International Civil Aviation Organization

MID Region AIS Database Study Group

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

Agenda Item 2: Introduction

AIS EXPERINCES IN EAD

(Presented by Jordan)

SUMMARY

The purpose of this paper is to share the experience gained after merging with EUROCONTROL for the connection to the EAD , in order to be taken into consideration whenever developing MIDAD .

Action by the meeting is at paragraph 9.

REFERENCES

-AIS/MAP TF/6 Report
-ATM/SAR/AIS SG/12 Report
- AIM Roadmap
- CARC Migration and Transition plan
-Eurocontrol / EAD website
- MIDANPIRG 12/Report

1. INTRODUCTION

1.1 EAD is owned by EUROCONTROL and is operating a reference database of quality-assured aeronautical information from the ECAC and world-wide area. EAD is providing a full integrated AIS solution for Data Providers (DP) and Data Users (DU) of aeronautical information, and immediate access to digital aeronautical information.

1.2 EAD is offering services to clients for different operational areas:

1- Static Data Operation (SDO)

2- Introduce and retrieve static data, aeronautical information and elements of the Integrated Package

3- International NOTAM Operation (INO)

4- Create and retrieve validated NOTAM and Pre-flight Information Bulletins (PIB);

5- AIP Production (AIP)

6- Generate AIP documents

7- Chart Production (CHP)

8- Generate charts

9- Published AIP Management System (PAMS)

10- Maintain a library of AIPs, AIP supplements, AIP amendments, AICs and charts that can be browsed and consulted by users.

1.3 The EAD operation requires the execution of activities and services by highly qualified skills and know-how of both the AIS domain, and of how AIS related operations are carried out.

1.4 Amongst others the EAD services comprise:

a- Processing of world-wide NOTAM
b- Coordination of static data conflict resolution
c- Maintenance of specific minimum set of data for the world-wide area
d- Provision of 24 hours technical and operational helpdesk and monitoring maintenance e-and operation of the System (EAD network included) to ensure the delivery of the system functionality.

1.5 Through the EMAC and EUROMED Aviation projects, Jordan was invited as well as other EUROMED Beneficiary states to merge with EAD as a data provider and/or data user.

2. AGREEMENT

2.1 Taking into accounts the ICAO policies and guidelines, and in order to enable AIS CARC to go in with AIS to AIM roadmap to get the benefits of EAD. Jordan CARC expressed its interest to become an EAD client on 29 September 2008.

2.2 Jordan CARC took the decision and became operational in all EAD operational areas (INO, SDO, PAMS), as both data provider and data user.

3. ACTUAL OPERATIONAL CONCEPT OF CARC AIS DEPARTMENT

3.1 CARC AIS consists of 4 units;

- The AIS HQ located at Amman/Marka aerodrome, collating, assembling, publishing, and distributing aeronautical information, including the production of AIP and charts;
- The International NOTAM and ATS reporting Office located at Amman/Queen Alia Aerodrome, publishing domestic and international NOTAM, and providing necessary briefing to pilots;
- The AIS and ATS Reporting Office located at Amman/Marka, providing briefing to pilots; and
- The AIS and ATS Reporting Office located at Aqaba/King Hussein Aerodrome, providing briefing to pilots.

4. NEW OPERATIONAL CONCEPT USING EAD

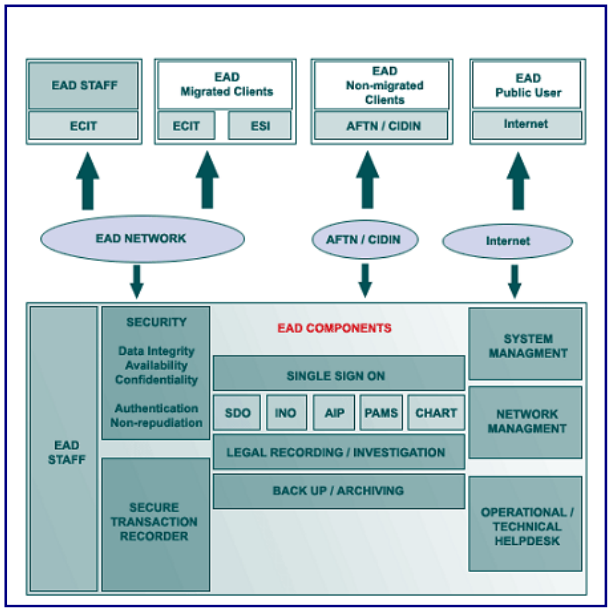
4.1 CARC planed the migration to the EAD in 3 phases:

- Phase 1: Implementation of the EAD integrated AIS office solution by maintaining INO, SDO and PAMS information and disseminating relevant data via the EAD terminal (EADPRO). The local NOTAM database will be kept up to date via AFTN subscription for continuity of the current solution and service, and in addition for fallback purposes. The local NOTAM database kept in service without any software changes in the current NOTAM software. This first phase allowed CARC to be declared operational for SDO, INO;

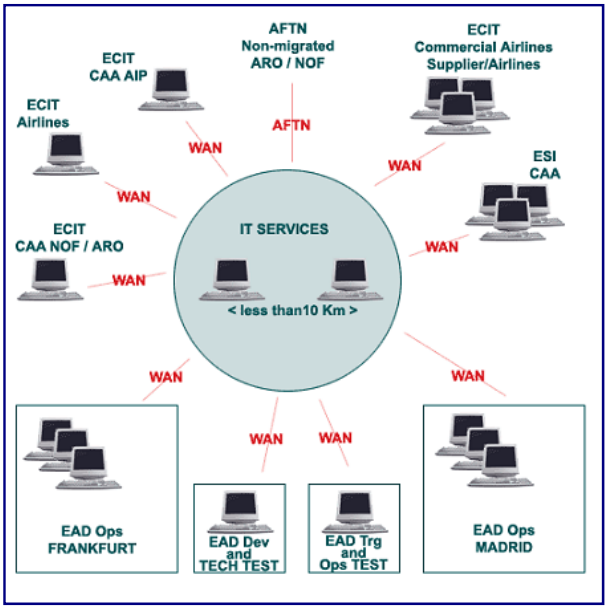
- Phase 2: Implementation of the Briefing Facility at the different ATS reporting offices; and

- Phase 3: implement the eAIP and Chart production according to CARC requirements and EUROCONTROL specifications.

5. EAD SYSTEM ARCHITECTURE AND TOPOLOGY



EAD System Architecture



EAD System Topology

Note: Abbreviations used above are: ESI-EAD System Interface, ECIT-EAD Client Interface Terminal

5.1 Technical Scenario

5.1.1 EAD terminals at CARC premises were deployed, and an AFTN connection with the local NOTAM database to exchange information, including the implementation of a network solution allowing connecting the terminals located at the different AIS offices with the EAD IT centres.

6. EXTERNAL SUPPORT

6.1 EUROCONTROL

6.1.1 EUROCONTROL provided the necessary support for any request related to migration or operations for SDO, INO, and PAMS.

7. ADVANTAGES

7.1 The main benefit is: “One single source of Aeronautical Information”. Specific benefits are identified for:

Safety - Improved data quality

- ICAO standards, OPADD, SDP, AICM/AIXM applied;
- Less reliance on human processing;
- Increased data integrity once it is input in EAD by the data provider
- Increased data coherence through validation checks;
- Automated processes between applications;
- Timely distribution of aeronautical information.

Cost Effectiveness - Integration of the different AIS components in the EAD

- Reduction in paper dissemination;
- Reduction of workload throughout the complete AIS process;
- Reduction in local AIS development costs through the use of commonly developed applications.

Availability/Accessibility

- Built-in redundancy with high availability;
- One single point of access;
- Easy retrieval of data for all clients.

8. DISADVANTAGES

8.1 AIS CARC is new user for EAD, therefore not many disadvantages could be reported so far, yet we could collect few in order to be taken into consideration in a later stage when establishing MIDAD:

- Following EAD SDO timeline makes you less flexible in terms of huge size AIP AMDT production, as you need to close the Slot 67 days in advance regardless how many changes of SDO you have.- Using EAD SW (AIP or CHART) sometimes stops your publication process until solution or SW Fix is installed.
- Using EAD SW (AIP or CHART) make you republish your AIP in total as you must use Structured AIP form.
- Constant upgrades and changes to the EAD SW requires a lot of additional training or awareness of you staff about the changes; (which sometime could not be achieved due budgetary reasons)
- EAD SW many times does not support your local requirements (AIP Structure etc.) and makes you less flexible in that respect.
- Cancelling EAD user day which proven to be good forum to exchange new ideas and suggest new solutions.

9. ACTION BY THE MEETING

9.1 The meeting is invited to:

a) note the information contained in this working paper;

b) Study the benefits provided of connection with EAD; and

c) Study the disadvantages reported in order to be taken into consideration.

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