



ICAO

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North American, Central American and Caribbean Office

WORKING PAPER

E/CAR/CATG/4 — WP/13  
28/08/18

**Fourth Eastern Caribbean Civil Aviation Technical Group (E/CAR/CATG/4) Meeting**  
Saint George's, Grenada, 6 - 7 September 2018

- Agenda Item 3:**           **3.2 Follow-up on the implementation of the NAM/CAR Regional Performance Based air Navigation Implementation Plan (RPBANIP) Air Navigation Targets and Block-0 status in the Eastern Caribbean**  
                                  **3.2.2 Progress reports of the AIM, AGA, ATM, CNS, MET and SAR Committees**

**PROGRESS REPORT OF THE CNS COMMITTEE**

(Presented by Presented by the CNS Committee Rapporteur)

<b>EXECUTIVE SUMMARY</b>	
This Working Paper presents an update on the activities carried out by the CNS Committee since the E/CAR/CATG/03 Meeting	
<b>Action:</b>	The suggested actions are presented in Section 3.
<i>Strategic Objectives:</i>	<ul style="list-style-type: none"><li>• Safety</li><li>• Air Navigation Capacity and Efficiency</li><li>• Security &amp; Facilitation</li><li>• Economic Development of Air Transport</li><li>• Environmental Protection</li></ul>
<i>References:</i>	<ul style="list-style-type: none"><li>• Fourth NAM/CAR Air Navigation Implementation Working Group Meeting (ANI/WG/4), Miami, United States, 21 – 24 August 2018</li><li>• Fifth North American, Central American and Caribbean Working Group Meeting (NACC/WG/5), Port of Spain, Trinidad and Tobago, 22-26 May 2017;</li><li>• Third Eastern Caribbean Civil Aviation Technical Group Meeting (E/CAR/CATG/03), Basseterre, St. Kitts and Nevis, 17 – 18 October 2016</li></ul>

**1. Introduction**

1.1 During the period since the last meeting of the CNS Committee, there has been limited interaction with the members of the CNS Committee. This was partly due to resource limitations in the aftermath of the hurricane season and the devastation wrought.

**2. Discussion**

2.1 **Appendix A** to this paper shows the status update since the E/CAR/CATG/03 meeting on the CNS Committee activities. **Appendix B** provides the updated Terms of Reference, Work program and Point of Contacts (PoCs) for the E/CAR CNS Committee. Further updates are expected arising from discussions during the meeting.

**3. Suggested Actions**

3.1 The Meeting is invited to:

- a) take note of the progress and status of the CNS Committee's activities;
- b) to review and agree on the activities to be carried out; and
- c) take any other action as deemed necessary.

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**STATUS UPDATE**

ID	TASK NAME	DELIVERABLE	RESPONSIBLE	REFERENCE	COMMENTS	STATUS
<b>COMMUNICATION</b>						
5	Adoption of “equipment modernization/DATIS Service implementation plan for int’l airports” compliance to ATM requirements	DATIS Modernization and Implementation Plan	States/ Territories coordinated by WG		<p>E/CAR States are invited to inform on the implementation of ATIS (DATIS) Services, also the identification of this ATM requirements for defined airports shall be determined.</p> <p><i>(via data link to the aircraft-VDL mode 2/4 or ACARS) System connects the AFTN and automatically creates the message-no manual intervention by ATC</i></p>	<p>1. Trinidad and Tobago automated voice</p> <p>2. Antigua- automated voice</p> <p>3. Barbados –automated voice</p> <p>4. Dominica-No ATIS</p> <p>5. Grenada-No ATIS</p> <p>6. Guadeloupe-recorded by ATC. No plans to change this.</p> <p>7. Nevis-No ATIS</p> <p>8. Martinique- recorded by ATC. No plans to change this.</p> <p>9. Montserrat-No ATIS</p> <p>10. St. Kitts-No ATIS</p> <p>11. St. Lucia- No ATIS</p> <p>12. St. Vincent-No ATIS</p> <p>13. San Juan- San Juan ATCT ATIS Freq, is 125.80 Main Transmitter located at the San Juan RTR.</p>
<b>NAVIGATION</b>						
23	Evaluation of required nav. infrastructure to satisfy PBN based nav. requirements, identifying improvements and deficiencies	Analysis of required navigation infrastructure for example: DME-DME coverage for selected ATS routes for RNAV 5; and Identification of deficiencies; and corresponding corrective Action plan	States/ Territories coordinated by WG	Reference to CNS table 3	<p>For the development of this task, operational PBN navigation specifications need to be defined.</p> <p>The E/CAR/WG, under the ATM, shall define these requirements and the priority of this implementation.</p>	Valid

APPENDIX A

E/CAR/CATG/04 – WP/13

ID	TASK NAME	DELIVERABLE	RESPONSIBLE	REFERENCE	COMMENTS	STATUS		
26	Plans on GNSS systems (SBAS and GBAS) and trial conduction	GNSS trial plan	States/ Territories coordinated by WG	Navigation Infrastructure alternatives for PBN	Based on GREPECAS references ( <a href="http://www.mexico.icao.int/CNS.html">http://www.mexico.icao.int/CNS.html</a> ), the E/CAR states shall plan or agree on future trials for GBAS and SBAS evaluation.	SACCSA Project RLA/03/902 has ended. States to advise on GNSS initiatives (GBAS)	Valid	/CAR/CATG/4 – W
<b>SURVEILLANCE</b>								
29	Evaluation of surveillance infrastructure to satisfy navigation requirements for PBN	Analysis of surveillance infrastructure	States/ Territories coordinated by WG		For the development of this task, operational PBN navigation specifications need to be defined.  The E/CAR/WG, under the ATM, shall define these requirements and the priority of this implementation.		Valid	13
30	Implementation of 24 bits Address registry	24 bits Aircraft Address registry	States/ Territories coordinated by WG		The involved parties are expected to inform their advances in the development and implementation of their national registry of 24-bit aircraft addresses in accordance to Annex 10, Vol III Chap 9 and GREPECAS guidance ( <a href="http://www.mexico.icao.int/CNS.html">http://www.mexico.icao.int/CNS.html</a> ).	Trinidad and Tobago – completed  OECS - completed  Martinique and Guadeloupe - completed  Barbados -outstanding	Valid	- A2 -
31	ADS-B, ADS-C and MLAT trials	Trials on ADS-B, MLAT and ADS-C	States/ Territories coordinated by WG		E/CAR States shall informed their national plans for conducting trials on ADS-B, ADS-C, MLAT and E/CAR/WG shall consolidate a plan for these trials to benefit of its results.	<b>Barbados</b> advised that they have started the implementation of MLAT/ADS-B. To be completed by Q4 2018.  <b>ECCAA</b> advised that they are conducting feasibility studies in the OECS States toward the implementation of ADS-B  <b>France</b> – Two (2) ADS-B stations should be ordered and installed in Martinique and Guadeloupe for trials	Valid	

ID	TASK NAME	DELIVERABLE	RESPONSIBLE	REFERENCE	COMMENTS	STATUS	
						<p>ADS-B – one receiver in French Guyana. To be implemented in 2014.</p> <p>ADS-B trials on-going with one receiver in Martinique but will not implement</p> <hr/> <p><b>Trinidad and Tobago</b> ADS-B: Installed but not implemented.</p>	
32	ADS-C/ CPDLC evaluation and trial Plans	Plan on ADS-C and CPDLC	States/ Territories coordinated by WG			<p><b>Trinidad and Tobago</b> ADS-C /CPDLC implemented July 7, 2016. CPDL not in operational use due to random anomalies generated. The vendor Leonardo has been engaged.</p> <hr/> <p><b>San Juan</b> – Information to be provided</p>	Valid
					<p>France - ADS-C is not planned nor required in FWI.</p> <p>ADS-C / CPDLC is in use in French Guyana since May 2011</p>		
38	Mode S radar implementation and update to Regional Plan on Surveillance Systems	Information on Mode S Radar implementation and updates to Regional Plan	States/ Territories coordinated by WG	Reference to CNS table 4A	<p>E/CAR States shall inform on their plans for Mode S implementation.</p> <p>This information and other surveillance systems implementation shall be used to update the regional Plan on Surveillance System (CNS table 4A available on <a href="http://www.mexico.icao.int/CNS.html">http://www.mexico.icao.int/CNS.html</a>.)</p>	<p>Trinidad and Tobago – Mode S</p> <p>Barbados – No Mode S</p> <p>Antigua – No Mode S</p> <p>San Juan – No Mode S</p> <p>France – No Mode S</p>	Valid

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**APPENDIX B**  
**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 Modules) related with the coordinated implementation and harmonization of CNS/ATM systems.
- ~~(b) Follow up and actively support POS Declaration targets fulfillment.~~
- (c) 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.
- (d) 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. 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

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**CNS/COMM WORK PROGRAMME**

<b>TASK NUMBER</b>	<b>TASK DESCRIPTION</b>	<b>PRIORITY</b>	<b>STATUS</b>
<b>CNS/1</b>	<b>General Matters</b>		
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
<b>CNS/2</b>	<b>Communication</b>		
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
<b>CNS/3</b>	<b>Navigation</b>		
CNS/3/1	Study and analyze the regional implementation alternatives of a GBAS system, taking into account the evolution	C	Valid

	of GNSS and GNSS augmentation systems.		
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
<b>CNS/4</b>	<b>Surveillance</b>		
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.