International Civil Aviation Organization
North American, Central American and Caribbean Office (NACC)
Seventh Central Caribbean Working Group Meeting
(C/CAR WG/7)
Mexico City, Mexico, 13 to 16 July 2009

Agenda Item 2: Review of air navigation matters
2.1 Global air navigation and CAR/SAM developments

AIR NAVIGATION ACTIVITIES AT THE GLOBAL, INTER-REGIONAL AND INTRA REGIONAL LEVELS

(Presented by the Secretariat)

SUMMARY

This paper presents a panoramic view on activities within the air navigation environment at the global, inter-regional and intra-regional levels.

References:

- ICAO Document on the Transition Framework for an Electronic Air Navigation Plan (eANP)
- Forum for the integration and harmonization of the SESAR and NextGen programmes (Montreal, Canada, 8 to 10 September 2008);
- NACC/WG Meeting Reports;
- GREPECAS/15 Meeting Report

Strategic Objectives	*This working paper is related to Strategic Objectives A and D.*

1. Introduction

1.1 ICAO has made an effort to guide the work carried out by States in the development of a Seamless Global ATM System under the Global Plan Initiatives (GPI's), the performance-based planning and implementation approach and the regional integration and transition process. It has been acknowledged that the planning process will be facilitated by using planning tools, an air navigation planning electronic database, project management techniques and software, and new methodologies for the presentation of reports.

1.2 The purpose of these initiatives is to harmonize the work programmes, improve the process to prepare and present reports, and assist to guarantee the interoperability and transparency among the Regions, as well as to guarantee the development and measurement of the performance objectives.

1.3 Considering the follow-up and accomplishment of these objectives, several activities have been carried out on a global, inter and intraregional level in the CAR Region, which are described as follows.

2. Air Navigation Activities on a global, inter and intraregional level in the CAR Region

Performance Metrics

2.1 When designing, planning, implementing and operating a global air navigation system, it is necessary to focus it towards performance metrics. When following-up on an action plan, avoiding costly data collection and analysis processes, the performance metrics should be focused on proactive results to improve air navigation and obtain environmental benefits as a consequence of the work programmes.

2.2 The implementation should include the performance metrics in one of the following fields: safety, service quality (such as capacity, flight delay and efficiency), productivity and the relation between profitability-efficiency. In this respect, ICAO will be implementing several seminars and workshops on the development of performance frameworks for air navigation systems, which will provide the knowledge to carry out the air navigation performance planning process. This will establish national performance objectives, carry out gap analysis, define operational improvements and determine the relevant projects for implementation. A workshop was carried out in the ICAO NACC Regional Office from 6 to 10 July 2009.

2.3 Supporting this approach, ICAO has offered States some tools for analysing and facilitating the decision-making process. One of these tools is the Workshop on Business Case Analyses for the Implementation of CNS/ATM Systems leading to a Seamless Global ATM System that will be held from 28 September to 2 October 2009, in Antigua and Barbuda. This event will provide knowledge and practical exercises for the analysis using a business case for the CNS/ATM implementation.

Overview of Proposed Electronic Air Navigation Plan (eANP) Framework

2.4 Within the performance metrics approach, ICAO is currently working on the development of an Electronic Air Navigation Plan (eANP). This eANP will facilitate the coordination and implementation of regional air navigation plans, as well as supporting the Global Air Navigation Plan. It will also contribute to the further development of air navigation planning by providing a framework for the efficient implementation of new air navigation systems and services at the national, regional, inter-regional and global levels. The framework will support, in particular, the work of regional planning and implementation groups that plan, monitor and analyse the implementation status of planned facilities and services for inclusion in the regional air navigation plans, and recommend ways to expedite these plans in accordance with ICAO priorities. The availability of this information online will greatly facilitate updating and access to the latest information for States, ICAO regional office and various other users. The **Appendix** to this paper broadens the scope and objectives of the eANP concept.

2.5 To support the start of operation and use of the eANP, as well as to continue with the planning and implementation activities of services and systems; in accordance with the air navigation performance requirements, an update is being carried out to the information contained in the CAR/SAM Air Navigation Plan (Doc 8733), Volume II – Facilities and Services Implementation Document (FASID), highlighting the following approved amendments:

FASID Table	Title	Updated in:
CNS 1A	*AFTN Plan*	March 2009
CNS 1Bb	*ATN Ground-Ground Applications Plan*	August 2008
CNS 1C	*ATS Direct Speech Circuits Plan*	August 2008
CNS 2A	*Aeronautical Mobile Service and AMSS*	March 2009
CNS 4A	*Surveillance Systems*	March 2009

2.6 Likewise, a revised proposal for amendment to the Table CNS 3 – Navigation Systems (Serial No. CAR/SAM 09/3 – CNS-Revised), which included the NDB equipment deactivation information and the information on ABAS use, has been circulated to States for their review and comments.

2.7 Another part of information being updated for this global automation and coordination, is the one regarding five letter name codes (5LNC). An initial update to this information was prepared by ICAO and forwarded for review by States. This information is currently included in the Global ICARD Database for its use and States have been requested to send the registry and designation of the users for this application.

2.8 It is important to mention that within the forthcoming GREPECAS CNS/ATM Subgroup Meeting (4th Quarter 2009) it is planned to carry out a workshop for the use and management of 5LNC information in order to have the participants' comments and to complete the implementation of the CAR Region information in the ICARD global database.

2.9 Within the same objective for information update and harmonization, there is a proposal to update the information on the frequency assignment tables (List COM 1, List COM 2 and List COM 3), requiring States to review their information and provide comments by August 2009.

2.10 In addition, the following MET Tables contained in the CAR/SAM Air Navigation Plan (Doc 8733), Volume II – Facilities and Services Implementation Document (FASID) have been updated:

FASID Table	Title
MET 1A	*Meteorological Service Required at Aerodromes*
MET 1B	*Meteorological Watch Offices*
MET 2A	*OPMET Information Required in ISCS and SADIS*
MET 2B	*Regional Exchange of Operational Meteorological Information within the CAR/SAM Regions*
MET 3A	*Tropical Cyclone Advisory Centre*
MET 3B	*Volcanic Ash Advisory Centre*
MET 3C	*Selected State Volcano Observatories*
MET 5	*Requirements for WAFS Forecasts*
MET 6	*Responsibilities of the Area Forecast Centres*
MET 7	*Authorized Users of the ISCS/1 Satellite Broadcast and Internet Based WAFS FTP Service in the CAR/SAM Regions*

Forum on Integration and Harmonization of NextGen and SESAR Programmes

2.11 ICAO held in Montreal, from 8 to 10 September 2008, the Forum on Integration and Harmonization of NextGen (Next Generation) and SESAR (the Single European Sky ATM Research Programme) into the Global ATM Framework.

2.12 The main goal of this event was to facilitate greater understanding of the integration and harmonization of NextGen and SESAR, the two major ATM programmes initiated by the United States and Europe, respectively, to meet the specific requirements of their regions.

2.13 The Forum allowed sharing developments in the NextGen and SESAR systems with the global audience; identifying common aspects between the systems as well as differences and highlighting how the harmonization and interoperability efforts which have been made, will benefit ANS providers, users and stakeholders. The opportunity to clarify uncertainties and to detail the next steps within a global discussion was the primary objective of the event.

Inter/Intra-Regional Activities and Coordination

2.14 Following-up on the GREPECAS guidelines pertaining to the CAR Region based on the performance objectives and its framework, the NACC/WG Meetings have prepared several action plans and have urged States/Territories/International Organizations to adopt the relevant follow-up actions to develop national air navigation services (ANS) implementation plans.

2.15 The NACC/WG/2 Meeting proposed a NAM/CAR Regional Air Navigation Implementation Plan, which is based on performance objectives, to be considered by States as guidance for the implementation of their national plans. This proposal was approved by the Third Meeting of North American, Central American and Caribbean Directors of Civil Aviation (NACC/DCA/3).

3. Suggested Actions

3.1 The meeting is invited to:

a) take note of the information presented;

b) analyse the information on global and inter/intra regional activities presented;

c) take the appropriate action in the requirements set in paragraphs 2.6, 2.7 and 2.9; and

d) determine other actions the meeting may deem pertinent.

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APPENDIX

SCOPE AND OBJECTIVES OF THE eANP CONCEPT

The eANP has two principal objectives:

a) at the global level: reconcile the Regional Air Navigation Plan with the ATM operational concept, the new Global ANP provisions and the ICAO planning processes of new activities; and

b) at the regional level: expedite regional planning and coordination through simplifying and freeing the core of planning from a long and cumbersome formal approval process, (whilst maintaining the planning and coordination process requirements within the ICAO regional mechanism).

To support the above objectives, the following deliverables will be produced:

a) easy-to-use planning templates that would contain the relevant elements, specifically, homogeneous ATM areas and major international traffic flows, and the agreed Global Air Navigation Plan systems infrastructure necessary to support the implementation of the homogeneous ATM areas and major international traffic flows; and

b) an integrated Air Navigation Planning environment containing details currently listed in Table ATS 1 and all FASID Tables (AOP, CNS, ATM, MET, SAR, AIS). This will be designed to easily support the coordination, agreement and recording process between States and international organizations, also through a user-friendly interface.

The proposed methodology that will be employed to achieve the above deliverables consists in:

a) replace the current provisions in the ANP Volume I, concerning establishment of ATS Routes and Table ATS 1, by the relevant elements of the Global ANP and the evolving ATM operational concept, specifically, homogeneous ATM areas and major international traffic flows;

b) replace the current provisions in the ANP Volume II, comprised of FASID tables (AOP, CNS, ATM, MET, SAR, AIS), by the agreed air navigation system elements necessary to support the implementation of a performance-based infrastructure to support homogeneous ATM areas and major international traffic flows;

c) move all details currently listed in Table ATS 1 and all FASID Tables to an integrated Air Navigation Planning environment, which will be designed to support the coordination, agreement and recording process between States and international organizations; and

d) propose the necessary amendments to current ICAO SARPs, e.g. Annex 11 —Air Traffic Services, Appendix 1, be revised to remove the distinction between regional and non-regional networks of ATS routes.

For the achievement of these goals and deliverables, the eANP proposes certain framework elements. Under these framework elements and among the tools proposed are the communication planning and the 5LNC Management Tool:

a) on the communication planning, ICAO has been considering and evaluating several existing tools used in different Regions, as for example the Spectrum and Frequency Information Resource (SAFIRE), which is operational in the European Region and in evaluation in the Asia Pacific Region. The SAFIRE, together with another tool used for the frequency planning purposes (MANIF Application), was also assessed by the ICAO NACC Regional Office and a further evaluation will be conducted by ICAO for defining the best world-wide tool for this planning; and

b) The five-letter named code (5LNC) Management tool is a Planning tool to ensure the allocation of unique designators compliant with Annex 11 standards and promoting an efficient global assignment of designators for the different ATS Routes, and permitting unambiguous designation of significant points not linked to the site of a Radio Navigation Aid. Currently, this tool is operational in the EUR/NAT, ASIA/PAC, MID and SAM Regions and in preparation for its implementation in the WACAF, ESAF and NACC Regions.

The eANP activities began in 2008; some of the advances can be seen on the ICAO GIS website (https://192.206.28.84/eganp), in which a revised ANP structure and format, as well as an online training for air navigation planning database/GIS use, is available.

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