



Combined ASIOACG/10 and INSPIRE/6 Meeting, 2015

Madagascar, 17th to 19th November 2015

Agenda Item No. 5: Surveillance data sharing amongst ANSPs

RADAR and ADS-B data sharing in Antananarivo FIR

(Presented by ASECNA Madagascar)

Summary

The aeronautical industry is developing thanks to technological progresses. The use of technology provides several benefits to both the users and the ANSP such as safety, efficiency and regularity, efficiency, less workload, better overall view of the traffic... Data sharing is one way to enhance and to spread these benefits to the recipient ANSPs. Also it is an evidence of sustainable strong coordination and cooperation.

This paper presents an example and a brief overview of a regional cooperation in surveillance data sharing amongst ANSPs in the Antananarivo FIR.

1. INTRODUCTION :

- 1.1. ADS-C is operational in the Antananarivo FIR since 2003. Combined with CPDLC it offers surveillance and a new primary mean of communication for equipped aircrafts and they provide several benefits to ATC and to aircrafts such as safety enhancement, workload reduction, more accuracy in positioning, non-voice reports, less HF use and monitoring...
- 1.2. An ADS-B station (AS680) has been implemented at Antsiranana for the north part of the Antananarivo FIR surveillance, its range is about 250 NM coverage range but we have experienced farther more than 280NM. Another station was implemented between May to October 2012 at FSIA. It provided a good coverage in FSSS FIR and beyond in FMMM FIR. In La Reunion Island, four stations are available to cover the reunion TMA.
- 1.3. MSSR monopulse surveillance secondary Radar (RSM970S) has been implemented in Antananarivo in June 2014. It offers a range of 200NM surveillance around the station. In Comoros, it has been implemented in November 2013 and it provides surveillance in the Moroni TMA and beyond. The Moroni TMA is located at the north west of the Antananarivo FIR.

2. DISCUSSION:

- 2.1. The Antananarivo FIR surface is 4 million square kilometers. Each Radar station represents about 13% of the FMMM FIR, so as for ADS-B coverage.
- 2.2. From May 2012 to September 2012, Madagascar, Seychelles and La Reunion had experimented the use of ADS-B and shared data surveillance. It had permitted to cover about 32% of the Antananarivo FIR. From this period, La Reunion and Madagascar still continue ADS-B data sharing. VSAT and internet are used as support to allow the multicast data exchange.
- 2.3. Radar data sharing has started in August 2014 between Antananarivo and Comoros, their coverage permits the ACC to have better surveillance coverage in the UTAs around the two stations. Data are transmitted by VSAT network.
- 2.4. All the surveillance data sensors (ADS-C, ADS-B, Radar) are displayed to the ATC in different HMI on the TOPSKY ATM system.

3. ACTION BY THE MEETING :

- 3.1. The meeting is invited to :
 - a) Note the information contained in this paper,
 - b) Sustain and develop the surveillance data sharing amongst ANSPs.