



ICAO

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

WORKING PAPER

E/CAR/NTG/10 & E/CAR/RD/8 — WP/10
30/08/21

**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

MODERNIZATION OF THE FWI ATM SYSTEM

(Presented by France)

EXECUTIVE SUMMARY	
This paper presents the modernization of the FWI ATM system and its consequences	
Action:	Suggested actions are presented in Section 4.
<i>Strategic Objectives:</i>	<ul style="list-style-type: none">• Safety• Air Navigation Capacity and Efficiency• Economic Development of Air Transport• Environmental Protection
<i>References:</i>	<ul style="list-style-type: none">• Eighth Eastern Caribbean Network Technical Group (E/CAR/NTG/9) and Sixth Eastern Caribbean Radar Data Sharing Ad hoc Group (E/CAR/RD/7) Online, 14 - 15 July 2021

1. Introduction

1.1 The FWI ATM system is based on the use of 2 systems: IRMA (radar display) and SIGMA (Flight Plan system).

1.2 The surveillance in FWI is based on the use of two (2) monopulse secondary radars (Thalès RSM970 MSSR in Guadeloupe and Martinique) and on one multi radar tracker (MRT, called DACOTA based on Martinique).

1.3 In 2015, France gave IRMA to several member States of the E/CAR AFS network. The purpose of this donation was to test a radar display system to write specifications and then acquire a modern system.

2. Replacement

2.1 France plans the modernization of the overseas ATM systems. These heterogeneous systems (IRMA and SIGMA) will be replaced by a single system. The new system will be realized by the Canadian company ADACEL.

2.2 Guadeloupe will be in operation in 2022 and Martinique in 2023.

2.3 New features:

- Electronic flight strips
- Automatic coordination: between Martinique and Guadeloupe and opportunity to do AIDC with other ANSP

2.4 A second MRT DACOTA is installed in Guadeloupe. It will be in operation in 2022.

3. Consequences

3.1 From 2021:

- Data of the FWI radars, format UDP/IP, will be available.

3.2 From 2022:

- Data of the Guadeloupe MRT, DACOTA, will be available.

3.3 From 2023:

- IRMA will not be used anymore by FWI. Any Assistance on IRMA will not be possible.
- MAC LLC radar data format will be discontinued.
- The FWI MRTs, DACOTA, will use format UDP/IP.

3.4 All IRMA installed in the East Caribbean islands use the MAC LLC format. From 2023, these IRMA will not be able to display DACOTA and French radar data.

3.5 Automatic coordination, AIDC, with other ANSP (Trinidad & Tobago, Barbados, St Lucia, etc.) could be used from 2023.

4. Suggested actions

4.1 The meeting is invited to:

- a) Take in consideration the end of IRMA exploitation from 2023;
- b) take in consideration the opportunity to use UDP/IP format of the French MSSR and MRT from 2022; and
- c) take in consideration the opportunity to do AIDC with FWI from 2023.