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WORKING PAPER

ASSEMBLY — 37TH SESSION

TECHNICAL COMMISSION

Agenda Item 36: NextGen and SESAR as part of the Global ATM system

COORDINATION OF RESEARCH PROGRAMMES AND DESIGNS TO CREATE AND IMPLEMENT PROMISING AIR NAVIGATION SYSTEMS

(Presented by the Russian Federation)

EXECUTIVE SUMMARY

Countries of the world are working diligently to craft the image of promising national and regional air navigation systems, gradually implement new ATC equipment and technologies in various regions of the world, and create programmes to integrate local systems into the global air navigation system. This document proposes elevating ICAO's coordinating role to resolve problems that arise, which will help expedite the process and save on States' material outlays on research related to setting up forward-looking air navigation systems such as SESAR and NextGen.

Action: The Assembly is invited to direct the Council to create, within the framework of ICAO, a special body to analyze and coordinate States' activities in the realm of forward-looking air navigation systems research and development on a mid-term and long-term basis, to address common problems, and coordinate the States' positions in the interests of transitioning to a globally seamless air navigation system based on the principles of a global operating concept taking into account amendments to regional air navigation plans.

Strategic Objectives:	This working paper relates to Strategic Objective A on safety.
Financial implications:	Additional resources may be required to support the activity of a special ICAO body on the analysis and coordination of the states' activities.
References:	*Global Air Navigation Plan* (Doc 9750); and *Global Air Traffic Management Operational Concept* (Doc 9854)

[1] Russian version provided by the Russian Federation.

1. INTRODUCTION

1.1 Experience shows that new equipment and technologies to improve air navigation flight servicing are being implemented in different countries and regions of the world to varying degrees. Although ICAO's efforts facilitate coordinating the process of building a forward-looking global air navigation system, it is difficult to imagine that this imbalance will be fully eliminated.

1.2 Regions and countries with high flight traffic need to force transition work by 2010-2025 to future air navigation systems that will make it possible to increase by 2-3 times the capacity of the airspace and support an acceptable air traffic safety level. From that perspective, we must acknowledge the thoroughly current, deep research the European Union is doing with the Single European Sky (SES) project (SESAR research stage) and NextGen in the United States.

1.3 In Russia, research in this area is being done within the programmes to implement the Concept for Creating and Developing the Air Navigation System of Russia to encompass the period through 2025. Work to create promising air navigation systems based on provisions of ICAO conceptual documents is underway in a number of other countries.

1.4 As the SESAR and NextGen projects are being implemented, there is a mutual exchange of information and clarification of positions that will make it possible in the future to ensure that the systems are functionally compatible. It would seem advisable to involve in the approval process other states that are doing similar research under their national projects.

2. COORDINATING RESEARCH AND DEVELOPMENT PROGRAMMES

2.1 The provisions of the ICAO conceptual documents that define the ways to transition to a prospective air navigation system provide air navigation planning bodies a broad choice of organizational, technical, ergonomic, and operational solutions. On one hand, this is an advantage. At the same time, there may be problems keeping the systems compatible if we do not take measures on time to coordinate research and development and align different perspectives on how to tackle different issues around air navigation servicing for aircraft.

2.2 Coordinating research and development is important because imbalances in system target indicators among countries can be detected in the early stages. It is well known that as international traffic grows these imbalances will exert mutual influence on one another. So, for example, analysis has shown that in different projects, air traffic safety levels can vary by an order of magnitude.

2.3 Coordination of research and development will also facilitate system compatibility, ease the adoption of new standards, rules, and procedures, as well as ensure that new equipment and technologies are implemented at the same time in different regions of the world. This is particularly important for determining airline policy for aircraft onboard equipment upgrades. Analysis shows that the cost of the work to improve onboard systems supporting international flights in any location in the world is commensurate with the cost of the system's ground segment.

2.4 The proposed coordination is possible only if the work will be under the auspices of ICAO and embody the principle: from harmonization of research and development to the harmonization of promising systems in the interest of a Global Air Navigation System.

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