



International Civil Aviation Organization

MID Region AIS Database Study Group

First Meeting (MIDAD SG*/1)
(Cairo, Egypt, 20 – 22 February 2012)

Agenda Item 6: Operation of MIDAD and maintenance aspects

CONCEPT OF OPERATION, ORGANISATIONAL STRUCTURE, STAFFING,
TRAINING & MIGRATION

(Presented by MIDAD Support Team)

SUMMARY

This working paper provides thoughts about operational aspects of MIDAD.

Action by the Meeting is at paragraph 3.

REFERENCES

- AIS/MAP TF/6 Report
- ATM/SAR/AIS SG/12 Report
- DGCA-MID/1 Report
- ICAO Aviation Systems Block Upgrades B0-30
- ICAO Strategic objective “Safety (A2)” and “Environment ...” (C31)”

1 INTRODUCTION

1.1 The operation of MIDAD requires an Operational Concept which drives the Functional and Non-Functional Requirements of MIDAD. The Organisation Structure needs to be able to enforce and ensure the realisation of the Operational Concept. To enable personnel to do that, Training is essential and the Migration Concept (Transition) from the old environment without MIDAD to an environment with MIDAD is vital.

1.2 The Operational Concept shall be harmonious to Global ATM Operational Concept of ICAO (Doc 9854 AN/458).

2 DISCUSSION

2.1 Concept of Operation

2.1.1 The Concept of Operation for the MIDAD is very important as a number of states AISs, ANSPs and other parties will probably have responsibilities for MIDAD. So a clear and documented Concept of Operation is the basis for all common work and shared responsibilities. The Concept of Operation shall be based on the target aeronautical data chain. The target aeronautical data chain shall be modelled by assessment of the existing data chain and the identification of the gaps based on the ICAO and Real User Requirements.

2.1.2 The target aeronautical data chain defines the responsibility of each actor related to the data in the data chain and is the basis for traceability.

2.1.3 The data modelling is an inventory:

- To identify mainly the **Aeronautical Data Ownership** in the existing chain,
- To identify data exchange points (to the next intended users),,
- To identify gaps.

2.1.4 The management of the target aeronautical data chain should consider to reach conformance to the RTCA/EUROCAE DO-201A/ED77 “Industry Requirements for Aeronautical Information” and DO-200A/ED76A “Processing of Aeronautical Data”.

2.1.5 This Concept of Operation and the Aeronautical Data Chain Modelling is essential for the definition of organisational structure, the staffing and the target system topology.

2.1.6 The ICAO AIS to AIM Study Group (AIS-AIM SG) is about to introduce the term of the “Authoritative Source” for a State AIS. This discussion must be followed and addressed for MIDAD¹.

2.2 Organisational Structure, Staffing

2.2.1 When implementing a data driven concept rather than a product driven concept for AIM, it should be noted that the organisation of the AIS or better the AIM will have working positions and responsibility which are not covered in the ICAO AIS Organisational Structure as described in the ICAO AIS Manual (Doc 8126-AN/872) Chapter 3.2 and Figure 3-2. Especially the function of aeronautical data and aeronautical obstacle data maintenance and coordination as well as the interface to procedures design is not covered. The AIS organisational structure in Doc 8126 was developed for a product driven AIS organisation.

2.2.2 Figure -1 shows also the integration of Procedures Design, MET, FPL Management, Help Desk and Training Management into AIS/AIM. The integration of civil and military AIS brings synergies, can cut costs and brings advantages for the organisation of training. Integration can mean full integration from the organisational structure point of view but can also mean to operate a joined office. In the later cases the integration is on data and/or product level. A possible enhanced organisational structure is shown in Figure -1.

¹ It should be noted that the European AIS Database (EAD) by its set-up is (legally) not an authoritative source. This might change in future but it is under discussion.

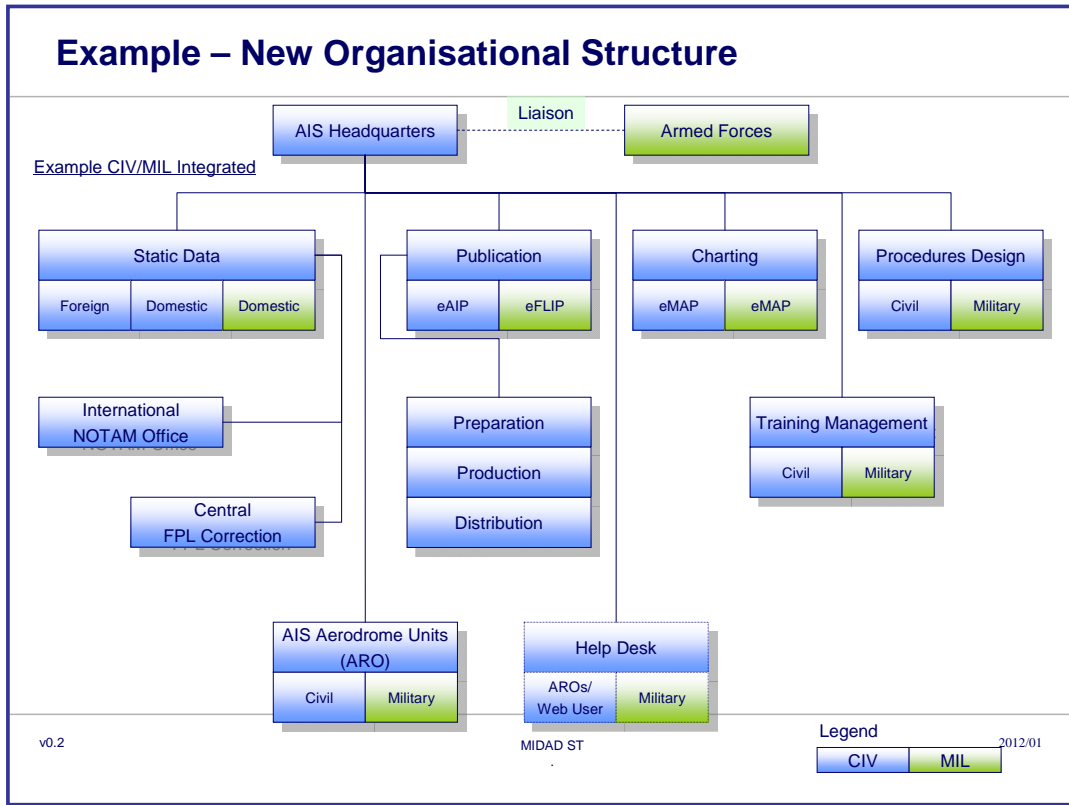


Figure 21: Example – New Organisation

2.2.3 The ICAO AIS-AIMSG considers an update of the AIS organisational structure in the AIS Manual (Doc 8126-AN/872) Chapter 3.2 and Figure 3-2 thereof in 2013.

2.3 Training

2.3.1 To have the right number of staff available which also has the right know-how and skills is the key for the whole undertaking of MIDAD. Therefore recruitment, staff selection, ab-initio training, specialised training, and follow up-training in the following essential areas :

1. Aeronautical Conceptual Model Data Contents;
2. Aeronautical Exchange Model Principles and Contents;
3. Electronic AIP advantages and publication;
4. Electronic Charting advantages and publication;
5. Generic approaches to publish AIS products;
6. Difference between product centred approach and data centred approach;
7. Aeronautical Data Chain Modelling; and
8. Operational Concept Description Methodology.

2.3.2 This list is not exhaustive and shall only trigger the issue of training. Training needs to be started well in advance before MIDAD is implemented.

2.4 Migration

2.4.1 The migration from the existing environment to the use of MIDAD shall also be studied and a outline concept needs to be part of the study.

2.4.2 At least the following should be studied:

1. Data conversion concepts;
2. Data conversion plan and schedule;
3. Data migration concepts;
4. Data migration plan and schedule; and
5. Data migration in cases of version changes of the AIXM (backward compatibility).

3 ACTION BY THE MEETING

3.1 The MIDAD SG/1 is invited to:

- a) note the content of this paper;
- b) Take it into account when moving forward with the Operational Concept for MIDAD; and
- c) Take appropriate action with regard to the MIDAD Operational Concept and Staffing.

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