



ICAO

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North American, Central American and Caribbean Office

WORKING PAPER

E/CAR/NTG/10 & E/CAR/RD/8 — WP/14  
04/09/21

**Tenth Eastern Caribbean Network Technical Group and Eighth Eastern Caribbean Radar Data Sharing  
Ad hoc Group Meetings (E/CAR/NTG/10 & E/CAR/RD/8)**  
Online, 6 to 7 September 2021

**Agenda Item 4: Surveillance Sharing Activities**

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

**ADS-B AND MLAT IMPLEMENTATION IN BARBADOS**

(Presented by Barbados)

<b>EXECUTIVE SUMMARY</b>	
This working paper presents a summary of the activities concerning ADS B and MLAT usage and development at Adams Air Traffic Control, Barbados during 2021.	
<b>Action:</b>	Suggested actions are presented in Section 4.
<i>Strategic Objectives:</i>	<ul style="list-style-type: none"><li>• Safety</li><li>• Air Navigation Capacity and Efficiency</li><li>• Economic Development of Air Transport</li><li>• Environmental Protection</li></ul>
<i>References:</i>	<ul style="list-style-type: none"><li>• ICAO Doc 4444</li><li>• ADS-B Implementation and Operations Guidance Document Edition 11.0 - July 2018</li></ul>

**1. Introduction**

1.1 In accordance with the Global Air Navigation Enables Requirements, an assessment was carried out to identify the actual ADS-B and MLAT implementation. In that sense both implementation have the following status:

- Barbados completed the ADS-B and MLAT Ground System implementation, surveillance data in integrated to the Air Traffic system.

**2. Discussion**

2.1 It is necessary for Technical staff to receive training according with the new technologies with the aim to provide maintenance, configuration and monitoring of the performance of the ADS-B and MLAT data.

2.2 Barbados currently has ADS B/MLAT capability through recent upgrades via installations of surveillance antennae and the use of the Leonardo Selex MLAT-ATM system. Ongoing assessment and development of the following areas have been done:

a) Operational procedures –

- Controller and pilot actions and phraseology.
- Separation criteria and requirements.
- Contingency and emergency.

(Reference ICAO 4444 and ADS-B IMPLEMENTATION AND OPERATIONS GUIDANCE DOCUMENT Edition 11.0 - July 2018.)

b) Determining minimum airspace requirements for aircraft.

c) Planning for Controller familiarization and training.

### **3. Conclusion**

3.1 Barbados Air Traffic Control Centre receives information from MLAT and ADS-B ground stations and displays it in the human machine interface (HMI) according with the ATC configuration display.

3.2 Barbados having completed the ground system implementation of the ADS-B and MLAT station and their interaction and validation in the air traffic operational environment, means the MLAT ground stations interrogate aircraft transponders and receive/process transponder replies to determine aircraft position as well as ADS-squitter transmissions.

3.3 Barbados continues to undertake the necessary tasks in order to progress in the implementation of ADS B/MLAT usage and operation

### **4. Suggested action**

4.1 Barbados must continue to improve efforts with regards to the development of activities which will assist in the implementation of ADS-B and MLAT.