

ELEVENTH AIR NAVIGATION CONFERENCE

Montreal, 22 September to 3 October 2003

Agenda Item 1: Introduction and assessment of a global air traffic management (ATM) operational concept

1.2 Enabling concepts in support of the global ATM operational concept
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AERONAUTICAL INFORMATION AND METEOROLOGICAL DATA FORMAT

(Presented by IATA)

SUMMARY

Modern airliners incorporate sophisticated avionics that can accommodate electronic uploading and downloading of flight plan data, meteorological information and traffic information, on the ground and in flight. The right information can be made available to the right user in a timely manner.

A key component of the future air traffic management (ATM) system is the exchange of data through a globally integrated air and ground aeronautical telecommunication network.

ICAO is encouraged to establish global provisions and move rapidly forward with a common digital aeronautical data information exchange model.

1. INTRODUCTION

1.1 Modern airliners can achieve schedules within minutes on flights of 12 hours and more, if unconstrained. Current flight management systems (FMS) can determine the optimum trajectory from departure to arrival, accommodating the latest traffic information and meteorological (MET) data. Sophisticated flight planning and collaborative decision-making between the pilot, the air navigation services (ANS) provider and the airline operations centre can minimize fuel consumption, reduce delays and optimize flight connecting times.

2. AN EFFICIENT DIGITAL ENVIRONMENT

2.1 To maximize efficiency and enhance safety, it is crucial to provide timely aeronautical information, MET data, airspace status and, in the future, traffic/congestion forecasts and flow restrictions. A key component of the future ATM system is the exchange of data through a globally-integrated air and ground aeronautical telecommunication network. This requires that common quality information be available to users in a timely manner.

2.2 ICAO and States are encouraged to support and facilitate the transition towards a standardized, globally harmonized data exchange model and set the basis for automated charting using digital information exchange. This requires that all users be capable of accessing, processing and disseminating information through a common digital data exchange system.

2.3 The future information exchange system must provide dynamic and timely aeronautical information (e.g. weather, the airspace situation, etc). Automation, in turn, will reduce the need for human intervention thus enhancing data quality.

2.4 To support and facilitate the transition to the future operational ATM concept, timely quality-assured digital Aeronautical Information Services (AIS) and charting information is required to enable airborne and ground computers to communicate. In a collaborative environment, fully automated access to AIS, MET and airspace and flow management information is required. The same information should reach all participants in a collaborative decision making (CDM) environment.

2.5 Implementation of required navigation performance (RNP) will require an higher integrity level of the aircraft's onboard data.. Airlines are in favor of the data integrity increase to retain the safety levels needed to support RNP procedures. The States are challenged to review internal processes used to develop navigation aid data, frequency assignments, world geodetic system-1984 (WGS-84) position surveys, runway data, peaks and obstacle information that are used in developing and executing aircraft arrival, approach, and departure procedures.

2.6 ICAO is encouraged to develop an AIS strategy to identify general principles and required actions which facilitate the seamless exchange of information through a globally integrated air and ground aeronautical telecommunication network including:

- a) a data model that will cope with the provision of real-time information to airspace users; and
- b) automated updates between AIS, MET, ATC, flow management, airspace management, airports and airline operations centres.

3. **ACTION BY THE CONFERENCE**

3.1 The conference is invited to:

- a) acknowledge the importance of establishing, achieving, implementing a fully digital environment for AIS and MET data to ensure that the right information is made available to the right user in a timely manner;
- b) request ICAO to urgently adopt a common data exchange model for AIS and MET data; and
- c) request ICAO to develop provisions to support a fully digital AIS and MET environment.

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