



ASSEMBLY — 37TH SESSION

TECHNICAL COMMISSION

Item 39: Transition of Aeronautical Information Services (AIS) to Aeronautical Information Management (AIM)

TRANSITION OF AIS TO AIM

(Presented by the Bolivarian Republic of Venezuela)

SUMMARY

This paper provides a general outline of a few of the recommendations for the appropriate implementation of phase two of the *Roadmap for the Transition of Aeronautical Information Services (AIS) to Aeronautical Information Management (AIM)*.

Action: The Assembly is invited to:

- a) duly note the contents of this paper;
- b) take into account the difficulties presented in this paper and adopt coordination actions to ensure a successful transition, and
- c) recommend to the Council that necessary measures should be taken to achieve coordinated actions between ICAO, the States, and the industry and service providers.

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| <i>Strategic objectives:</i> | This information paper relates to Strategic objective D |
| <i>Financial implications:</i> | Not applicable |
| <i>References:</i> | <i>Roadmap for the transition from AIS to AIM</i> (First edition 2009) Doc 9750, <i>Global Air Navigation Plan</i> Doc 9828, <i>Report of the Eleventh Air Navigation Conference (2003)</i> |

¹ Spanish version provided by Venezuela.

1. INTRODUCTION

1.1 The Eleventh Air Navigation Conference (AN-Conf/11), held in Montreal in September 2003, approved the operational concept and recognized that aeronautical information services (AIS) would become one of the most valuable and important services of the global air traffic management system (ATM) operational concept. As the global ATM operational concept is based on taking decisions in collaboration, it is necessary to have reliable electronic information of high quality and at the appropriate time, both aeronautical and meteorological, as well as information on the airspace and flow management. Several of the recommendations of AN-Conf/11 specifically tackled the importance of aeronautical information.

1.2 In June 2006, a Global AIS Congress was held in Madrid, Spain. The event resulted from the collaboration between the European Organization for the Safety of Air Navigation (EUROCONTROL) and ICAO. The Congress dealt with the fundamental role of AIS in the constantly evolving ATM environment and noted that computer-based navigation systems, area navigation (RNAV), required navigation performance (RNP), and ATM requirements have led to the introduction of new requirements in the area of AIS to respect data quality and accuracy. Consequently, it involves the transition of the AIS function to an information management service, which has new requirements, responsibilities and scope, to respond to new needs and capable of dealing with new demands for information, as well as managing the provision of this information.

1.3 The Congress gave its support to the recommendations of AN-Conf/11 in relation to aeronautical information and started to establish a general overview determining the form, nature and contents of a strategy to transfer from product-centered AIS to data-based aeronautical information management (AIM), with a wider scope. Aware of the crucial importance of aeronautical information from a safety perspective, the Congress agreed that to avoid future divergences ICAO should lead the transition from AIS to AIM. Therefore, the Congress drafted ten recommendations requesting actions from ICAO or support from the States and international organizations.

1.4 In September 2007, the 36th Session of the Assembly recognized the need to support the Congress recommendations and asked for a better coordination between the States and international organizations.

2. DEVELOPMENT

2.1 As the current provision of aeronautical information is based on the pre-flight delivery of information and in view of the fact that the distribution of aeronautical information from the morning will have to respond to the requirements of all the components of the ATM system during all phases of the flight, when managing the system it will be necessary to use and transmit data and information considered vital for the correct operation of these components.

2.2 Depending on the activities carried out by the States and regions to complete the transition, the following has been taken into consideration:

- a) the new concept means it is necessary to take measures to guarantee that all regions throughout the world progress in the same way or, at least, cooperate together to offer a global interoperability based on common standards and procedures; and
- b) it is also necessary to take corresponding actions when introducing new amendments to the Standards and Recommended Practices (SARPs). Likewise, institutional, legal and technical issues also need to be examined.

2.3 Difficulties encountered for the transition:

- a) the requirements for a secure and effective global provision of information management (AIM) have not been clearly defined; adopting a model for exchanging aeronautical information developing new specifications for Annex 4 — *Aeronautical Charts* and Annex 15 — *Aeronautical Information Services*, which govern the electronic availability of aeronautical information and charts;
- b) the provisions of Annex 4 and Annex 15, and the associated guidance materials, require the provision of conceptual tools to interchange standardized aeronautical information to allow the global interchange of data in a digital format. They should include more provisions relating to standardization standards for establishing AIPs in a digital format by the means of a software application. Likewise, the appropriate updating of Document 8126;
- c) to ensure consistency and links between the various components of the operational concept and fulfill the role of the AIS, there is a need to interchange and manage aeronautical information to be used by various services and users, taking into account the interoperability of future and existing systems. One of the key objectives underpinning the effective transition to AIM will be to determine which data network is to be used to exchange new products and determine which information is allowed to be exchanged over the public internet, and which information will require a secure system. These issues have not yet been determined;
- d) the future human resources required for the future AIM must be determined. This involves identifying the skills of the personnel required in future, the mechanisms used to validate their skills and drafting guides and teaching materials. Global mechanisms will need to be defined, which will allow the models to evolve in a manageable way and support provided; and
- e) any AIS system based on aeronautical information management networks with an AIM-focused basis must recognize that some data is of a sensitive nature when used by the military, national security, air operators, airport operators or from an industrial perspective. Sensitive data requires an appropriate protection, and necessary measures must be taken to prevent any unauthorized use of such data by applying restricted access procedures and implementing fundamental review and control operations; a system of identifying adverse situations which may have an impact on the management of aeronautical information must also be established.

3. CONCLUSIONS:

3.1 The Bolivarian Republic of Venezuela urges that the phases described in the roadmap for the transition from AIS to AIM, according to the evolution of the general concepts of the ATM, should be assessed and updated in order to build a solid base for this plan.

3.2 The changes must be linked to the clearly defined needs in the ATM Operational Concept, instead of aiming at generic requirements, as is presently the case.

3.3 To ensure the effectiveness of the current AIM transition, in phase two, step eight, the following should be defined:

- a) the data networks used to interchange the new products;
- b) the information allowed to be interchanged over the public internet; and
- c) information requiring data assurance.

3.4 We recommend that the possibility of integrating a new secure information management system should be studied, as Phase two of the Roadmap requires the definition of standards for interchanging aeronautical data.

3.5 For Phase two of the Roadmap, define the standards for interchanging data between regions and with unique identifiers.

3.6 ICAO must continue to help States, in their regions, to define the aeronautical information management (AIM) system and must undertake to draft more guidelines to ensure the transition work is carried out effectively.

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