International Civil Aviation Organization

MIDANPIRG MIDAD Task Force

First Meeting (MIDAD TF/1)
(Cairo, Egypt, 16 - 18 June 2014)

Agenda Item 3: MIDAD Project Phase 2 - Detailed Study

MIDAD - OPPORTUNITY FOR THE MIDDLE EAST AIM

(Presented by Helios, APAC and GroupEAD)

SUMMARY

This paper highlights important aspects relevant for the next phase of MIDAD. The paper summarizes current understanding of the global AIM vision, addresses key factors for a successful implementation of this vision, and approaches the vital relationship between operational requirements and technical solution relevant for a successful AIM implementation.

Action by the meeting is at paragraph 4.

1. INTRODUCTION

1.1 ICAO calls for the transformation of traditional AIS to the AIM on both the national as well as regional levels, and ultimately on a global scale, harmonising all the regional nodes into one interlinked network of aeronautical data. This is stipulated by the *Global Air Navigation Plan* (Doc 9750) and was further developed in the *Roadmap for the Transition from AIS to AIM* in 2009. The roadmap identifies major milestones recommended for a uniform evolution across all regions of the world, specific steps that need to be achieved, and timelines for implementation.

2. DISCUSSION

The Global AIM Vision

2.1 A clear message from ICAO representing the opinion of stakeholders is that AIM should signify a shift from standardising products to standardising data, which will in turn enable more freedom in the definition of future products while maintaining a high degree of quality, integrity and coherency of the information contained in these new products.

2.2 As a result, aeronautical information services are evolving from publication managers to information enablers, gathering data from different sources and serving a big variety of final users.

2.3 ICAO's vision has been fulfilled to some extent in a number of regions, as shown in Figure 1. European EAD is currently the most developed regional solution for the harmonisation of the AIS. However, with the MIDAD initiative now entering its next stage, there is a unique opportunity for the Middle East to become one of the leading regions, defining a service that covers not only the current AIS and AIM challenges, but also identifies future aeronautical data needs.

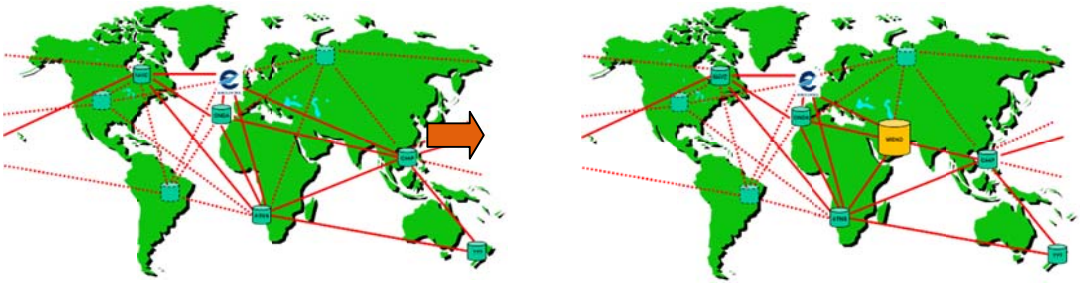

Figure 1: AIM worldwide coverage in 2014 and vision for the near future

2.4 The First Step to fulfil a vision of global interconnected system is to have well working regional AIM services. The MIDAD initiative aims to achieve this by providing a critical regional AIM data node in one of the fastest growing regions in civil air transport, delivering clear benefits for its subscribers.

2.5 The potential interlink with other regional nodes would enable participants to gain from the well-established and reliable system providing consolidated and verified data also from the neighboring regions.

Success Factors

2.6 There are a number of success factors which would need to be fulfilled to establish an effective and efficient AIM service, and to achieve an ultimate global network of AIM nodes – a collective service that is able to cover individual needs.

2.7 MIDAD should allow countries to manage their own personalised data workflow integrated in a single, harmonised, interlinked solution. The understanding of the users' needs, requirements of the legal framework and limitations of the originators are key factors for defining a service where everybody works according to the same workflows, while still maintaining their own responsibility and control.

2.8 In addition and as already well understood by the ICAO MIDAD Task Force, the initiative has to be supported and steered by a centralized body, which should:

- Support both the data and client migration;
- ensure that all the required procedures and guidelines are harmonised throughout all participants; and
- monitor the overall workflow, together with providing guidance and quality evaluation.

2.9 A neutral entity should be responsible for the monitoring of data harmonisation and conflict resolution, and should ensure a high dependability of data providing an ever needed contingency and business continuity capability.

2.10 It is also essential that the actions taken by the participating parties are supported by a positive business case aimed at improving efficiency and minimizing service costs.

2.11 Last but not least, one of the most essential points in this respect is that responsibility and ownership of the data will stay with the organisation responsible for their production and delivery.

Methodology

2.12 In order to achieve a target concept and design that is consistent with user requirements, it is strongly recommended that the approach to the MIDAD detailed study is consistent with best practice and, as a minimum, follows a process which includes:

- Understanding of the complete Data Chain;
- close contact with all parties involved in the Data Chain;
- understanding of Data Operations;
- neutrality;
- identification and definition of entire data and service scope, including elements that are not currently covered by AIM operations; and
- identifying constraints and national limitations.

2.13 Importantly, the approach should ensure the eventual selection of the technical enablers that best fit the chosen concept. If MIDAD is designed considering only systems that are currently available there is a high risk of inherently limiting the MIDAD initiative in terms of the employed business model, but also the modus operandi for service provision and the scope of provided services.

Technological solution

2.14 The technical system and infrastructure is a tool to achieve the goals that are set. These goals and technical requirements should be derived from the operational concept. Therefore, an open call for tender driven by open service concept will enable the MIDAD Task Force to receive proposals for the best tool(s) and will allow selection of the most suitable and tailored technical solution.

"Data operations *serve the customer – technology serves the operations"*

2.15 Following this principle will ultimately allow the MIDAD Task Force to achieve the best possible outcome. The call for tender specifications for the technical solution should therefore be produced by a team with both operational and technical expertise and AIM service and infrastructure experience, ideally with similar size of operation as anticipated for the MIDAD solution.

2.16 The team should be able to draw from the lessons learnt in other regions. A clear definition of the migration path to future systems and data formats is essential and should be supported by a proven technical compatibility for global integration.

2.17 We envisage that the subsequent system implementation and setup should include at least the following attributes:

- Supplier management;
- system specification fine-tuning;
- deriving IT service specification from the system/service specification;
- IT system and infrastructure design;
- safety management;
- coordination with local implementation of client installations;

- data user integration, e.g. airlines;
- network setup;
- interfaces to global AIM and local systems;
- setup of AIM server(s) IT service operation, e.g. professional service provider(s);
- system/infrastructure implementation;
- verification and validation;
- pilot operation;
- system acceptance; and
- system maintenance setup.

3. CONCLUSION

3.1 If MIDAD is to be successful, it is essential that operational service is the determining component and that the technical solution is the tool to enable operations.

3.2 The MIDAD initiative provides the Middle East with a unique opportunity to deliver a future AIM solution which is part of a global network and can meet the needs of all users. It should use the experience from the Middle East and other regions and involve technical and operational experts that can contribute to implementation and transition to innovative and effective service which is fit for the 21st century. This can be assured by detailed study that delivers a comprehensive view over a broad spectrum of areas and challenges.

3.3 Incorporating operational and technical expertise of setting up and running similar service offers MIDAD an opportunity to design, develop and run even better system and operation than in the preceding cases worldwide.

4. ACTION BY THE MEETING

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

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