Fifth North American, Central American and Caribbean Working Group Meeting (NACC/WG/5)

Port of Spain, Trinidad and Tobago, 22-26 May 2017

Agenda Item 3   **Implementation on Air Navigation Matters**

         3.4   **AGA and MET progress and other regional implementation groups**

                 3.4.3   **MEVA and Eastern Caribbean Civil Aviation Technical Group (E/CAR/CATG), Eastern Caribbean Aeronautical Fixed Service Network Technical Group (E/CAR AFS NTG) Meeting reports**

**EASTERN CARIBBEAN AERONAUTICAL FIXED SERVICE NETWORK TECHNICAL GROUP
(E/CAR AFS NTG) MEETING REPORT**

(Presented by E/CAR/NTG Rapporteur)

EXECUTIVE SUMMARY
This Working Paper presents the results of the Seventh Eastern Caribbean Network Technical Group (E/CAR/NTG/7) and the Fifth Eastern Caribbean Radar Data Sharing Ad-hoc Group (E/CAR/RD/5) Meetings and provides an update on the activities since the meetings.

Action:	The suggested actions are presented in Section 3.
Strategic Objectives:	• Safety • Air Navigation Capacity and Efficiency
References:	• Sixth Eastern Caribbean Network Technical Group (E/CAR/NTG/6) and Fourth Eastern Caribbean Radar Data Sharing Ad hoc Group (E/CAR/RD/4) Meeting Report

1.   **Introduction**

1.1   The Seventh Eastern Caribbean Network Technical Group (E/CAR/NTG/7) and Fifth Eastern Caribbean Surveillance Data Sharing Ad hoc Group (E/CAR/RD/5) meetings were held at Saint Kitts and Nevis, from 17 to 18 October 2016. The Meeting was attended by eight States/Territories and three International Organizations, totalling 24 participants and formulated ten Conclusions and three Decisions.

2. **Discussion**

2.1		Under Agenda Item 1, the Meeting approved the agenda and made minor changes to the meeting schedule.

2.2		Under Agenda Item 2, the Meeting reviewed and followed-up on the E/CAR/NTG and E/CAR/RD valid conclusions/decisions, the valid conclusions related to the E/CAR AFS Network formulated by the Second Eastern Caribbean Civil Aviation Technical Group Meeting (E/CAR/CATG/02) and the valid conclusions from the ANI/WG/3 and NACC/WG meetings as follows:

- E/CAR/NTG and E/CAR/RD: All conclusions and decisions were considered completed or superseded, except for DECISION E/CAR/NTG/5/8 Completion of E/CAR AFS Network Standard Operations Procedures (SOP).
- E/CAR/CATG/02: The Twenty-sixth Directors of Civil Aviation of the Eastern Caribbean Meeting (E/CAR/DCA/26) congratulated the effective work of the E/CAR/NTG Group on the Network improvements and performance, and the implementation of Phase I of the Radar Data Display. It concluded that the E/CAR/NTG had fulfilled its work as mandated by the E/CAR DCAs and therefore, agreed to keep the E/CAR/NTG only for the next meeting in 2016, passing its Network functions to the E/CAR/CATG CNS Committee. However, during the NACC/DCA/6 Meeting the E/CAR/DCAs decided that the Eastern Caribbean Network Technical Group (E/CAR/NTG) continue to be active in order to support the E/CAR subregion.
- ANI/WG/3 and NACC/WG: Conclusions are presented in **Appendix**.

2.3		Under Agenda Item 3, the Meeting took note of the challenges and activities on local equipment operation conditions. Similarly, the Meeting took note of the maintenance procedures timelines and its escalation conditions. The following matters were noted:

a)	Saint Kitts and Nevis is presently pursuing government approval for the funds to replace one of the routers that failed as a result of environmental damage.

b)	The E/CAR/AFS Network equipment at the Douglas-Charles International Airport in the Commonwealth of Dominica was destroyed in the aftermath of tropical storm Erica on 28 August 2015. The ground floor of the building where the E/CAR/AFS equipment was housed was flooded. The installation of the replacement E/CAR/AFS network equipment at Douglas Charles International Airport in Dominica was completed over the period 11 to 14 February. Operations at the airport were restored on 14 February 2017.

c)	Dominica's power fluctuations: There is the constant issue as it relates to power regularity and conditioning on the island. The frequency of outages has decreased but it is suggested a power regulation analysis be conducted at both airports in order to deliver safe and clean power to AFS hardware.

d)	Argyle International Airport is a newly constructed airport in Saint Vincent and the Grenadines located approximately four miles east of the E.T. Joshua Airport. The project broke ground in 2008, and was commissioned with its first international arrival on 14 February 2017. The E.T. Joshua International Airport closed operations on 14 February, 2017 at 0400UTC. Trinidad and Tobago, in

support of its commitment to the Eastern Caribbean to provide air navigation voice and data services through the E/CAR/AFS network, has invested in equipment to replicate a node similar to that at E.T. Joshua International Airport, at the Argyle International Airport.

e) Guadeloupe: The secondary router that failed due to environmental conditions not being respected was replaced by Cisco under the Smartnet support. The router is configured and expected to be installed in Guadeloupe by May 2017.

f) TSTT's failure reporting system registered a total of one hundred and nine (109) tickets (August 2015 to September 2016). The failures were further categorized as link failures (33%), power (25%), router related (28%), application (4%) and no fault found (10%).

g) E/CAR/AFS Network maintenance activity for 2016 was conducted over the period from 11 September to 4 November 2016. Oversight visits and maintenance activities of the E/CAR/AFS network and the AMHS/AISS user end equipment were successfully conducted by Trinidad and Tobago over the months of February - April of 2016. A similar activity for 2017 is scheduled for May – July 2017.

h) Barbados informed that the Network availability over the period was satisfactory, that all failures or faults reported during the period were rectified and suggested that an arrangement of automatic changeover of routers on failure could further improve reliability.

i) ECCAA reported that the network performed reasonably well. Very few down times were reported and on those occasions the outages were very short and did not impact heavily on the operations of the units.

j) France reported that the E/CAR/AFS network is globally compliant with operational requirements, but recommended some improvements both in technical and procedural aspects.

2.4   Decisions E/CAR/NTG/7-RD/5/1 - *ROUTER AUTOMATIC CHANGEOVER CAPABILITY* and E/CAR/NTG/7-RD/5/3 - *CYBER SECURITY VULNERABILITY ASSESSMENT* and Conclusion E/CAR/NTG/07-RD/5/2 - *REPLACEMENT OF AFS NETWORK NODE REDUNDANCY IN GUADELOUPE* were formulated (see http://www.icao.int/NACC/Pages/nacc-regionalgroups-ecarntg.aspx).

2.5   Under WP/09, the MEVA TMG Coordinator presented information on the combined regional activities in the Central and Eastern Caribbean, which are carried out through bilateral agreements in order to improve the telecommunication in the area. In this regard the Federal Aviation Administration (FAA) and Trinidad and Tobago Civil Aviation Authority (TTCAA) have agreed on the implementation of the hotline as indicated in the Caribbean Initiative. A ring-down hotline was implemented in November 2016. After clarification it was confirmed that the requirement is for a shout-line where either party can pick up and talk without waiting for a ring. Trinidad and Tobago is working with the E/CAR AFS Network service provider to formulate and implement a solution.

2.6   Under Agenda Item 4, the meeting took note of the ongoing activities related to Air Traffic Flow Management (ATFM). A bilateral agreement between Trinidad and Tobago and United States and is currently under discussion for flight data exchange in keeping with the objectives of ATFM, utilizing the System Wide Information Management (SWIM) concept. The intention is to incorporate the FAA's Traffic Flow Management data into the Trinidad and Tobago ATFM system. The FAA has requested the PIARCO Multi Radar Tracking (MRT) data, which presently comprises the PIARCO radar and the French Dakota (Martinique and Guadeloupe radars MRT) in order to combine and display the data on the Aircraft Situation Display (ASD) for the Caribbean. In this regard, Conclusion E/CAR/NTG/7-RD/5/4 - *REVISION OF LETTERS OF AGREEMENT* was formulated (see http://www.icao.int/NACC/Pages/nacc-regionalgroups-ecarntg.aspx).

2.7   Regarding surveillance sharing, Conclusion E/CAR/NTG/7-RD/5/5 - *REACTIVATION OF TRINIDAD AND TOBAGO - VENEZUELA RADAR EXCHANGE and* Conclusion E/CAR/NTG/7-RD/5/6 - *TRINIDAD AND TOBAGO - GUYANA RADAR EXCHANGE* were formulated (see http://www.icao.int/NACC/Pages/nacc-regionalgroups-ecarntg.aspx).

2.8   Trinidad and Tobago and United States updated the meeting on their actions for the agreement for radar data as follows:

a)   Sint Maarten - United States radar agreement is on-going but the timeline for accomplishment is October 2017.
b)   Sint Maarten - Trinidad and Tobago radar agreement is being drafted and an update will be informed by the Eighth Eastern Caribbean Network Technical Group (E/CAR/NTG/8) Meeting.

2.9   United States is supporting the exchange of RADAR between Sint Maarten and Trinidad and Tobago through an interconnection of the E/CAR Network to the MEVA III Network at the ZSU CERAP. A proof of concept test was done earlier in 2016 between San Juan and Sint Maarten through the MEVA III Network. Further to the proof of concept test a trial is tentatively set for June 2017 to transmit RADAR data from Sint Maarten to Trinidad and Tobago over the MEVA-E/CAR AFS Networks over a serial connection.

2.10   Antigua and Barbuda informed the Meeting that its Government has recommitted itself to the acquisition of a surveillance system and Conclusion E/CAR/NTG/7-RD/5/7 - ANTIGUA RADAR DATA was formulated (see http://www.icao.int/NACC/Pages/nacc-regionalgroups-ecarntg.aspx).

2.11   Barbados briefed the Meeting on its Automatic Dependent Surveillance – Broadcast (ADS-B)/Multilateration (MLAT) development in Barbados, noting the current projection for completion of the installation is in December 2016. Conclusion E/CAR/NTG/7-RD/5/8 - *INTEGRATION OF BARBADOS SURVEILLANCE DATA INTO THE PIARCO MRT AND EXCHANGE OF PIARCO MRT WITH BARBADOS* (see http://www.icao.int/NACC/Pages/nacc-regionalgroups-ecarntg.aspx) was formulated.

2.12   The Trinidad and Tobago MRT data was successfully integrated into the Barbados new Air Traffic Management (ATM) system on 15 November 2016. Barbados is the first State to display the PIARCO combined surveillance data. Integration of the Barbados surveillance (radar/ADS-B/MLAT) into the PIARCO MRT is expected to start by the end of June 2017.

2.13   Considering the current and short term ADS-B activities, the following conclusion was adopted: Conclusion E/CAR/NTG/7-RD/5/9 - *ADS-B OUT IMPLEMENTATION IN THE E/CAR REGION* (see http://www.icao.int/NACC/Pages/nacc-regionalgroups-ecarntg.aspx).

2.14   Under Agenda Item 5, the meeting reviewed the results of the surveillance data questionnaire that was distributed to States to complete the information. CONCLUSION E/CAR/NTG/7-RD/5/10 - *SURVEILLANCE DATA REQUIREMENTS FOR DOMINICA AND ST. VINCENT*; CONCLUSION E/CAR/NTG/7-RD/5/11 - *SURVEILLANCE DATA REQUIREMENTS FOR ANGUILLA AND MONTSERRAT* and DECISION E/CAR/NTG/7-RD/5/12 - *DEFINITION OF RADAR DATA DISPLAY PHASE II PROCESS* were formulated (see http://www.icao.int/NACC/Pages/nacc-regionalgroups-ecarntg.aspx).

2.15   Under Agenda Item 6, the Secretariat recalled that with the approval of the Sixth Eastern Caribbean Network Technical Group (E/CAR/NTG/6) and Fourth Eastern Caribbean Radar Data Sharing Ad-hoc Group (E/CAR/RD/4) Meetings Final Report, reference ICAO State Letter EMX0769 dated 5 August 2015, the E/CAR/DCA approved the E/CAR/NTG and RD Terms of Reference and work program contained in the Final Report.

2.16   Considering that there will be no E/CAR/CATG meeting in 2017, Antigua and Barbuda kindly offered to host a 2-day E/CAR/NTG/8 and E/CAR/RD/6 meetings to be held in October 2017.

2.17   Under Agenda Item 7 and WP/20, ICAO presented the first year's performance evaluation of the implementation of the ICAO No Country Left Behind (NCLB) Strategy developed by the ICAO NACC Regional Office. The Secretariat highlighted that if the Radar Data sharing States interested in implementing Phase II organized their common requirements and are willing to work together for a common Project, a NCLB Project may be formulated and proposed for funds. In this regard, the Meeting agreed Conclusion E/CAR/NTG/7-RD/5/13 - *PROJECT PROPOSAL FOR ECAR REGION UNDER ICAO NACC NCLB* (see http://www.icao.int/NACC/Pages/nacc-regionalgroups-ecarntg.aspx).

3.   Suggested Actions

3.1   The Meeting is invited to:

a)   take note of the progress report of the E/CAR/NTG and RD groups; and

b)   agree to any other actions as deemed appropriate.

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FOLLOW UP TO ECAR/NTG-RD RELATED CONCLUSIONS FROM ANI/WG/3 CONCLUSIONS/DECISIONS

Number	Conclusion/Decision	Follow-up BY E/CAR/NTG-RD
C-3/1 REGIONAL PERFORMANCE OF AIR NAVIGATION IMPLEMENTATION PROJECT	That, bearing in mind that the deadline for Port-of-Spain Declaration targets finishes in December 2016, and the implementation of the NACC *No Country Left Behind (NCLB)* Strategy the ICAO NACC Regional Office to coordinate the development of a web application of the performance air navigation implementation system for the CAR Region in accordance with the new requirements of the CAR/SAM Electronic Air Navigation Plan (eANP) by 30 December 2016.	The E/CAR/NTG-RD Group to review the status of the ANS corresponding targets (NACC Webpage)
C-3/6 AMHS IMPLEMENTATION PROCESS IN THE CAR REGION	That, to streamline the AMHS operational use, the CAR States/Territories: a) update accordingly the CAR Region Implementation Matrix by December 2016; b) take advantage of the ATSN Data Link Implementation Application Workshop scheduled for 18 to -21 April 2016 in St Maarten to exchange information and progress on the implementation; and c) carry on the additional task of testing the transmission of XML data through AMHS system, coordinating these activities with the AMHS TF; informing the NACC/WG and GREPECAS Meetings	E/CAR AFS Network to be considered for the testing the XML data transmission

FOLLOW UP TO VALID NACC/WG/4 CONCLUSIONS RELATED TO THE E/CAR/NTG-RD

No.	CONCLUSIONS	FOLLOW-UP BY E/CAR/NTG-RD
CONCLUSION NACC/WG 4/5 ACTIVE SUPPORT FROM STATES FOR ICAO ITU WRC-2015 POSITION	That NAM/CAR States/Territories, in order to ensure their active support for the ICAO WRC-15 position for the protection of the aeronautical frequency spectrum and satisfy future frequency spectrum aviation needs: a) include the main points addressed by the ICAO International Telecommunication Union (ITU) WRC-15 position for the protection of the C-band when used for aeronautical purposes and the ICAO WRC-15 position as a whole, including any amendments, when preparing national ITU WRC-15 proposals in coordination with the National Spectrum Management Authority; b) include representatives from civil aviation administrations and aviation experts from national delegations, to the extent possible, when participating in the ITU Radio and regional preparatory activities for WRC-15; and c) if not already done so, nominate their focal point for WRC-2015 to ICAO by December 2014.	done

No.	CONCLUSIONS	FOLLOW-UP BY E/CAR/NTG-RD
CONCLUSION NACC/WG 4/6 REPORTING ON THE PROGRESS ACHIEVED IN THE IMPLEMENTATION OF THE AERONAUTICAL INFORMATION EXCHANGE MODEL (AIXM)	That NAM/CAR States and international organizations: a) adopt the AIXM 5.1 information exchange model; and b) report on the progress achieved with application of the conceptual model and aeronautical information exchange to the ICAO NACC Regional Office by **31 December 2014**.	E/CAR Network is ready to implement
CONCLUSION NACC/WG 4/7 AIM ACTION PLANS FOR THE AIS TO AIM TRANSITION	That CAR States that have not yet done so: a) develop/update and execute the Action Plans for the transition from AIS to AIM taking into consideration the latest AIM developments, and the AIM TF work until AIM is completed according the AIM RPO of the RPBANIP; and b) inform the ICAO NACC Regional Office of all the AIM progress to be presented at the upcoming GREPECAS/17 Meeting.	E/CAR Network is ready to implement
CONCLUSION NACC/WG 4/10 ADS-B OUT IMPLEMENTATION IN THE NAM/CAR REGIONS	That all States/Territories in the NAM/CAR Regions adopt/include the ADS-B implementation date of **31 December 2018** in their implementation plans to finalize operational implementation of ADS-B OUT.	E/CAR Network is ready to implement
CONCLUSION NACC/WG 4/12 APPROVAL OF IPV4 ADDRESSING SCHEME, VER 1.0	That, in order to expedite and facilitate the implementation of the IPv4 ATN in the CAR Region, States/Territories of the CAR Region: a) approve the revised version of the CAR IPv4 addressing scheme, version 1.0; b) implement their Aeronautical Telecommunication Networks (ATNs) in accordance with the IPv4 addressing scheme ver. 1.0, where applicable; and c) report use/planned use to the ICAO NACC Regional Office no later than **December 2015**.	ECAR Network has implemented conclusion.

No.	CONCLUSIONS	FOLLOW-UP BY E/CAR/NTG-RD
CONCLUSION NACC/WG 4/15 AIR NAVIGATION REPORTING/ MONITORING IN THE NAM/CAR REGIONS	That no later than **December 2014**, for the harmonized and efficient collection of data for reporting and monitoring air navigation implementation progress and achieved performance/benefits, NAM/CAR States/Territories: a) invite all air navigation stakeholders to participate in the data collection and reporting process; b) use the RPBANIP Air Navigation Report Forms (ANRFs) to the extent possible to report their national, sub-regional and regional implementation and performance progress; and c) periodically report to the ICAO NACC Regional Office on the air navigation implementation status.	E/CARNTG-RD ready to support this reporting and monitoring for the E/CAR Region

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