FOURTH MEETING OF THE ALLPIRG/ADVISORY GROUP

(Montreal, 6 – 8 February 2001)

Agenda Item 3:   Coordination of CNS/ATM partners' planning and implementation efforts

OVERVIEW OF EUROCONTROL's
COORDINATION MECHANISMS

(Presented by EUROCONTROL)

SUMMARY

This paper provides an overview of the coordination mechanisms which have been implemented in Europe, in connection with the EUROCONTROL ATM Strategy for the years 2000+ — approved by the ECAC Ministers of Transport in January 2000 — and with the corresponding EUROCONTROL performance enhancement programme for ATM in Europe, known as EATMP.

The paper also provides some information on interregional coordination activities and may, therefore, be useful as background material for Agenda Items 2.1 and 2.3.

1.   **INTRODUCTION**

1.1   Increasing capacity and enhancing safety are key objectives of the ATM Strategy for the years 2000+, which was developed by the European aviation community and adopted by the ECAC[1] Ministers responsible for Air Traffic Services in Europe (MATSE) at their 6th meeting in January 2000.

1.2   The European ATM Programme (EATMP) was developed by EUROCONTROL to draw together the programmes, support services and implementation actions that are needed to improve the European ATM network as a whole and meet the continuous rise in demand for air transport, while maintaining the highest level of safety.

1.3   An important characteristic of both the Strategy and the EATMP is the "gate-to-gate" concept, which means that each flight is managed and treated as a continuum - from first interaction with ATM (which, in some cases, can be as early as several months before actual operations) until post-flight activities, such as performance analysis and the billing of charges for services rendered.

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[1]   ECAC stands for "European Civil Aviation Conference", which has 38 Member States in Europe.

1.4   The implementation of this concept requires a much closer partnership between all of the aviation stakeholders, and a more widespread sharing of information than previously. Information on flights is usually available in several individual systems - at airlines' Operations Centres, airports and air traffic service units – but is often not shared. Innovations such as "system-wide information management" and "collaborative decision-making" will, in the future, ensure that all relevant data concerning flight planning and the actual progress of a flight are pooled, ensuring that all partners in the system are fully aware of the downstream impact of any likely change.

2.   **CURRENT RELATIONSHIP BETWEEN SUB-RGIONAL AND REGIONAL PLANNING IN EUROPE**

2.1   The European Air Navigation Planning Group (EANPG) is responsible, *inter alia*, for managing the Regional Air Navigation Plan for the EUR Region. In its discussions on measures and means to facilitate regional planning, the EANPG has been kept abreast of the efforts made within EUROCONTROL to develop the European Convergence and Implementation Plan[2] (ECIP) for the ECAC area. At its 42nd meeting in December 2000, the EANPG "*recommended that the "performance driven planning" concept used in EUROCONTROL's "European Convergence and Implementation Plan" for the ECAC member States, be extended to the whole ICAO EUR Region. This approach would enable the concept of the "homogenous areas" (qualitative description) to be complemented with the concept of "performance targets" (capacity target, safety target, etc. - quantitative description).* [quote from meeting report].

2.2   In preparation of the EANPG work, the ICAO EUR/NAT Regional Office and EUROCONTROL set up a small task force to, *inter alia*, make a detailed assessment of the relationship between the New ICAO European (EUR) Air Navigation Plan (ANP) / Facilities and Services Implementation Document (FASID) and the EUROCONTROL European Convergence and Implementation Plan (ECIP).

2.3   The Task Force concluded that:

   a) The EUROCONTROL ECIP is a high-level document, aiming at target setting and the way in which the targets would be reached;

   b) The EUR ANP/FASID, on the other hand, sets forth, in general terms, the ICAO Plan for the provision, under Article 28 of the Chicago Convention, of facilities and services for international air navigation in the ICAO European Region, and incorporates requirements emanating from the introduction of the ICAO Global CNS/ATM Systems' Concept;

   c) There is no duplication between the two documents, each of them serving well its own objective and purpose. As a general statement, it can be said that the ICAO ANP/FASID serves adequately the EUROCONTROL work and activities and, consequently, there is no reason for the Agency to develop a similar document;

   d) The main difference between the two documents is that the ECIP places the emphasis on the implementation/achievement of specific Objectives/Lines of Action in order to attain the harmonisation of States' Air Navigation Systems, whilst the ICAO EUR ANP provides the basic operational requirements, planning criteria and general

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[2]   A brief explanatory note on the European Convergence and Implementation Plan will be found in the appendix to this paper.

principles on which regional planning in the whole ICAO European Region should be based.

3.   **INTRA- AND INTERREGIONAL COORDINATION WITH STAKEHOLDERS**

3.1   The ATM 2000+ Strategy states quite clearly that, for the non-EUROCONTROL ECAC States to which the Strategy will apply, a method for ensuring the rights, obligations and commitments of those States should be established. The Strategy also refers to the fact that the EUROCONTROL Agency must initiate and co-ordinate, with all affected partners, the rule-making process that influences ATM, and that both airspace users and service providers are responsible for their timely and effective response to agreed plans, programmes and projects. One of the new features of the Strategy is indeed that ATM is seen as part of a complex air transport network - a "System of Systems" - which includes the processes of the aircraft operators and the airports.

3.2   Experience shows that a decision taken at a given time and at a given level is not automatically translated into the full, timely commitment and follow-up needed at all levels in all States. To obtain and maintain commitment, a convincing case must be presented at each step, accompanied by evidence, including business and safety cases, in order to secure that not only the service providers but also the airspace users make the necessary investments. This is why considerable investment – in terms of time and manpower – is being made by all stakeholders to secure sustained interaction.

3.3   The so-called EATMP Working Arrangements are a striking example. The various activities needed to implement the objectives of the ATM 2000+ Strategy have been organised in a set of technical, operational and managerial "domains", and each "domain" has its own team, composed of experts from EUROCONTROL and all interested stakeholders. Each team can be supported, as required, by specialist sub-groups and task forces. The top of the EATMP consultation ladder is the ATM/CNS Consultancy Group (ACG), which advises EUROCONTROL's Director General on ATM/CNS matters, and which is composed of high-level representatives of the ECAC States, international organisations (ICAO, the European Commission, etc.) and organisations representing a comprehensive range of stakeholders (IATA, IFALPA, IFATCA, etc.).

3.4   It should, in this connection, briefly be mentioned that the domain-oriented structure has been reflected in EUROCONTROL's internal organisation, which has adopted matrix working arrangements for all the programmes and activities in European ATM development in which the Agency is involved.

4.   **COOPERATION IMPROVEMENTS**

4.1   The ATM 2000+ Strategy identified several areas where co-operation needed to be improved. These are listed below, together with an overview of the action already taken or underway.

4.1   **Collaboration with airspace users**

4.1.1   In the past years, the emphasis has been on the improvement of the use of the airspace, and on the removal of costly bottlenecks. In this specific field, excellent collaboration exists not only at the level of the Domain Team and its sub-structures, but also at the level of the ATM/CNS Consultancy Group. All airspace users, ranging from major intercontinental operators, over regional carriers to general aviation/airports organisations are consistently consulted through their various representative – European or global – organizations.

4.2   **Collaboration with air navigation service providers**

4.2.1   Economic liberalisation has set in motion a still increasing trend towards privatisation and corporatisation of service provision in several States. The realisation of the objectives set out in the Strategy will affect the operation and management of any such privatised or corporatised air navigation service providers. Although the final authority rests with the States under the Chicago Convention, it was essential to improve the involvement of ATM service providers in the EUROCONTROL Organisation's decision-making process. In order to organise the exchange of views with service providers, and to secure high-level consultation, a Standing Conference of the service providers' Chief Executive Officers has been established. In addition, the Civil Air Navigation Services Organisation (CANSO) is represented at the level of both the ACG and the Provisional Council.

4.3   **Collaboration with airports**

4.3.1   Airports are an integral part of, and affect, the total ATM network – consequently, there was a need for an arrangement between the EUROCONTROL Organisation and the airports. The Airports Council International is represented on the ACG, and, in the Agency, a dedicated Airport Operations Unit and corresponding Domain Team have been established.

4.4   **Civil/military collaboration**

4.4.1   It goes without saying that close civil and military co-operation and co-ordination is of the highest importance, particularly because military authorities are not merely airspace users, but also service providers and airport operators. The measures taken to enhance this co-operation are the creation of the EUROCONTROL Civil-Military Interface Standing Committee (CMIC), advising the Provisional Council, and a dedicated EUROCONTROL Military Expert Unit in the Agency. In addition, the Agency maintains close liaison with NATO.

4.5   **Collaboration with manufacturing industry**

4.5.1   ATM has a poor record for implementing change to time and within budget, and many major infrastructure projects have suffered delays and escalating costs. This indicates that there are fundamental problems in the development of complex ATM systems, and in the relationships with equipment suppliers. Suppliers and service providers need to develop procedures for the best use of their expertise and to ensure that requirements and products can rapidly converge. Industry representative organisations, such as AECMA ("Association Européenne de Constructeurs de Materiel Aéronautique") and EUROCAE, (European Association for Civil Aviation Equipment manufacturers) are already represented on the ACG and relevant Domain Teams, and such representation is currently being extended to include individual companies. This had already been done when the ATM Strategy for the years 2000+ was being framed, since, for example, both Airbus and Boeing participated in those proceedings.

4.6   **International collaboration**

4.6.1   The developments in European ATM, brought about under the aegis of ECAC and EUROCONTROL, will strengthen Europe's contribution to the design, planning and implementation of the ICAO CNS/ATM System. European ATM will also remain aligned with ICAO Regional ATM plans to meet the airspace users' global requirements and to both strengthen co-operation and provide an effective interface with adjacent States and ICAO regions. Because of the particular similarity in the

development of, the problems facing and the solutions to be adopted for ATM in North America and Europe, and the mutual benefits to be gained, co-operation with the authorities of North America has been strengthened. The same goes for contacts with Africa, the Middle East and the Russian Federation. These contacts are either governed by Memoranda of Understanding, or by bilateral agreements.

4.7   **Stakeholder relations management**

4.7.1   The increasing complexity of the ATM environment resulting from the dynamics of the on-going privatisation of airlines and airports, the commercialisation of Air Navigation service providers, and an increased awareness of the environmental aspects of aviation, have led to the establishment of a dedicated Stakeholder Relations Management Unit in the EUROCONTROL Agency. The remit of this unit is to capture information on stakeholders, their needs and expectations, and to identify development trends in the various sectors of the air transport industry. The unit establishes and maintains channels of communication between EUROCONTROL and the ATM stakeholders. Its aim is to enhance mutual understanding and increase commitment of stakeholders to the actions needed to improve the European ATM network as a whole.

5.   **ACTION BY THE MEETING**

5.1   The group is invited to:

    a) note the coordination mechanisms put in place by EUROCONTROL to secure full involvement of the various stakeholders in ATM;

    b) note that some direct inter-regional co-ordination activities are being pursued by EUROCONTROL, but that, in all cases, the ICAO Regional Office is kept fully abreast of developments; and

    c) consider whether elements of the mechanisms developed by EUROCONTROL in the ICAO EUR Region could possibly serve as guidelines for similar developments elsewhere.
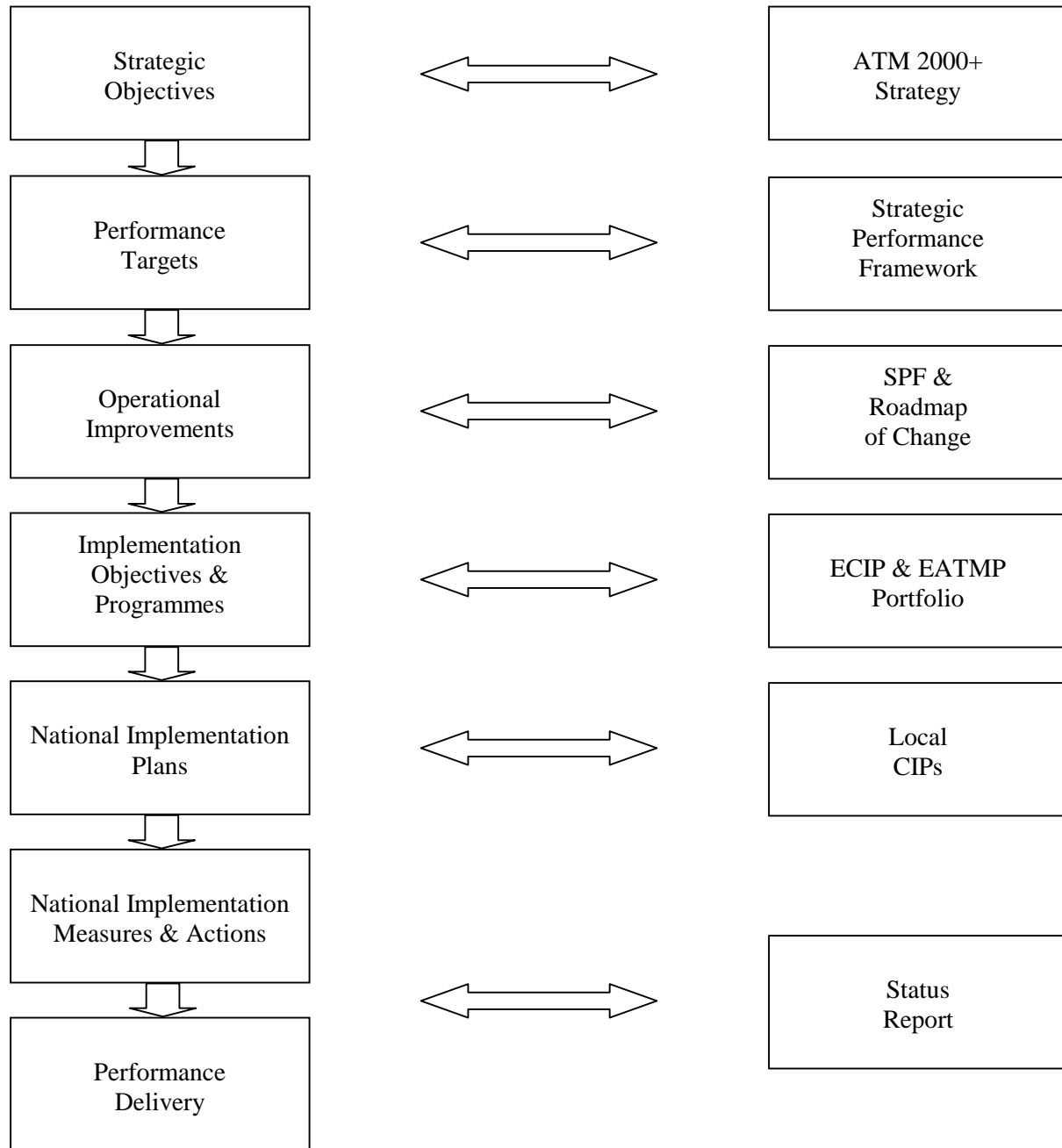
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APPENDIX

EUROPEAN CONVERGENCE AND IMPLEMENTATION PLAN

1.1   Different performance needs, traffic environments and situations may lead to different regional or local implementation plans. These differences in plans sometimes merely concern the time of implementation, and the common work is directly re-usable. On other occasions, truly different solutions may be required, but it is always beneficial to assess the conditions which affect the choice of different alternatives, and to consider those alternatives' wider impact. In any event, many – if not a majority of - operational improvements or infrastructure enhancements are better realised through the common and synchronised realisation of specific actions, including at regional or inter-regional level.

1.2   The above considerations have led to the establishment of the "European Convergence and Implementation Plan" (ECIP), an ECAC-wide, common medium-term Implementation Plan for improving ATM performance over the next 5 to 7 years. The ECIP describes the commonly agreed actions to be taken by EUROCONTROL and other ECAC States to meet the strategic principles and objectives set out in the ATM 2000+ Strategy, in full compliance with ICAO provisions and SARPs. It is developed in consultation and close co-operation with the States and other aviation stakeholders.

1.3   The ATM 2000+ Strategy describes a "Roadmap of Change through time" consisting of a consolidated and manageable set of Operational Improvements (OI) that will satisfy the ATM performance requirements and meet the airspace users' needs. The more developed Operational Improvements generate ECIP Implementation Objectives that set out the actions needed to implement the operational changes in the European ATM network.

1.4   The ECIP sets out ATM Performance Targets and breaks the ECIP Implementation Objectives down into generic Stakeholder Lines of Action (SloA), which describe what has to be done by each of the aviation stakeholders to meet the objective, and by when.

1.5   The ECIP Implementation Objectives and Stakeholder Lines of Action cascade further down into Local CIP Documents (LCIPD) for each State. These set out the detailed national plans and actions needed to achieve the objectives and meet the National ATM Performance Targets. The Local CIP Documents constitute the medium-term implementation plans for the ECAC States and aviation stakeholders.

1.6 An overview of the planning process is shown below, together with the associated lead documents.

Strategic Objectives	⟷	ATM 2000+ Strategy
Performance Targets	⟷	Strategic Performance Framework
Operational Improvements	⟷	SPF & Roadmap of Change
Implementation Objectives & Programmes	⟷	ECIP & EATMP Portfolio
National Implementation Plans	⟷	Local CIPs
National Implementation Measures & Actions		
Performance Delivery	⟷	Status Report

1.7   ECIP Implementation Objectives fall into one of the 3 following categories:

—   **Pan-European** - to be applied in **all ECAC States** within a common time scale; Pan European objectives apply to all States in the ECAC area and have to be achieved by all stakeholders by an agreed target date (or according to a common implementation time scale) in order to bring the expected benefits.

—   **Multi-National** - to be applied in **participating ECAC States** within a common time scale; Multi-national objectives apply to several States in the ECAC area and the actions they encompass have to be achieved by all stakeholders by the agreed target date (or according to a common implementation time scale) in order to bring the expected benefits.

—   **Harmonisation** - to be applied at **individual State or ATC unit level,** as appropriate, to meet local ATM Performance Targets. Harmonisation objectives have no fixed target date for completion as they can bring benefits locally, independently of other implementations. They should be applied where appropriate to reach the ATM Performance Targets set.

1.8   The need to implement a specific **Harmonisation** objective will depend largely on the local air traffic conditions and complexity. Not all ECAC States, or all ATC units in a State, will need to implement all of these objectives, and in many instances States will be free to choose which of the objectives best meet their national requirements while still allowing them to meet their national ATM Performance Targets. The ECIP will define the date from which implementation of the objective will deliver initial benefits. In some instances, it may also be possible to define a date by which full deployment on a voluntary basis might be possible.

1.9   The status of an ECIP varies over time, in relation to the lifecycle of the programme that supports it: from "tentative" to "confirmed" and eventually "achieved":

1.10   The description of **Implementation Objectives** comprises also a reference to the ATM process it improves, or the domain of work or enabling area primarily concerned, e.g. Airspace Organisation and Management, Human Resources, etc. Each objective comprises associated Stakeholder Lines of Action defined according to the stakeholders who have to progress them (e.g. Airport Operators, ATM/CNS Service Providers, Military Authorities, Regulatory Authorities, Support Industry, Airspace Users, EUROCONTROL Agency).

1.11   **Examples of Objectives**

Pan-European

Airspace Organisation and Management

- Implement Reduced Vertical Separation Minimum   2002   Confirmed

En-Route and Terminal ATC

- Implement ACAS II   2000   Confirmed

Multi-National

Airspace Organisation and Management

- Implement Free Routes Airspace in Eight   From 2003   Tentative
  States Airspace

Harmonisation

En-Route and Terminal ATC

- Implement Arrival Management Tools   From 2001   Proposed
- Improve Procedures through Mode S Elementary   From 2003   Proposed
  Surveillance Information
- Implement Air Ground Data Link Services (Phase 1) From 2003   Proposed

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