

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

1.1 The global ATM operational concept :

EUROCONTROL ATM 2000+ STRATEGY - SUPPORTING THE ICAO GLOBAL OPERATIONAL CONCEPT

(Presented by European Organisation for the Safety of Air Navigation — EUROCONTROL, on behalf of its Member States and those of ECAC¹)

SUMMARY

This paper presents the EUROCONTROL view on the Global ATM operational Concept pointing out that the developments in Europe are consistent with it.

It appreciates the progress made on the concept and advocates further work.

Action by the conference is in paragraph 4.

REFERENCES

1. ATM operational concept document, WP/4 App:
<http://www.icao.int/icao/en/anb/meetings/anconf11/index.html>
2. EUROCONTROL Operational Concept Document (OCD)
3. EUROCONTROL ATM 2000+ Strategy, 2002 edition:
http://www.eurocontrol.int/eatmp/library/documents/DraftVol1_10e-clean.pdf

* English, French, Russian and Spanish versions provided by EUROCONTROL.

¹ The ECAC Member States are: **Albania**, Armenia, **Austria**, Azerbaijan, **Belgium**, Bosnia and Herzegovina, **Bulgaria**, **Croatia**, **Cyprus**, **the Czech Republic**, **Denmark**, Estonia, **Finland**, **France**, **Germany**, **Greece**, **Hungary**, Iceland, **Ireland**, **Italy**, Latvia, Lithuania, **Luxembourg**, **Malta**, **Moldova**, **Monaco**, **the Netherlands**, **Norway**, Poland, **Portugal**, **Romania**, Serbia and Montenegro, **the Slovak Republic**, **Slovenia**, **Spain**, **Sweden**, **Switzerland**, **The former Yugoslav Republic of Macedonia**, **Turkey**, Ukraine and the **United Kingdom**).

The 31 Member States of EUROCONTROL appear in **bold**.

1. INTRODUCTION

1.1 The first draft version of the global air traffic management (ATM) operational concept developed by the Air Traffic Management Operational Concept Panel (ATMCP) was circulated to States and international organisations in 2002 for assessment and to provide recommendations for improvement. Taking into account the comments and recommendations received, the Air Navigation Commission produced the ATM operational concept document.

1.2 This paper presents the EUROCONTROL view on the Global ATM Operational Concept, pointing out that the developments in Europe are consistent with it. It appreciates the progress made on the concept and supports further work on it.

2. EUROPEAN WORK ON OPERATIONAL CONCEPT

2.1 The EUROCONTROL Organisation commenced work on the future ATM operational concept in the 1980's. It supported ICAO through participating in the Future Air Navigation System (FANS) Committee, and contributed to the development of the Future European ATS (FEATS) concept of the European Air Navigation Planning Group (EANPG).

2.2 A new phase started in 1992 when the development of a European ATM System (EATMS) concept was launched aiming to satisfy the European traffic needs — looking ahead and seeking ways and means to accommodate the anticipated traffic demand of the first decades of the 21st century. The Transport Ministers of the European Civil Aviation Conference (ECAC) States asked EUROCONTROL to propose a comprehensive ATM Strategy, and in response to this request the European Air Traffic Management Strategy for the Years 2000+ was formulated. The strategy has been presented to and accepted by the EANPG.

2.3 Numerous aspects and initiatives of the Strategy have been simulated and tested by European ATM R&D programmes. The results of these simulations and tests have progressively been taken into account to update initial views, and were considered as the European input to the ATMCP's work. Some of these studies were carried out in cooperation with European States, involving the R&D community, aviation industry, airspace users and ATM service providers. In some cases the cooperation was extended to non-European partners, in particular partners in the United States.

3. COMMONALITY OF VIEWS

3.1 The good synergy developed among the ATMCP members enabled the panel to capitalise on work done in Europe and in other regions. As a result, the current vision of the future ATM is not merely a collection of new operational features, but constitutes a fundamental revision of the approach to ATM, addressing and considering characteristics such as:

- a) performance orientation;

- b) safety first, with systems safety management as a foundation;
- c) recognition of operational changes that consider ATM as a network of partners, including the gate-to-gate scope, collaborative decision-making (CDM), and system-wide information management (SWIM); and
- d) concept at the top of a chain of planning and decision-making.

3.2 The operational concept of EUROCONTROL has recently been updated and is closely aligned with the global concept.

3.3 The characteristics set out in paragraph 3.1. above are fully compatible with the EUROCONTROL ATM 2000+ Strategy and actions are underway to progress their realisation. The attachment to this paper describes the main features of the strategy and of the associated operational concept.

3.4 A lot remains to be done to validate the different aspects of the concept. This requires coordinated R&D designed to ensure that the results are comparable with and complementary to each other. It is also desirable to speed up the overall process. These efforts require cooperation and exchange of information among all the parties concerned, all around the world.

3.5 It is important to have a common vision, and it is also important to determine how it can be achieved. The development of the concept should be immediately supplemented by activities, which prepare the transition from today's ATM systems to the future. Steps of changes need to be identified and assessed in terms of improved ATM performance. This is essential to achieve future global interoperability and "seamlessness" at the most acceptable total cost.

4. ACTION BY THE CONFERENCE

4.1 The conference is invited to:

- a) recommend that the global ATM operational concept be used as the common global operational framework to focus future ATM development work and progress validation;
- b) encourage States and industry:
 - 1) to undertake work to validate the ideas and initiate implementation planning steps; and
 - 2) to inform ICAO of validation results;
- c) request ICAO to organise work to progress on global issues, such as system safety, identified by ATMCP but which are beyond its current mandate; and
- d) note the strategic approach undertaken in Europe with the ATM 2000+ Strategy, which associates an operational concept, and a transition strategy, and recommend to ICAO regions and States to adopt a similar process.
