAE National AIM Implementation Roadmap**
- **Status of B0-DATM Implementation**
- **Outlook 2020**
- **Status of AIM Deficiencies**
- **Lessons Learned**
- **Challenges**
- **Recommendations**



UAE National AIM Implementation Roadmap

- **CIVIL AVIATION ADVISORY PUBLICATION, CAAP 54 (Issue July 2011) TRANSITION FROM AIS TO AIM**
- **The summary of the implementation plan as follows:**

UAE National AIM Implementation Roadmap

PHASE	STEP	START DATE	END DATE
PHASE 1	STEP-01 — Data quality monitoring	2008	2011
	STEP-02 — Data integrity monitoring		
	STEP-03 — AIRAC adherence monitoring		
	STEP-04 — Monitoring of differences to Annex 4 and Annex 15		
	STEP-05 — WGS-84 implementation		
	STEP-08 — Aeronautical information conceptual model (Database - ICAO)		
	STEP-13 — Electronic terrain – Area 1 and 4		
PHASE 2	STEP-14 — Electronic obstacles – Area 1 and 4	2012	2015
	STEP-06 — Integrated aeronautical information database		
	STEP-07 — Unique identifiers (Database - ICAO)		
	STEP-11 — Electronic AIP		
	STEP-12 — Aeronautical information briefing		
	STEP-13 — Electronic terrain – Area 2 and 3		
	STEP-14 — Electronic obstacles – Area 2 and 3		
	STEP-16 — Personnel training		
	STEP-17 — Quality Management		
	STEP-18 — Agreements with data originators		
STEP-20 — Electronic aeronautical charts			
PHASE 3	STEP-09 — Aeronautical data exchange - Global	2016	2021
	STEP-10 — Communication networks - enhanced		
	STEP-15 — Aerodrome mapping		
	STEP-19 — Interoperability with meteorological products		
	STEP-21 — Digital NOTAM		



Status of B0-DATM Implementation

Abbreviations used in Status Tables:

NI: Not implemented

PI: Partially Implemented

FI: Fully Implemented

NC: Not Compliant

PC: Partially Compliant

FC: Fully Compliant

N/A: Not Applicable

Note – NC/PC/FC is used for the provisions required by SARPS; NI/PI/FI are regionally agreed requirements

Provision of AIS/AIM products and services based on the Integrated Aeronautical Information Database (IAID)			
Elements	Status	Action Plan	Remarks
Integrated Aeronautical Information Database (IAID)	FI		
AIXM (+version)	FI		AIXM 5.1
eAIP (IAID-based)	FI		
NOTAM (IAID-based)	NC	2021	As per UAE National AIM Implementation Plan
SNOWTAM (IAID-based)	NC	2021	As per UAE National AIM Implementation Plan
PIB (IAID-based)	PC	2020	PIB: AVBL at OMAA, OMDB, OMDW, OMFJ; other ADs 2020
Charting (interoperable with IAID)	PC	2018	Charting system upgrade is planned for 2017
Procedure Design (interoperable with IAID)	NI	2021	
ATS (interoperable with IAID)	PI	2021	ACC coordination ongoing

Aeronautical Data Quality			
Elements	Status	Action Plan	Remarks
Quality Management System (QMS)	<i>FC</i>		
Formal agreement with originators	<i>PC</i>		Pending with UAE Military, Discussion on going at the ADs level
Digital data exchange with originators	<i>PC</i>	2021	Data exchange trials with Dubai is ongoing This will set the base for exchanging with other data originators
Metadata	<i>FC</i>		
Data quality monitoring	<i>FC</i>		
Data integrity monitoring	<i>FC</i>		
AIRAC adherence	<i>FC</i>		



WGS-84			
Elements	Status	Action Plan	Remarks
FIR/ENR	FC		
Terminal	FC		
AD	FC		
Geoid Undulation (GUND)	FC		

electronic Terrain and Obstacle Datasets (eTOD)

Elements	Status	Action Plan	Remarks
Area 1 Terrain	PC	2017	A recurrent data acquisition is planned in 2017
Area 1 Obstacles	PC	2017	A recurrent data acquisition is planned in 2017
Area 4 Terrain	FC		
Area 4 Obstacles	FC		
Area 2a Terrain	NC		Ongoing
Area 2a Obstacles	FC		
Area 2b Terrain	NC		Ongoing
Area 2b Obstacles	FC		
Area 2c Terrain	NC		Ongoing
Area 2c Obstacles	FC		
Area 2d Terrain	PC	2017	A recurrent data acquisition is planned in 2017
Area 2d Obstacles	PC	2017	A recurrent data acquisition is planned in 2017
Area 3 Terrain	FC		
Area 3 Obstacles	FC		
AMDB	NI	2021	As per UAE National AIM Implementation Plan



Outlook 2020

(Status of B0-DATM by 2020)

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B0 – DATM: Service Improvement through Digital Aeronautical Information Management				
Elements	Applicability	Status	Action Plan/Timelines	Remarks
National AIM Roadmap	State	FC		
AIXM (+version)	State	FC		
eAIP	State	FC		
QMS	State	FC		
WGS-84	ENR	FC		
	AD	FC		
	TMA	FC		
	GUND	FC		
eTOD	Area 1 Terrain	FC		
	Area 1 Obstacle	FC		
	Area 4 Terrain	FC		
	Area 4 Obstacle	FC		



Status of AIM Deficiencies

- NIL



Lessons Learned

- Prior System implementation, state should consider a common and consistent standard system architecture and specifications
- Regular coordination meetings with AIM Stakeholders within the state should streamline and support in completing the transition plan
- The necessity to establish regulations for the aeronautical surveyor service providers

Challenges

- Lack of interoperability in aeronautical data exchange due to different implementation of AICM by different system providers (import/export timeslice, business rules);
- Technical variation related to, for example, delivery format, mapping AIM DB to eAIP tool templates, version extensions, geometry encodings for airspace aggregation, arcs, etc.;
- The difficulty of encoding the aeronautical data e.g. terminal procedures, due to lack of consistent guidelines;
- SWIM implementation is presenting a certain risk due to several external dependencies, both at the practical level (local ANSP initiatives, lack of coordination) and at the conceptual level



Recommendations

- Coordination of the developments and even the definition of an implementation strategy at the national level
- Coordination and active involvement in the SWIM developments at international level
- Invest time and effort in studying the encoding aspects and to share the experience between the key Stakeholders responsible for originating, managing and publishing the data to the next intended user; active participation in international group dealing with coding specifications e.g. ECTL AIXM Coding Focus Group



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Thank you