International Civil Aviation Organization

WORKING PAPER

ASSEMBLY — 36TH SESSION

TECHNICAL COMMISSION

Agenda Item 32: Development of an up-to-date consolidated statement of continuing ICAO policies and practices related to a global ATM system and communications, navigation and surveillance/air traffic management (CNS/ATM) systems

INSTITUTIONAL HURDLES TO IMPLEMENTATION OF THE ICAO GLOBAL ATM OPERATIONAL CONCEPT

(Presented by Civil Air Navigation Services Organisation (CANSO)[2])

EXECUTIVE SUMMARY
Assembly Resolution A35-15 urged steps to be taken to ensure the future global ATM system is performance-based and called on States "to use the ICAO Global ATM Concept as the common framework to guide planning and implementation of CNS/ATM systems." The Assembly also resolved that "States' sovereignty and borders should not be affected by the CNS/ATM systems implementation" and noted that "economic and institutional issues, … , need to be addressed by States individually and/or collectively."   **Action:** The Assembly is invited to: a) Note the challenges to realising the vision of an integrated, harmonised and globally interoperable air navigation system are primarily of an institutional, rather than of an operational/technical nature   b) Consider, for inclusion in a new consolidated statement, the proposed language included in paragraph 3.3 of this paper

Strategic Objectives:	This working paper relates to Strategic Objectives A, C and D.
Financial implications:	Not applicable
References:	Doc 9848, *Assembly Resolutions in Force (as of 8 October 2004)* Doc 9854, *Global Air Traffic Management Operational Concept* Doc 9750, *Global Air Navigation Plan for CNS/ATM Systems* Annex 11 - *Air Traffic Services* Doc 9426, *Air Traffic Services Planning Manual* Doc 9161/3, *Manual on Air Navigation Services Economics*

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[1] Arabic, Chinese, English, French Spanish and Russian versions provided by CANSO.

[2] CANSO is the global voice of ATM. In 2006, CANSO Member ANSPs serve 61% of world airspace, controlled 84% of world traffic and handled 44 million flights. Full members include:
Aena - Spain | AEROTHAI - Thailand | Airports Authority of India | Airservices Australia | Airways New Zealand | ANS of the Czech Republic | ATNS - South Africa | ATSA - Bulgaria | Austro Control - Austria | Avinor - Norway | AZANS - Azerbaijan | Belgocontrol - Belgium | CAA Uganda | DFS - Germany | DHMI - Turkey | DSNA - France | EANS - Estonia | ENAV SpA - Italy | Federal Aviation Administration - USA | HungaroControl | Irish Aviation Authority | Kazaeronavigatsia - Kazakhstan | LFV - Sweden | LGS - Latvia | LPS Slovak Republic | LVNL - the Netherlands | MATS - Malta | MoldATSA - Moldova | NAMA | NANSC - Egypt | NATS - UK | NAV CANADA | NAV Portugal | Naviair - Denmark | OACA - Tunisia | Oro Navigacija - Lithuania | PANSA - Poland | ROMATSA - Romania | Sakaeronavigatsia Ltd - Georgia | Serco | skyguide - Switzerland | Slovenia Control | SMATSA - Serbia | UkSATSE - Ukraine

1.   **INTRODUCTION**

1.1   Assembly Resolution A35-15 urged steps to be taken to ensure the future global ATM system is performance-based and called on States "to use the ICAO Global ATM Operational Concept as the common framework to guide planning and implementation of CNS/ATM systems." The last Assembly also resolved that "States' sovereignty and borders should not be affected by the CNS/ATM systems implementation" and noted that "economic and institutional issues, … , need to be addressed by States individually and/or collectively."

1.2   The current Global Air Navigation Plan, developed on the basis of an industry roadmap in follow-up to the 11th Air Navigation Conference, contains guidance that comprises the technical, operational, economic, environmental, financial, legal and institutional elements necessary to transition to the ATM system to the Global ATM Operational Concept.

1.3   The 35th session of the Assembly recognised "the central role ICAO shall play … in facilitating the provision of assistance to States with regard to the technical, financial, managerial, legal and cooperative aspects of implementation." Yet, progress to realise the vision of an integrated, harmonised and globally interoperable air navigation system has been slow in view of the institutional hurdles that have been encountered.

2.   **DISCUSSION**

2.1   It is reminded that under Article 28 of the Convention on International Civil Aviation each ICAO Contracting State undertakes to provide airport and air navigation services and facilities in accordance with the standards and recommended practices (SARPs) set forth in the Annexes to the Convention. The Convention in no way constrains *how* States should go about providing airports and air navigation services. States are free to choose the organisational structure and legal form of the entity to provide the services; they are to designate the authority responsible for the provision of the services, whether it is the State itself or a suitable agency. However, while operational functions may be delegated, the responsibility for complying with the Convention remains with the State.

2.2   Despite the latitude afforded by the Convention to States in determining the organisational and operational arrangements for the provision of air navigation services, air navigation services remain in large part the only link in the aviation value chain still organised, operated and owned at the national level. Liberalisation of air transport has forced airlines to restructure and reorganise and, in certain States and regions, allowed to merge and consolidate. Airports too, have been allowed to commercialise and privatise, and in some cases, become part of global airport or infrastructure companies. For a function that is truly global by nature, air navigation services need to be able to restructure and organise to become globally integrated, harmonised and interoperable.

2.3   Different rules and operational requirements currently exist for each air navigation services provider, as dictated by its national regulatory authority. This fragmentation of ATM impacts on safety, efficiency, capacity and has adverse effects on the environment. ANS performance is compromised. Air traffic management needs to be more functionally organised, while airspace needs to be organised following operational requirements and delineated in relation to the nature of the traffic route structure, rather than national borders.

2.4   This requirement to organise airspace according to traffic flows, irrespective of national borders, is recommended by ICAO.[3] Numerous arrangements currently exist where an air navigation service provider has been delegated to provide air traffic services in flight information regions, control areas or control zones that extend over the territory of another State. Such arrangements make sense for reasons of safety, efficiency and capacity enhancements. They are however often formalised by means of agreements between ATC units rather than State-to-State arrangements, with all the institutional and legal uncertainties that may derive from such informal agreements.

2.5   The organisation of airspace into Functional Airspace Blocks (FABs) as part of the Single European Sky initiative can be seen as an extension of this concept of organising airspace according to traffic flows, but then on a grander scale. A FAB can extend across the airspace under the responsibility of more than one EU Member State, and the Member States concerned are to designate the air navigation service provider(s) within the FAB. This could lead to eventual ANSP consolidation. Capacity and efficiency improvements can be achieved, while maintaining a high level of safety. Environmental benefits are also expected to be realised.

2.6   However, this European initiative to "de-fragment" the airspace and improve the performance of ATM first requires State agreement to create a FAB and then an agreement on the ANSP(s) to be designated as the provider(s) of the service within the FAB. It is acknowledged that significant legislative, regulatory & oversight, financial, social, security & defence, and legal & liability hurdles exist, which require strong political leadership and commitment from States in order to resolve them.

3.   **CONCLUSION**

3.1   Air traffic management needs to be more functionally organised, while airspace needs to be organised following operational requirements and delineated in relation to the nature of the traffic route structure, rather than national borders. The previous Assembly recognised that State sovereignty and borders should not be affected by CNS/ATM systems implementation and noted that the economic and institutional issues need to be addressed by States individually and/or collectively. It also recognised the role regions must play in the planning and implementation of such systems in order to ensure harmonisation and interoperability.

3.2   The European experience demonstrates that the challenges to realising the vision of an integrated, harmonised and globally interoperable air navigation system are primarily of an institutional, rather than of an operational/technical nature. It is further recognised that these challenges require strong political leadership and commitment from States in order to resolve them.

3.3   It is suggested that the revised consolidated statement of continuing ICAO policies and practices related to CNS/ATM implementation include the following wording:

> *Recognising* that the future global ATM system needs to be requirements-driven and performance-based
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> *Recognising* that the current fragmentation of ATM impacts on safety, efficiency, capacity and has adverse effects on the environment, airspace needs to be organised

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[3] *ICAO Annex 11 – Air Traffic Services*, para. 2.9.1

following operational requirements and delineated in relation to the nature of the traffic route structure, rather than national borders;

Recognising that State sovereignty and borders should not be affected by CNS/ATM systems implementation;

Noting that progress to realise the vision of an integrated, harmonised and globally interoperable air navigation system has been slow and the institutional hurdles encountered require strong political leadership and commitment from States in order to resolve them;

Recognising the role regions must play in the planning and implementation of CNS/ATM systems in order to ensure harmonisation and interoperability;

The Assembly:

Urges the Council to ensure that ICAO works closely with States and industry partners to develop a better understanding of the Global ATM Operational Concept and its implications for the organisational and operational arrangements for the provision of air navigation services;

Resolves that States collectively, and on a regional basis, address the institutional challenges to the realisation of an integrated, harmonised and globally interoperable air navigation system.