



ICAO

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

Twelfth Eastern Caribbean Network Technical Group (E/CAR/NTG/12) and Tenth Eastern Caribbean Radar Data Sharing Ad hoc Group (E/CAR/RD/10) Meetings

Final Report

Miami, United States, 24 – 25 July 2023

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HISTORICAL

ii.1 Place and Date of the Meeting

The Twelfth Eastern Caribbean Network Technical Group (E/CAR/NTG/12) and Tenth Eastern Caribbean Radar Data Sharing Ad hoc Group (E/CAR/RD/10) meetings were held at the IATA Americas premises in Miami, United States, from 24 to 25 July 2023.

ii.2 Opening Ceremony

Mrs. Mayda Ávila, Regional Officer, Communications, Navigation and Surveillance. Of the North American, Central American and Caribbean (NACC) Office of the International Civil Aviation Organization (ICAO). provided opening remarks and thanked the IATA for hosting the meeting. Mr. Steve Saroop, Trinidad and Tobago, Chairperson of the ECAR/NTG and ECAR/RD, provided the open remarks and thanked the participation of all assistance.

ii.3 Working Languages

The working language of the Meeting was English and the working papers, information papers and reports of the meeting were available to participants.

ii.4 Schedule and Working Arrangements

It was agreed that the working hours for the sessions of the meeting would be from 09:00 to 16:00 hours daily with adequate breaks. Ad hoc Groups were created during the Meeting to do further work on specific items of the agenda.

ii.5 Agenda

Agenda Item 1: Approval of the Agenda, Working Method, and Schedule of the Meetings

Agenda Item 2: Review of E/CAR/NTG and E/CAR/RD and Other Meetings Valid Conclusions

2.1 Follow-up on E/CAR/NTG and E/CAR/RD's Valid Conclusions and Decisions

2.2 Follow-up on North American, Central American and Caribbean Working Group (NACC/WG), North American, Central American and Caribbean Working Group Rapporteurs (NACC/WG/RAP) and CAR/SAM Planning and Implementation Regional Group (GREPECAS) Valid Conclusions and Decisions

Agenda Item 3: Operation and Performance of the E/CAR Aeronautical Fixed Services (AFS) Network

3.1 Network Performance and General Aspects

3.2 E/CAR Network Interconnections and Integration

3.3 Global Air Navigation Plan (ANP) Elements Implementation Group

Agenda Item 4: Surveillance Sharing Activities

4.1 Surveillance/Automatic Dependent Surveillance – Broadcast (ADS B)/Multilateration (MLAT) Developments/Updates)

4.2 E/CAR Surveillance Data Coverage Status (Radar Data Display and E/CAR needs)

Agenda Item 5: Update of E/CAR/NTG and E/CAR/RD Terms of Reference and Work Programme

5.1 Integration of E/CAR/NTG and E/CAR/RD under the NACC/WG

5.2 Update of Terms of Reference (ToRs)

Agenda Item 6: Other Business

ii.6 Attendance

The Meeting was attended by 7 States/Territories from the CAR Region, 1 International Organization and representation of 2 different companies, totalling 29 delegates as indicated in the list of participants.

ii.7 Conclusions and Decisions

The Meeting recorded its activities as Draft Conclusions and Decisions as follows:

CONCLUSIONS: Activities requiring endorsement by the Directors of Civil Aviation of the Eastern Caribbean (E/CAR/DCA).

DECISIONS: Internal activities of the Eastern Caribbean Network Technical Group (E/CAR/NTG) and the E/CAR Surveillance Sharing Ad hoc Group (E/CAR/RD).

ii.8 List of Conclusions and Decisions

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ii.9 List of Working and Information Papers and Presentations

Refer to the Meeting web page:

<https://www.icao.int/NACC/Pages/meetings-2023-ecarxtg.aspx>

WORKING PAPERS

Number	Agenda Item	Title	Date	Prepared and Presented by
WP/01	1	Provisional Agenda and Schedule of the E/CAR/NTG/12 and the E/CAR/RD/10 Meetings	18/07/23	Secretariat
WP/02	2.1	Actions Taken Regarding Valid Conclusions from Previous E/CAR/NTG Meetings and Conclusions and Decisions Formulated by the E/CAR/NTG/10 and E/CAR/RD/8	24/07/23	Secretariat
WP/03	2.2	Conclusions and Decisions of Previous Meetings that Impact the Activities of the E/CAR Meetings	24/07/23	Secretariat
WP/04	--	Cancelled	--	--
WP/05	4.1	Process of Automatic Dependent Surveillance–Broadcast (ADS-B) Implementation	24/07/23	Secretariat
WP/06	4.1	Developments in the Areas of Automatic Dependent Surveillance – Broadcast (ADS-B)/Multilateral (MLAT) in the PIARCO FIR	24/07/23	Trinidad and Tobago

WORKING PAPERS

Number	Agenda Item	Title	Date	Prepared and Presented by
WP/07	--	Cancelled	--	--
WP/08	5.2	Update of E/CAR/NTG and E/CAR/RD Terms of Reference and Work Programme	24/07/23	Secretariat
WP/09	4	Modernization of the FWI ATM System	24/07/23	France
WP/10	3	General Feedback of the French West Indies	19/07/23	France

INFORMATION PAPERS

Number	Agenda Item	Title	Date	Prepared and Presented by
IP/01	--	List of Working, Information Papers and Presentations	24/07/23	Secretariat
IP/02	4.1	ADS-B Implementation Project in French West Indies	19/07/23	France
IP/03	3.2	Contingency Planning - Provision of NOTAM, Flight Planning and PIB Data for the PIARCO FIR (TTZP)	19/07/23	Trinidad and Tobago
IP/04	3.2	Progress on CANSNET and Interconnection to the E/CAR Network	20/07/23	United States for the NACC/WG/COMM Rapporteur

PRESENTATIONS

Number	Agenda Item	Title	Presented by
1	3	E/CAR Network Performance	E/CAR Network Provider
2	2	Automatic Dependent Surveillance – Broadcast (ADS-B)	Secretariat

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3. Audrey Lorraine Davis

ECCAA

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6. Trevor Davis

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25. Manny Gongora

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E/CAR/NTG/12 & E/CAR/RD/10
List of Participants – Contact Information

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E/CAR/NTG/12 & E/CAR/RD/10
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Agenda Item 1: Approval of the Agenda, Working Method, and Schedule of the Meetings

1.1 Under WP/01, the E/CAR/NTG Rapporteur invited the Meeting to approve the provisional agenda and schedule. The Meeting approved the agenda as presented in the historical section of this report and did not make changes to the schedule (**Appendix A**).

Agenda Item 2: Review of E/CAR/NTG and E/CAR/RD and Other Meetings Valid Conclusions

2.1 Follow-up on E/CAR/NTG and E/CAR/RD's Valid Conclusions and Decisions

2.1.1 Under WP/02, the conclusions and decisions formulated by the E/CAR/NTG/12 and E/CAR/RD/10 meetings were reviewed. The status and follow-up comments for each conclusion/decision are based on information and discussion at the meeting and presented by the ECAR/NTG Rapporteur.

2.1.2 According to the discussion the open decisions and conclusions have the following status:

Number	Conclusion	Status
E/CAR/NTG/12- E/CAR/RD/10/01	IMPROVE MAINTENANCE AND PERFORMANCE PROCESS IN THE ECAR COMMUNICATION NETWORK	Valid. States are still working in the review of the BBB according with the new version of the GANP.
E/CAR/NTG/12- E/CAR/RD/10/02	CREATE AN AD-HOC GROUP RESPONSIBLE FOR DEVELOPING A PROJECT PROPOSAL FOR A REGIONAL COVERAGE OF SURVEILLANCE DATA.	Valid. To be completed before 30 June 2024
E/CAR/NTG/12- E/CAR/RD/10/03	NEW ECAR/NTG, ECAR/RD RAPPOREUR	Completed.
E/CAR/NTG/12- E/CAR/RD/10/04	NEED TO IMPROVE COMMUNICATION MECHANIC TO SEND ICAO EVENT INFORMATION AND DOCUMENTATION TO THE PoC OF THE ECAR STATES	Valid. Immediately and for future activities

2.2 Follow-up on North American, Central American and Caribbean Working Group (NACC/WG), North American, Central American and Caribbean Working Group Rapporteurs (NACC/WG/RAP) and CAR/SAM Planning and Implementation Regional Group (GREPECAS) Valid Conclusions and Decisions

2.2.1 Under WP/03, the Secretariat summarized the status of all Decisions and Conclusions from previous meetings of the North American, Central American and Caribbean Working Group (NACC/WG), the Eleventh North American, Central American and Caribbean Directors of Civil Aviation (NACC/DCA/11) meeting, and information that has a direct impact over the E/CAR groups and their action plans.

2.2.2 E/CAR/NTG and E/CAR/RD agreed to integrate all requirements by the Meeting that directly affect the work of both Task Groups, into the E/CAT/NTG and E/CAR/RD action plan.

2.2.3 At the NACC/DCA/11 meeting, held in Varadero, Cuba in June 2023, the following conclusion was made CONCLUSION NACC/DCA/11/5 "APPROVAL OF NORTH AMERICAN, CENTRAL AMERICAN AND CARIBBEAN WORKING GROUP (NACC/WG) STRUCTURE AND 2023 WORKPLAN", under this new NACC/WG structure, the E/CAR/NTG and E/CAR/RD will report directly to the NACC/WG.

2.2.4 Moreover, the E/CAR/NTG must integrate and participate in the NACC/WG/COMM Task Force, which is responsible for communication improvement in the CAR Region. The E/CAR/RD must integrate its work into the NACC/WG/SURV Task Force, responsible for the surveillance improvement in the region.

2.2.5 According to these actions the E/CAR/NTG and the E/CAR/RD must update their Terms of Reference and Actions Plan. The action plan is under **Appendix B** of this report.

Agenda Item 3: Operation and Performance of the E/CAR Aeronautical Fixed Services (AFS) Network

3.1 Network Performance and General Aspects

3.1.1 The statistics on the availability of the network routers were provided by Telecommunications Services of Trinidad and Tobago (TSTT) and are included below:

AVAILABILITY	2020	2021	2022
Column1	Column2	Column3	Column4
COUNTRY			
ANGUILLA	99.56%	99.14%	99.21%
ANTIGUA	99.77%	99.96%	99.45%
BARBADOS	99.85%	99.96%	99.89%
DOMINICA - CANEFIELD	94.52%	97.05%	99.58%
DOMINICA - MELVILLE HALL	0.00%	0.00%	0.00%
GRENADA	99.82%	99.49%	99.96%
MARTINIQUE	99.85%	99.97%	99.73%
MONTSERRAT	97.78%	95.23%	99.94%
NEVIS	99.43%	99.88%	99.19%
PIARCO	99.94%	99.97%	99.96%
SAN JUAN	99.59%	99.73%	99.64%
ST KITTS	99.29%	99.84%	99.97%
ST LUCIA - GF CHARLES	99.91%		
ST LUCIA - HEWANORRA	95.84%	99.96%	98.73%
ST VINCENT	99.65%	99.75%	99.91%
TOBAGO	92.67%	98.51%	99.98%
GUADELOPUE	99.85%	99.95%	99.75%

3.1.3 The Aeronautical message handling system (AMHS) service on the direct link Antigua-Guadeloupe was unserviceable for the period 08 March 2022 – 14 April 2022 due to an issue of the tunnel being down following a configuration change which was made on the switch in Antigua after migration of the circuit due to a card failure.

3.1.4 The upgrade of the network because of the obsolescence of the routers was awarded to TSTT in 2018. Due to delays arising from the Covid-19 pandemic health safety measures, the project has faced significant delays. The router equipment, which was ordered from the manufacturer, has been received and configured by TSTT and is ready to ship to the installation sites. TSTT is in the process of conducting pre-installation site visits using local on-site support.

3.1.5 The Meeting recalled that new 2MBps MPLS IP circuits would be implemented for the new Network (excluding San Juan and FWI). The circuits to San Juan, Martinique, and Guadeloupe were upgraded a few years ago. Trinidad and Tobago informed the Meeting that the deployment of the new circuits was delayed due to the COVID-19 pandemic and delays in delivery of the circuit hardware from the foreign manufacturer based in China.

3.1.6 All efforts are made to push through with the implementation since failures of the Cisco 2921 routers have been reported. Notwithstanding the setbacks, the new network was expected to be completed within the calendar year 2023.

3.1.7 After discussing and providing information about the different failures in the States Members of the E/CAR network, the States agreed that the availability of the network was incorrect due to the network having many failures that were not attended promptly by the network provider.

3.1.8 Trinidad and Tobago indicated that the provider had suffered staff reductions due to the COVID-19 pandemic and did not have sufficient staff to deal with system failures. In this regard, the Secretary indicated that the service and the contract that the provider has is to provide 99.99% availability and that Trinidad and Tobago must ensure that the provider provides the service for which it is contracted and paid.

3.1.9 In that regard, the following Conclusion was made:

CONCLUSION	
E/CAR/NTG/12-E/CAR/RD/10/01 IMPROVE MAINTENANCE AND PERFORMANCE PROCESS IN THE E/CAR COMMUNICATION NETWORK	
<p>What:</p> <p>That, as the quality of service provided to network users has decreased, causing a degradation of service that directly contributes to operational safety, Trinidad and Tobago,</p> <ul style="list-style-type: none"> a) report all faults on Top Desk/CNS Email/ECAR Phone and communicate them to the TTCAA for resolution; b) coordinate with the network provider to improve service to users; c) implement improved fault monitoring and troubleshooting; and d) perform better control of the service provided by the supplier by 30 August 2024. 	<p>Expected impact:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Political / Global <input type="checkbox"/> Inter-regional <input type="checkbox"/> Economic <input type="checkbox"/> Environmental <input type="checkbox"/> Operational/Technical
Why: It is important to maintain high operational performance in the ECAR AFS network	
When: Complete before 30 August 2024	Status: <input type="checkbox"/> Valid / <input type="checkbox"/> Superseded / <input type="checkbox"/> Completed
Who: <input checked="" type="checkbox"/> States <input type="checkbox"/> ICAO <input type="checkbox"/> Other:	Trinidad and Tobago

3.1.10 Under IP/04, United States presented information on behalf of the Improvements to the ATS Voice Link (MEVA) Rapporteur about the intended replacement network for MEVA III and requirements for interconnection to the E/CAR network.

3.1.11 Under WP/10, France indicated that the E/CAR Aeronautical fixed service (AFS) network is globally compliant with operational requirements and securing FWI E/CAR AFS network connection is achieved through dual access: Guadeloupe (Antigua, Martinique) and Martinique (Trinidad and Tobago, Guadeloupe). Also, in addition to the E/CAR network, a link between Martinique and Trinidad and Tobago supports radar data and two phone lines.

3.1.12 However, it was indicated that many failures must be solved by the E/CAR network provider as follows:

- restart the periodic maintenance on site of the ECAR equipment;
- improve router reset processing time to solve trouble line faster;
- deploy as soon as possible the solution correcting the telephony problem in Guadeloupe;
- communicate to the States the planning and technical constraints of the network upgrade;
- take advantage of the implementation of the new E/CAR architecture to establish a Letter of Agreement (LOA) between the different States; and
- set up performance indicators for Aeronautical message handling system (AMHS) and telephony services. For example, in 2022, the network performance indicator indicated an availability rate of 99.93% in Guadeloupe. But during this same year, this site suffered more than a month of AMHS outage. The network performance indicator is important, but it must be accompanied by indicators showing the status of the transmitted data.

3.1.13 Trinidad and Tobago will coordinate with the E/CAR Network Provider to solve all items indicated by France.

3.2 E/CAR Network Interconnections and Integration

3.2.1 Under IP/03, Trinidad and Tobago presented information on contingency planning - provision of Notice to airmen (NOTAM), flight planning, and Pre-flight information bulletin (PIB) data for the PIARCO Flight information region (FIR). In support of Air Traffic Management (ATM) Contingency Plans and the furtherance of the System wide information management (SWIM) need for continuous availability of data, the TTCAA is in the process of implementing the Aeronautical Data Contingency Plan – Aeronautical Data Sharing and Failover/Disaster Recovery for specific AIM data/service.

3.2.2 Trinidad and Tobago has developed a 24x7x365 contingency plan with the Dutch Caribbean Air Navigation Service Provider N.V. (DC-ANSP) which ensures failover and backup operations of the CRONOS Dynamic Aeronautical Information Management (AIM) System; NOTAM and Flight Planning and PIB service. The Aeronautical Data Sharing and Failover/Disaster Recovery Contingency Plan is currently in the testing phase.

3.2.3 Operationally, the Contingency Plan has three phases: Notification/Activation, Recovery, and Reconstitution and it can be activated for planned Contingency Scenarios occurring either in Trinidad and Tobago or at Curacao.

Agenda Item 4: Surveillance-Sharing Activities

4.1 Surveillance/Automatic Dependent Surveillance – Broadcast (ADS B)/Multilateration (MLAT) Developments/Updates

4.1.1 Under WP/06, Trinidad and Tobago presented information on developments in the areas of Automatic Dependent Surveillance–Broadcast (ADS-B)/Multilateration (MLAT) in the Piarco FIR. The Surveillance Concept for Piarco FIR includes the provision of ADS-B services to augment the existing Secondary surveillance radar (SSR) source of surveillance. The analysis of trial data showed that over 85% of aircraft transiting the Piarco continental airspace are equipped for ADS-B. The Piarco ACC shall be a repository for all the ADS-B/Wide Area Multilateration System (WAM) data processing, where the data will be integrated into the Piarco ATM System and the Multi Radar Tracker (MRT). The combined data from all available surveillance sources will be available over the E/CAR AFS Network for distribution to the E/CAR States.

4.1.2 Due to the Covid-19 pandemic, the contract, although negotiated, was on hold. The project was initially envisaged to be completed in 2019 in two phases. It is rescheduled to start in the last quarter of 2023 with the first phase, ADS-B/WAM System, being implemented in Trinidad, Tobago, and Barbados with the installation, testing, validation, and integration. The second phase, ADS-B Sub System composed of two ADS-B Ground Stations, should be completed by the second quarter of 2024 with the installation, testing, validation, and integration of the sites in Antigua and Barbuda and Saint Lucia. This schedule is tentative pending any unforeseen circumstances that may adversely affect the shipment of equipment, travel, and weather-related matters.

4.1.3 Under WP/09, France presented information on the modernization of the FWI ATM system and its consequences. France plans the modernization of the overseas ATM systems. These heterogeneous systems (IRMA and SIGMA) will be replaced by a single system. This change is managed through the project called SEAFLIGHT. ADACEL's Aurora Air Traffic Management is the heart of the new system. It integrates approach and tower control capabilities. Each controller position will include three screens: airspace situation, electronic flight strip, and general information (weather, Automatic terminal information service -ATIS-, etc.).

4.1.4 Under P/02, the Secretariat provided information on the process of ADS-B implementation. The main purpose of the ADS-B is to support the provision of Air Traffic Services (ATS) and operational applications at reduced cost and increased surveillance coverage and provide new capabilities over the conventional surveillance systems:

- ADS-B provides precise position/velocity information in all airspace (accuracy not range-dependent as with radar). It also provides aircraft call signs and precise position/velocity information to nearby aircraft with ADS-B-In receivers.
- ADS-B can also support State aircraft airspace access, however it should, when possible, leverage benefits from dual-use of State aircraft capabilities to reduce cost and technical impact.

4.1.5 The Secretariat explained the different enablers needed before the operational implementation of the ADS-B.

4.1.6 Under WP/05, the Secretariat indicated that ADS-B supports the provision of ATS and operational applications at reduced cost and increased surveillance coverage. It also increases safety and supports the implementation of many operational functionalities. This working paper provided information on the process of ADS-B implementation and how the Eastern Caribbean (E/CAR) States should obtain benefits from this implementation.

4.1.7 ADS-B is an Aviation System Block Upgrade (ASBU) element, part of the Surveillance Module that provides data and accurate reports of an aircraft's position. The ADS-B data provides precise position/velocity information in all airspaces (accuracy not range-dependent as with radar). It also provides aircraft call signs and precise position/velocity information to nearby aircraft having ADS-B-In receivers. ADS-B can also support States' aircraft airspace access, however, it should when possible, leverage benefits from dual-use of States' aircraft capabilities to reduce cost and technical impact.

4.1.8 Several of the Caribbean States are in the process of ADS-B implementation and other require the implementation of surveillance systems to support their air traffic control operations in the lower airspace. To obtain real benefits from the implementation of this facility, it is advisable to carry out a regional analysis of this implementation to achieve goals that benefit the entire region, and support efficiency, capacity, and above all, safety throughout the region.

4.1.9 The implementation of ADS-B would allow the Caribbean (CAR) Region to better plan its operational improvements and standardize regional air traffic control procedures. Although implementation on a single island would benefit the individual safety of the implementing State, coordinated regional implementation among the States would benefit the entire region.

4.1.20 In this regard, it would be very important to take advantage of all the individual projects being carried out by the States, but also to develop an integrated project covering the entire region. ICAO recommended to consider implementation on a regional basis and to pursue these regional objectives to obtain the benefits that ADS-B provides.

4.1.21 The Secretariat proposed to create a multidisciplinary group with specialists from the E/CAR subregion for the development of a regional ADS-B project. The Ad hoc Group would be responsible for developing the following deliverables:

1. Regional Status of the ADS-B implementations.
2. Identification of ADS-B objectives for the E/CAR States.
3. Development of a Automatic terminal information service (CONOPS) for ADS-B Implementation.
4. Development of a Request for an Information Document (RFI).

4.2 E/CAR Surveillance Data Coverage Status (Radar Data Display and E/CAR needs)

4.2.1 Under WP/07, an update on the Antigua and Barbuda Air Traffic Management (ATM) and Surveillance System as of July 2023 was presented, indicating the following timelines for the project:

1. Hardware installation and initial configuration of the ATM System and Surveillance Sensor were completed on 17th April 2023.
2. Technical training is planned for 7 to 18 August 2023.
3. Pre-ATC training is planned for 21 to 25 August 2023.

4. Site Acceptance Tests planned for 28 August to 8 September 2023.

4.2.2 Under IP/02, France presented the status of the ADS-B implementation project in the French West Indies (FWI). France informed that data collection for analysis is in progress and a simulation with 2 to 4 antennas per island is underway to assess the optimal coverage. There is no ADS-B out equipage mandate in effect in the FWI. This new system would complement the 2 radars that will be retrofitted (mode S) in the years to come.

4.2.3 According to the Meeting discussion and analysis of the Secretariat proposal, the Meeting agreed to the following conclusion:

CONCLUSION	
E/CAR/NTG/12-E/CAR/RD/10/02 CREATION PF AN AD-HOC GROUP RESPONSIBLE FOR DEVELOPING A PROJECT PROPOSAL FOR A REGIONAL COVERAGE OF SURVEILLANCE DATA	
<p>What:</p> <p>That, a regional Ad hoc Group project, within the E/CAR NTG and RD group, be created to assess the elements in the implementation plan of the ADS-B/CNS initiatives on air navigation in the E/CAR, to help providing information on the current and future systems with technical and operational recommendations for the State's implementation development of a regional ADS-B project proposed for E/CAR.</p> <p>a) and to make aware the DCAs in the subregion of the concept of a regional project for future implementation by 30 June 2024.</p>	<p>Expected impact:</p> <p><input type="checkbox"/> Political / Global</p> <p><input type="checkbox"/> Inter-regional</p> <p><input type="checkbox"/> Economic</p> <p><input type="checkbox"/> Environmental</p> <p><input type="checkbox"/> Operational/Technical</p>
<p>Why: Safety is a priority for air navigation services, surveillance information supports air control services and safety operations.</p>	
<p>When: Complete before 30 June 2024</p>	<p>Status: <input type="checkbox"/> Valid / <input type="checkbox"/> Superseded / <input type="checkbox"/> Completed</p>
<p>Who: <input checked="" type="checkbox"/> States <input type="checkbox"/> ICAO <input type="checkbox"/> Other:</p>	<p>ECAR/States, NACC/WG/SURV and ICAO NACC</p>

Agenda Item 5: Update of E/CAR/NTG and E/CAR/RD Terms of Reference and Work Programme

5.1 Integration of E/CAR/NTG and E/CAR/RD under the NACC/WG

5.1.1 Under WP/08, the Secretariat indicated that under the new regional objectives, the new version of the Global Air Navigation Plan and the new structure of the NACC/WG, it is necessary that the E/CAR/NTG and E/CAR/RD update their Terms of Reference (ToRs) with the inclusion of the new responsibilities and regional objectives.

5.1.2 Following the new structure of the NACC/WG, new regional objectives, and the need to integrate the E/CAR activities with the different NACC/WG Task Forces, the E/CAR/NTG and E/CAR/RD need to update the following information: Eastern Caribbean Network Technical Group (E/CAR/NTG) ToRs, including membership; and Points of Contact (PoC).

5.1.3 After discussion, members of both groups identified the benefits of working under the NACC/WG mechanism, participating more actively in the development of regional objectives, and taking advantage of lessons learned from other regional groups that would benefit the ANS implementations in the Eastern Caribbean States.

5.2 Update of Terms of Reference (ToRs)

5.2.1 After the discussion session, the Group developed and updated the requested information, included in **Appendix B**.

5.2.2 The Appendix also shows the Membership of the Group.

Agenda Item 6: Other Business

6.1 Under this agenda item, Mr. Saroop, Trinidad and Tobago, was nominated as rapporteur of the E/CAR/NTG and E/CAR/RD, and the Meeting made the following Decision:

DECISION	
E/CAR/NTG/12-E/CAR/RD/10/03 NEW E/CAR/NTG AND ECAR/RD RAPPOREUR	
What: That, due to the retirement of Mrs. Veronica Ramdath, the Meeting approved Mr. Steve Saroop as the new rapporteur of the E/CAR/ NTG and ECAR/RD.	Expected impact: <input type="checkbox"/> Political / Global <input type="checkbox"/> Inter-regional <input type="checkbox"/> Economic <input type="checkbox"/> Environmental <input type="checkbox"/> Operational/Technical
Why: CNS needs leadership and coordination over all E/CAR States.	
When: Immediately	Status: <input type="checkbox"/> Valid / <input type="checkbox"/> Superseded / <input type="checkbox"/> Completed
Who: <input checked="" type="checkbox"/> States <input type="checkbox"/> ICAO <input type="checkbox"/> Other:	E/CAR/States

6.2 The States shared their concern that not all members of their Task Forces are informed of the meetings that take place, which prevents their participation. In that sense, E/CAR States requested ICAO to improve the communication working and communication mechanism to encourage the participation of all Eastern Caribbean States and adopted the following Decision.

DECISION	
E/CAR/NTG/12- E/CAR/RD/10/04 IMPROVEMENT OF COMMUNICATION MECHANISM CONCERNING ICAO EVENT INFORMATION AND DOCUMENTATION TO THE PoC OF THE E/CAR STATES	
What: That, as the technical and operational points of contact, do not receive information on ICAO events, documents, and important meetings in which the Eastern Caribbean States need to participate: a) each Eastern Caribbean State will send the information of the Official Point of Contact to ICAO by 29 February 2024; and b) ICAO update the communication distribution list of the E(CAR States.	Expected impact: <input type="checkbox"/> Political / Global <input type="checkbox"/> Inter-regional <input type="checkbox"/> Economic <input type="checkbox"/> Environmental <input type="checkbox"/> Operational/Technical
Why: It is important to ensure that all ICAO-related information is communicated to ECAR States promptly.	
When: 29 February 2024	Status: <input type="checkbox"/> Valid / <input type="checkbox"/> Superseded / <input type="checkbox"/> Completed
Who: <input checked="" type="checkbox"/> States <input checked="" type="checkbox"/> ICAO <input type="checkbox"/> Other:	ECAR States, ICAO NACC

**APPENDIX A
PROVISIONAL SCHEDULE**

Time	Monday 24 July	Tuesday 25 July
	Twelfth Eastern Caribbean Network Technical Group (E/CAR/NTG/12) and Tenth Eastern Caribbean Radar Data Sharing Ad hoc Group (E/CAR/RD/10) Meetings	
08:30–09:00	<i>Opening Ceremony & Photo</i>	
09:00–09:30	Agenda Item 1	Agenda Item 4
09:30–10:30	Agenda Item 2	
10:30–11:00	<i>Coffee break</i>	
11:00–12:30	Agenda Item 2 (Cont.)	Agenda Item 5
11:30–12:00		
12:00–12:30		
12:30–13:30	<i>Lunch time</i>	
13:30–15:00	Agenda Item 3	Agenda Item 6

APPENDIX B
EASTERN CARIBBEAN NETWORK TECHNICAL GROUP (E/CAR/NTG)
TERMS OF REFERENCE

1. Background

1.1 The Eastern Caribbean Network Technical Group (E/CAR/NTG) was established as a standing group following the Thirty-First Eastern Caribbean Working Group Meeting (E/CAR/WG/31), Conclusion 31/7 - *Replacement of the E/CAR AFS Network*, approved by the Twenty-Second Meeting of Directors of Civil Aviation of the Eastern Caribbean (E/CAR/DCA/22) Port-of-Spain, Trinidad and Tobago, 8 to 11 December 2009. The terms of reference of the E/CAR/NTG were approved by the E/CAR/DCA/22 Meeting, Decision 22/6 - *E/CAR Network Technical Group (NTG) Terms of Reference and First Meeting*. The following main objectives are assigned:

- a) analysis and monitoring of the status of the current E/CAR AFS Network;
- b) study, analyze and follow up on the planning, documentation and implementation of the replacement of the existing E/CAR AFS Network;
- c) recommend measures to improve reliability of the E/CAR AFS Network for the immediate/near term; and

1.2 By 2013, the E/CAR/NTG had fulfilled these objectives, with an efficient Internet Protocol (IP) Network and well-established stable services; however, the continuous monitoring, analysis and follow-up to Network improvements and resolution of failures were considered necessary by the E/CAR AFS Network participants.

2. Terms of Reference

2.1 For the activities related to the analysis and monitoring of the status of the current E/CAR AFS Network, the E/CAR/NTG is required to make recommendations on measures to improve the reliability of the E/CAR AFS Network for the immediate/ near term. These activities include:

- a) review the current status of the Network (maintenance and reporting procedures, technical personnel involved, spare parts, tools for monitoring the Network status, identify common network points of failure, etc.) and submit recommendations;
- b) ensure compliance of the Network services with ICAO SARPs, Regional Air Navigation Plans and user expectations (Aviation System Block Upgrades (ASBU) Block 0 Modules);
- c) assist Trinidad and Tobago and the E/CAR States with technical coordination and solutions of problems that occurred with the implementation and operation of the Aeronautical Fixed Service (AFS) including the E/CAR AFS Network, and to consider and make recommendations on measures to improve implementation and operation;
- d) study and propose to the E/CAR/DCA intra and inter-regional coordination for the E/CAR AFS Network connectivity with other regional and domestic digital communications networks of the CAR and SAM Regions; and
- e) inform and advise the E/CAR AFS Network users, if a major failure or network concern that affects the entire network occurs or may occur or an event that does not allow achieving the Network Service level agreement, recommending solutions for its recovery and actions by the E/CAR AFS Network Service Provider.

3. Work Programme

No.	Activities	Objectives	Responsible	Deliverables
1	To assist the E/CAR AFS Network Members in providing solutions to problems presented in the network operations and in the implementation of the related equipment and service.	Keep E/CAR AFS Network SLA levels	NTG	E/CAR AFS Network assistance
2	To study and implement Technical /operational measures that may be agreed to improve the operation and implementation of E/CAR AFS Network services, that do not impact in a significant cost, investments and objectives of the Network.	Satisfactory operation and service levels	NTG	Implementation of Network improvements
3	Keep E/CAR AFS Network Members aware of the status of the E/CAR AFS Network performance and conditions of operation.	E/CAR AFS Network awareness	NTG	Reliable E/CAR AFS Network website Network Performance revision
4	Maintain valid and up-to-date E/CAR AFS Network Contingency Procedures, taking into consideration the contingency plans of each E/CAR AFS Network Member and of the Service Provider and keeping aligned with the CAR Region General Contingency Plan.	Readiness for contingencies	NTG	E/CAR AFS NETWORK Contingency Procedures
5	To assist the E/CAR AFS Network Members in maintaining a valid data and voice circuits implementation, according to the requirements shown in the ANP CAR/SAM (ASBU BO modules and Regional/National Priorities).	Fulfil Air Navigation requirements	Task Forces- Ad hoc Groups	Data and voice circuit implementation
6	To study and propose solutions for AFS connectivity of the E/CAR AFS Network with other regional and domestic	Fulfil Air Navigation requirements	Task Forces- Ad hoc Groups	Data and voice circuit implementation

No.	Activities	Objectives	Responsible	Deliverables
	CAR/SAM networks.			
7	To review and propose amendments to the terms of the Services Agreement, based on the ICAO requirements for the transitioning towards the ATN for the E/CAR AFS Network.	Network improvements	Taskforces	Effective and efficient E/CAR AFS Network Transition Process
8	Keep and validate with the E/CAR AFS Network Service Provider a procedural handbook on management, operation and maintenance of the E/CAR AFS Network telecommunication circuits.	Ensure proper E/CAR AFS Network maintenance and operation	NTG	Maintenance Procedural Handbook/Manual

4. Working Methods

- a) The E/CAR/NTG work programme should present its activities in terms of objectives, responsible and deliverables. Further details can be provided in the form of Work Breakdown Schedule (WBS);
- b) E/CAR/NTG will avoid duplication of work within the E/CAR/CATG and maintain close coordination among the existing entities (like the NAM/CAR Air Navigation Implementation Group:ANI/WG) to optimize the use of available resources and experience;
- c) E/CAR/NTG 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) E/CAR/NTG should co-ordinate and progress 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) E/CAR/NTG meetings shall be conducted as possible, jointly with other E/CAR Meetings like the E/CAR/CATG meetings; and
- f) E/CAR/NTG will report and coordinate the progress of assigned tasks to the E/CAR/CATG as well as to the E/CAR Directors.

5. Membership

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ICAO will act as technical adviser to the E/CAR/NTG.

6. Rapporteur

6.1 Mr. Steve Saroop (Trinidad and Tobago)

— END —