



ICAO

International Civil Aviation Organization
North American, Central American and Caribbean Office

WORKING PAPER

E/CAR/CATG/5 — WP/06
06/09/21

Fifth Eastern Caribbean Civil Aviation Technical Group Meeting (E/CAR/CATG/5)
Online, 8 to 10 September 2021

Agenda Item 3: Air Navigation Matters

- 3.2 Development of the e-ANP Volume I, II and III
3.2.1 Progress reports of the AIM, AGA, ATM, CNS, MET and SAR Committees

PROGRESS REPORT OF THE CNS COMMITTEE

(Presented by the CNS Committee Rapporteur)

EXECUTIVE SUMMARY	
This paper presents an update on the activities carried out by the CNS Committee since the E/CAR/CATG/04 Meeting.	
Action:	Suggested actions are presented in Section 3.
<i>Strategic Objectives:</i>	<ul style="list-style-type: none">• Safety• Air Navigation Capacity and Efficiency• Economic Development of Air Transport• Environmental Protection
<i>References:</i>	<ul style="list-style-type: none">• Sixth North American, Central American and Caribbean Working Group Meeting (NACC/WG/6), 25-27 August 2021;• Fourth Eastern Caribbean Civil Aviation Technical Group Meeting (E/CAR/CATG/04), Saint George's, Grenada, 6 - 7 September 2018

1. Introduction

1.1 The CNS Committee operates under the umbrella of the E/CAR/CATG and comprises of members from Anguilla, Antigua and Barbuda, Barbados, Dominica, France, Grenada, Montserrat, Saint Lucia, Saint Kitts, Saint Vincent, Trinidad and Tobago, United States and the Eastern Caribbean Civil Aviation Authority (ECCAA).

2. Discussion

2.1 The revised the Terms of Reference as presented in the **Appendix**.

2.2 The following achievements are noted:

ADS-B/MLAT

2.2.1 In August 2018 the TTCAA engaged ICAO TCB for the ADS-B/WAM project for the procurement and implementation of ADS-B within the continental airspace and WAM in the South Sector of the Piarco FIR. After open tendering process and evaluation, the successful vendor, meeting the technical requirements, was recommended by ICAO.

2.2.2 Due to the Covid-19 pandemic, the contract, although negotiated, has been on hold. The project initially envisaged to be completed in 2019 is now rescheduled to start in the first quarter of 2022 and be completed in phases by the first quarter 2023. This schedule is tentative pending any developments in Covid-19 that may adversely affect travel related matters.

E/CAR Network Interconnection to the CANSNET (MEVA IV) telecommunications network

2.2.3 During the last meeting of the North American, Central American and Caribbean Directors of Civil Aviation Meeting (NACC/DCA/09) held in Port of Spain, Trinidad and Tobago in June 2019, it was requested (Decision NACC/DCA/09/16) that the MEVA/TMG Ad-hoc Group facilitate the execution of the Project so that the new telecommunications network would be operative at the end of the current contract of the MEVA III network in March 2022. Unfortunately, due to the COVID19 pandemic and its effect world-wide, the Project was modified to accommodate existing conditions in the Region.

2.2.4 A Request for Proposal (RFI) that pursued technical information for new technologies and solutions for terrestrial and/or satellite-based telecommunication voice and data network services between ATC Centers throughout the geographical region of the Central Caribbean (C/CAR) was published by ICAO TCB on 01 June 2020.

2.2.5 The RFI process did not identify any new technology that would require speeding up the CANSNET RFP process. The Project is anticipated to be implemented within the first quarter of 2024. The new Network must be able of establishing gateway connectivity to neighboring networks of the region. Area network connectivity may consist of fiber, VSAT and copper terrestrial networks. The physical interconnection between networks shall be accomplished at an authorized designated demarcation or at the (CAA) communications facility. The new Network will also be capable of supporting additional CAR/SAM users, who may not be initial signatory members of the ICAO Agreement for the new network, whenever required by ICAO.

Modernization of the FWI ATM System

2.2.6 France plans the modernization of the overseas ATM systems. These heterogeneous systems (IRMA and SIGMA) will be replaced by a single system. The new system will be realized by the Canadian company ADACEL. Guadeloupe will be in operation in 2022 and Martinique in 2023. New features will include:

- Electronic flight strips.
- Automatic coordination: between Martinique and Guadeloupe and opportunity to do AIDC with other ANSP.

2.2.7 A second MRT DACOTA installed in Guadeloupe is expected to be in operation in 2022.

Upgrade of the Eastern Caribbean Aeronautical Fixed Services Network

2.2.8 The present E/CAR/AFS Network is over ten (10) years old and needs to be upgraded to accommodate newer technologies, evolving user requirements and security protocols and to manage manufacturer's end of production and end of support of critical equipment elements. At the E/CAR/NTG/08 meeting in September 2018, TSTT presented its proposal for the upgrade of the network taking into consideration the end of sale and end of support on critical network equipment.

2.2.9 The TSTT proposal was accepted by the TTCAA. Award of contract in accordance with the tender rules and approval process was completed in 2019. The project initially anticipated to be completed in 2020 has been delayed due to the Covid-19 pandemic. The project is now expected to be completed in 2022 pending any developments in the Covid-19 situation. The new network will incorporate in its design the suggestions made by States at E/CAR/NTG meetings.

AMHS

2.2.10 In April 2021 an AMHS P1 interconnection between the COM Centers of Caracas and Piarco was established.

2.2.11 Work is ongoing with Martinique, Guadeloupe and Guyana for similar AMHS P1 connections.

2.2.12 Presently, the Federal Aviation Administration (FAA) maintains a connection between the Atlanta Network Enterprise Management Center (NEMC) and the E/CAR network via a point of presence located in San Juan, PR. In 2020, a connection to the REDDIG network from the FAA's NEMC located in Atlanta and Salt Lake City was implemented. The newly proposed connection will create a secondary path between Atlanta and Piarco using the REDDIG network and will represent a significant improvement in network redundancy and reliability. This additional path should provide enhanced availability of AMHS service between Atlanta and Piarco that have been susceptible to undersea cable breaks and other interruptions.

3. Suggested action

3.1 The Meeting is invited to:

- a) take note of the achievements of the CNS Committee;
- b) review and approve the Terms of Reference; and
- c) propose any other action or task as deemed necessary.

APPENDIX
EASTERN CARIBBEAN CIVIL AVIATION TECHNICAL GROUP
COMMUNICATION, NAVIGATION AND SURVEILLANCE COMMITTEE (CNS/COMM)

1. Background

- (a) The Eastern Caribbean CNS Committee was originally established by the Eastern Caribbean Working Group (E/CAR/WG) which has now been renamed the Eastern Caribbean Civil Aviation Technical Group. The CATG was established in October 2012 by the Directors of Civil Aviation of the Eastern Caribbean at their 24th Meeting (E/CAR/DCA/24) through Conclusion 24/7 - New NAM/CAR Air Navigation Implementation Working Group, item (b) to continue the performance-based work programme for the implementation and improvement in all air navigation fields in the Eastern Caribbean.
- (b) The CNS Committee should periodically update the terms of reference, the scope of the tasks of the Committee and the work programme which establishes the list of items to be analyzed in accordance with the scope defined in the terms of reference.

2. Terms of Reference

- (a) Review and complete the planning of the CNS systems, in accordance with the CAR/SAM RPBANIP, on the results of the inter-regional planning and co-ordination and on ICAO SARPs and technical guidelines, and user expectations (Aviation System Block Upgrades (ASBU) Block 0 and Block 1 Modules) related with the coordinated implementation and harmonization of CNS/ATM systems.
- (b) Facilitate operational improvement initiatives through action plans and implementation strategies and associated technologies to improve safety, increase operational and economic efficiency and/or capacity of regional CNS systems.
- (c) Share information on implementation initiatives for enhancing interoperability of air traffic systems through CNS improvements.

3. Work Programme

See the attached work programme.

4. Working Methods

- (a) The CNS Committee of the E/CAR/CATG work programme should present their activities in terms of objectives, responsible and deliverables. Further details can be provided in the form of Work Breakdown Schedule (WBS);
- (b) The CNS/COMM will avoid duplication of work within the E/CAR/NTG and maintain close coordination among the existing entities (like the Air Navigation Implementation Technical Group: ANI/WG) to optimize the use of available resources and experience;
- (c) The CNS/COMM may designate, as necessary, ad-hoc groups to work on specific topics and activities; all tasks and activities should be clearly defined by time and

deliverables;

- (d) The CNS/COMM shall co-ordinate and advance its works as follows to maximize efficiency and reduce costs:
- conduct work via electronic written correspondence
 - conduct work via phone and teleconference calls
 - hold meetings when necessary
- (e) The CNS COMM will report and coordinate the progress of assigned tasks to the E/CAR/CATG.

5. Membership

See attached Membership List. ICAO will act as technical adviser to the CNS/COMM.

6. Activities

- a) Develop essential minimum CNS specifications for Control Tower operations. *ECCAA*
- b) Develop operational requirements for AIDC. *Piarco - Barbados*
- c) Develop contingency procedures for CNS equipment and services. *France*
- d) Recommend training areas in concepts to ICAO. *All States and ECCAA*

7. Rapporteur

Ms. Veronica Ramdath (Trinidad and Tobago)

CNS Committee Membership Rapporteur: Veronica Ramdath, Trinidad and Tobago
Antigua and Barbuda, Barbados, France, Trinidad and Tobago, United States and ECCAA.

STATE	MEMBER	E-MAIL ADDRESS	TEL
Antigua and Barbuda	Lorraine Davis ATS Operations Officer Ministry of Civil Aviation	Lorraine.davis@ab.gov.ag	+ 268 562 5232
Barbados			
France	Michel HUMBERT, SNA/AG Technical Manager French Civil Aviation Directorate Air Navigation Services Antilles-Guyana	michel.humbert@aviation- civile.gouv.fr	+ 596 596 42 24 93,
Trinidad and Tobago	Veronica Ramdath Manager Communication Navigation Surveillance Trinidad and Tobago Civil Aviation Authority	vramdath@caa.gov.tt	+ 1 868 669 4706
United States	Dulce M. Rosés Program Manager, International Telecommunications CAR/SAM	Dulce.roses@faa.gov	+ 1 305 716-1830
ECCAA (Dominica, Grenada, Saint Kitts and Nevis, Saint Lucia, Saint Vincent and the Grenadines)	Trevor Davis Manager, CNS Unit Eastern Caribbean Civil Aviation Authority	tdavis@eccaa.aero	+ 1 268 462 0000

CNS/COMM WORK PROGRAMME

TASK NUMBER	TASK DESCRIPTION	PRIORITY	STATUS
CNS/1	General Matters		
CNS/1/1	Review, identify, evaluate and recommend solutions with the necessary priority assignment on the deficiencies of the CNS systems.	A	Permanent
CNS1/2	Examine the CNS systems in the adjacent regions, with the aim of contributing to a coordinated and harmonious interconnection development.	B	Permanent

CNS/1/3	Support ICAO initiatives and measures for the protection of the radio frequency spectrum management.	A	Permanent
CNS/2	Communication		
CNS/2/1	Continue the guidance and follow-up to the development of communication networks and develop regional guidelines for the inter-operability between the communication networks of the CAR and SAM Regions and neighboring areas.	B	Permanent
CNS/2/2	Coordinate and implement the transition for inter network ATN service (AMHS).	A	Valid
CNS/2/3	In keeping with the AIDC Implementation plan, coordinate the implementation of the ground-ground applications such as AIDC.	B	Valid
CNS/2/4	Monitor the performance of the HF service in the Oceanic portion of the Piarco FIR and implement improvements in conjunction with contracted service provider as required.	A	Permanent
CNS/2/5	Monitor the performance of the VHF service and implement improvements as necessary.	A	Permanent
CNS/3	Navigation		
CNS/3/1	Study and analyze the regional implementation alternatives of a GBAS system, taking into account the evolution of GNSS and GNSS augmentation systems.	C	Valid
CNS/3/2	Review and update the NDB deactivation plan accordingly based on individual States' situations.	B	Valid
CNS/3/3	Evaluate the required nav. infrastructure to satisfy PBN based nav. requirements, identifying improvements and deficiencies.	B	Valid
CNS/4	Surveillance		
CNS/4/1	Promote Surveillance Data Sharing implementation in the Region.	A	Permanent
CNS/4/2	Evaluation of surveillance infrastructure to satisfy navigation requirements for PBN	B	Valid

CNS/4/3	Promote the surveillance coverage in the continental airspace of the Piarco FIR (ADS-B, RADAR, MLAT)	A	Valid
CNS/4/4	In order to support and guide implementation of ADS-B in the CAR Region and to achieve regional milestone date of December 2018 for the implementation of ADS-B OUT, the Regional ADS-B CONOPS document initial version be adopted as a guide to planning and implementation of ADS-B service to the States/ANSPs in the region.	A	Valid
CNS/4/5	In order to support and guide implementation of ADS-B in the CAR Region and to achieve regional milestone date of December 2018 for the implementation of ADS-B OUT, Technical Specification (RTCA D0260B) document be adopted as a guide for the acquisition and implementation of ADS-B service.	A	Valid
CNS/4/6	Monitor and evaluate the progress and results of ADS-C/ CPDLC.	A	Valid
CNS/4/7	Support the implementation of CPDLC and ADS-C. The States involved in this implementation shall adopt as references the CPDLC Implementation Considerations and a CPDLC/ADS-C IMPLEMENTATION Action Plan respectively.	A	Valid
CNS/5	ATM Automation		
CNS/5/1	Support functional levels for the implementation of ATM automation.	C	Valid

- A High priority tasks, on which work should be speeded up.
- B Medium priority tasks, on which work should commence as soon as possible, but without detriment to Priority **A** tasks.
- C Tasks of lesser priority, on which work should commence as time and resources allow, but without detriment to Priority **A** and **B** tasks.