



ICAO

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North American, Central American and Caribbean Office

WORKING PAPER

E/CAR/CATG/4 — WP/16
05/09/18

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

E/CAR/NTG/8 AND E/CAR/RD/6 MEETINGS AD HOC GROUPS REPORT

(Presented by E/CAR/NTG and E/CAR/RD Rapporteur)

EXECUTIVE SUMMARY	
This Working Paper presents the report of the E/CAR/NTG/8 and the E/CAR/RD/6 Meetings	
Action:	The suggested actions are presented in Section 3
Strategic Objectives:	<ul style="list-style-type: none">• Safety• Air Navigation Capacity and Efficiency
References:	<ul style="list-style-type: none">• Eight Eastern Caribbean Network Technical Group (E/CAR/NTG/8) and Sixth Eastern Caribbean Radar Data Sharing Ad hoc Group (E/CAR/RD/6) Meetings

1. Introduction

1.1 The Eight Eastern Caribbean Network Technical Group (E/CAR/NTG/8) and Sixth Eastern Caribbean Radar Data Sharing Ad-hoc Group (E/CAR/RD/6) Meetings were held at the Grenada Airports Authority conference facility in Saint George's, Grenada, from 03 – 05 September 2018. The Meeting was attended by nine (9) States/Territories, two (2) International Organizations, the E/CAR/AFS Network provider and three (3) industry vendors totalling twenty-nine (29) participants.

2. Discussion

2.1 Under Agenda Item 1, the Meeting approved the agenda and did not make changes to the 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 MEVA/TMG/33, ADS-B/IMP AND ANI/WG/4 Meetings as follows:

- E/CAR/NTG and E/CAR/RD: Four (4) decisions were considered valid, one (1) conclusion completed, one superseded and seven (7) valid conclusions.
- The Implementation Meeting/Workshop (ADS-B/IMP) that was held in Lima, Peru, on November 2017, agreed on the following actions:
 - ✓ Improve data radar sharing between different FIRs with the objective to improve safety.
 - ✓ Improve ADS-B implementation
 - ✓ Integrate operational and technical requirement to the ADS-B implementation.
 - ✓ Develop in parallel to the ADS-B implementation, the necessary regulation for its operation.
 - ✓ Regulatory entities (DGACs) will need to certify aircraft and Airlines.
- The Thirty Third MEVA Technical Management Group Meeting (MEVA/TMG/33) held in Curaçao, May 2018, agreed to the following:
 - ✓ Development a fourth phase of the MEVA network, new IP based communications infrastructure to support data facilities.
 - ✓ Integrate a new procedure that permit third party companies can use MEVA to carry out their information to the MEVA Members States, as AIREON to provide surveillance satellite information to Curaçao.
 - ✓ Protect and support the frequencies use for aviation for actual and future services.

2.3 Under Agenda Item 3, the Meeting took note of information presented by TSTT on the E/CAR network features, managed service capabilities, network performance analysis and upgrade and recommendations. The following matters were noted:

- a) St. Kitts has yet to replace one (1) of the routers that failed as a result of environmental damage.
- b) Dominica Canefield and Anguilla E/CAR/AFS Network equipment are out of service due to Force Majeure.
- c) TSTT's failure reporting system registered a total of one hundred and eighteen (118) tickets (July 2017 to July 2018). The failures were further categorized as link failures (27%), power (22%), router related (4%), voice (10%), and no fault found (9%).
- d) E/CAR/AFS Network maintenance activity was completed in March – April 2018.
- e) Barbados informed that the Network availability over the period was excellent at 100%.

- f) ECCAA reported that apart from C.J. Lloyd Airport, Anguilla and Canefield Airport, Dominica which suffered loss of terminal equipment during the passages of hurricanes Irma and Maria in September 2017, the network on a whole performed well, and the few outages which were reported did not significantly affect the operations of the ATS units.
- g) France reported some difficulties with phone communications but agreed that the E/CAR/AFS network is globally compliant with operational requirements. TSTT has already implemented a solution to the phone issues

2.4 Under WP/18, the United States provided information on the combined activities in the Central and Eastern Caribbean and updates on Aeronautical Message Handling System (AMHS) implementation in order to improve the telecommunications in the area.

2.5 Under Agenda Item 4, WP/4, the Secretariat talked about the importance of having common situational awareness information and noted that ICAO has assisted States to make decisions based on realistic information to allow for safety improvement and sharing surveillance data information which are essential requirements to support and improve situational awareness. In this regard, the following Conclusion was formulated:

CONCLUSION
E/CAR/NTG/8-RD/6/x

**UPDATE SURVEILLANCE INFRASTRUCTURE OF EASTERN
CARIBBEAN**

That, bearing in mind that it is necessary for States to provide information on the technical characteristics of their surveillance infrastructure, that States agreed to:

- a) Integrate all the technical information and capacity of your surveillance systems (Provider, Model, Protocols, etc.);
- b) promote with this information the activities of radar data sharing among the States that its technical capacity allows it; and
- c) integrate into your development plans the necessary requirements for new projects to come, integrate these capabilities.

2.6 Regarding surveillance sharing, the following conclusion was formulated:

CONCLUSION
E/CAR/NTG/8-RD/6/x

SUPPORT EASTERN CARIBBEAN STATES IN THE DEVELOPMENT
OF THEIR IMPLEMENTATION PLANS

That,

The Eastern Caribbean States seek the support of their governments for the development of aviation projects that support air traffic control activities. Developing the second phase of the radar project is a necessity, since this will promote the operational safety of the region and improve situational awareness. States agreed that:

- a) It is necessary that ICAO support the Second phase of the radar data implementation project;
- b) Trinidad and Tobago support this project in all possible ways, since it promotes safety in the PIARCO Region; and
- c) ICAO to provide an approach between the different Eastern Caribbean States by **March 2019.**

2.7 France noted the SNA AG plans to modernize their overseas ATM systems. These heterogeneous systems (IRMA and SIGMA) will be replaced by a single system to be realized by the Canadian company ADACEL. It is expected that Guadeloupe will be in operation in 2020 and Martinique in 2021. New features will include Electronic Flight strips and Automatic coordination between Martinique and Guadeloupe and the opportunity to implement AIDC with other ANSPs. France informed the meeting that IRMA will be discontinued by end of year 2021.

2.8 Barbados updated the meeting on the work done in the areas of ADS-B and Multilateration (MLAT). Since 2014 Barbados embarked on a project to replace its aging MSSR system and provide greater safety and efficiency in its airspace through the use of more modern technologies that would facilitate automation in Management of Air traffic. The system is expected to be fully installed with site acceptance testing scheduled by the end of October 2018.

2.9 Under IP/03 the United States shared that in 2010, the Federal Aviation Administration (FAA) published a regulatory requirement for all aircraft operating within certain airspace to be equipped with Automatic Dependent Surveillance – Broadcast (ADS-B) Out technology by January 1, 2020, according to Title 14 of the U.S. Code of Federal Regulations (14 CFR) sections 91.225 and 91.227. This requirement will affect all flights in the designated airspace. To prepare the aviation community and prevent any operational disruptions, the FAA is promoting the new mandate to the international community so that foreign aircraft intending to operate within the affected airspace will be equipped with the appropriate ADS-B Out system by the compliance date.

2.10 Under Agenda Item 5, ICAO advised that upon contacting the NCLB Project that the E/CAR radar data sharing project Phase II does not qualify under the NCLB Project. In light of the length of time that has elapsed since the last meeting of the RD group and in consultation with ICAO it was agreed to invite industry to present any developments in end user equipment processing of surveillance technology related to Phase II of the project. In this regard and based on the information presented by industry at this meeting, a revised RFP will be developed and submitted as previously agreed as an ICAO TCB project. In this regard, the following Draft Conclusion was formulated:

CONCLUSION
E/CAR/NTG/8-RD/6/x

DEFINITION OF RADAR DATA DISPLAY PHASE II PROCESS

That, the NTG Rapporteur in coordination with ECCAA, France, Trinidad and Tobago and the United States revise the operational requirements and contact ICAO TCB for an estimate of the project based on the defined user requirements by **31 January 2019**.

2.11 Under P/02, Thales presented their solution about surveillance, communication, navigation and automation. A solution was proposed for the radar data display project Phase II using either ECOsystem architecture with the Thales cloud and E/CAR network or a TopSky-ATC automation based system with Air Situational awareness and display, monitoring, automatic or manual correlation and additional functional capabilities. The presentation identified main features of human machine interface, technical monitoring and control that could be used as a standalone position for each island. Thales explained two types of cost models for implementation:

- a) Own and implement automatic system equipment; or
- b) Contract the service and pay for the service and data.

Upon request from Trinidad and Tobago, Thales has agreed to a demonstration of their proposed solution in Trinidad and Tobago.

2.12 Under Agenda Item 6, the work programme for the E/CAR/NTG was updated, aligning them to the RPBANIP and ASBU methodology. The membership was revised to reflect the actual attendance and contributions to the success of the meetings to include Antigua, Dominica, Grenada, St. Lucia, St. Kitts and Nevis and St. Vincent.

2.13 Under Agenda Item 7, WP/10, information was presented about AIDC and the NAM/ICD. The NAM/CAR Regions, based on their experience, had identified a series of weaknesses during AIDC implementation, as well as post-implementation issues. In that sense, it is necessary that the Eastern Caribbean States take advantage of lessons learned and avoid the same mistakes.

2.14 Under WP/15, a review of Performance-Based Communication and Surveillance (PBCS), operative objectives, ICAO standards application and implementations requirements was presented. The Secretariat explained the technical requirement to provide this service, integrate equipment aboard, ground capacity and to validate/certify surveillance and communication equipment.

2.15 Under WP/20, information about flight plans errors presented indicated that flight plan automation and management errors were not only associated to flight plan information errors but also to other factors, such as non-compliance with ICAO standards concerning flight plan (Doc 4444), database information inconsistencies (including names of procedures, fixes, airways, aircraft information), lack of integrity in the information published in AIP or weakness in the process of the amendment and application of the AIRAC calendar, among others. In this regard, ICAO is planning to hold two workshops in 2019 to provide States with the necessary information to address flight plan errors. Barbados offered to engage their administration to seek approval to host the English speaking workshop.

2.16 Under IP/04, United States shared information about the destruction of hurricane Maria on MEVA equipment at the San Juan CERAP and the aftermath to restore services. Under P/04, Thales presented an overview on activities that was carried out in Sint Maarten after hurricane Irma.

2.17 The complete report of the E/CAR/NTG/8 and the E/CAR/RD/6 meetings are available on the ICAO NACC office website at:

<http://www.icao.int/NACC/Pages/meetings>

3. Suggested Action

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.