



ICAO

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WORKING PAPER

ADS-B/LEG — WP/09
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**Automatic Dependent Surveillance – Broadcast (ADS-B) Implementation and Regulation Meeting
for the NAM/CAR/SAM Regions (ADS-B/LEG)
Mexico City, Mexico, 26 to 30 November 2018**

Agenda Item 2: Surveillance NAM/CAR Task Force

STATUS OF THE IMPLEMENTATION OF ADS-B IN THE SAM REGION
(Presented by the Secretariat)

EXECUTIVE SUMMARY	
This paper presents the status of the implementation of the ADS-B in the SAM Region.	
Action:	Suggested action is presented in Section 3.
<i>Strategic Objectives:</i>	<ul style="list-style-type: none">• Safety• Air Navigation Capacity and Efficiency
<i>References:</i>	<ul style="list-style-type: none">• Workshop/Seminar for the ADS-B implementation, Lima-Peru, 13 to 13 to 16 November, 2017.• Twenty Second Workshop/Meeting of the SAM Implementation Group (SAM/IG/22), Lima-Peru, 19 to 23 November, 2018.

1. Introduction

1.1 As a basis for the implementation of the ADS-B in the SAM Region, a CAR/SAM Unified Regional Surveillance Strategy, and a Technical and Operational Considerations Guide for the Implementation of the ADS-B in the SAM Region, have been prepared.

1.2 Additionally, a study on the Convenience and Feasibility of the Satellite ADS-B in a Regional Implementation has been presented during the Twenty Second Workshop/Meeting of the SAM Region Implementation Group (SAM/IG/ 22) of the SAM Region for the consideration of the States.

1.3 This paper presents the initiatives for the implementation of the ADS-B in the SAM Region.

2. Analysis

Implementation initiatives for terrestrial ADS-B

Argentina

2.1 Argentina has implemented ADS-B information exchange tests, using the REDDIG to receive information from ADS-B stations in Paraguay.

2.2 Likewise, it is managing the signing of a Memorandum of Understanding (MoU) with the satellite ADS-B provider to carry out tests.

Brazil

2.3 Brazil has developed an implementation of the ADS-B to support, mainly, the air operations in the TMA-Macaé, place of interest of the oil industry that is characterized by the movement of helicopters between the continent and the platforms or vessels anchored in that basin in the oceanic zone, for the transport of people and cargo.

2.4 To serve the Campos basin in the airspace corresponding to the Macaé-TMA, 6 ADS-B stations were installed: four stations on maritime platforms and two on the continent. This infrastructure, integrated with the current radar network that supports air traffic control in that region, allows surveillance throughout the TMA airspace at 500 feet and more. Figure 1 presents coverage in the TMA-Macaé area.

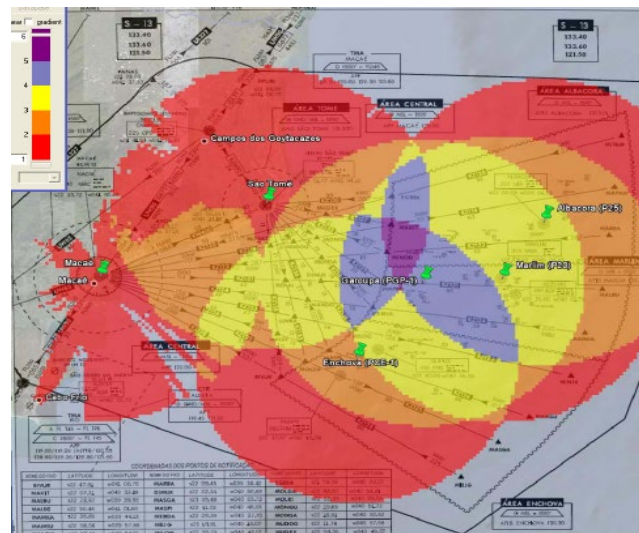


Figure 1 –MACAÉ- TMA in Brazil

2.5 Brazil is finalizing the procedures to sign a Memorandum of Understanding with the provider of the Satellite ADS-B, in order to carry out tests with the information that the company will provide in the first quarter of 2019.

Colombia

2.6 Colombia currently has ten (10) ADS-B stations installed, INDRA brand, which are operating in the different Regional Aeronautics, listed below: Antioquia (Cerro Santa Helena), Atlantic (San Andrés, Barranquilla, Montería, Cerro Bañaderos), Meta (Carimagua, San José del Guaviare, Mitú), Santander (Cerro Tasajero), and Valle (Tumaco).

2.7 Seven (7) Frequentis Comsoft ADS-B stations were acquired to be installed in Araracuara (Caquetá), Carepa (Antioquia), Puerto Leguizamo (Putumayo), Santana (Cauca), Leticia (Amazonas), Puerto Carreño (Vichada) and Puerto Inírida (Guainía), which will be installed and put into operation before the end of this year.

French Guiana

2.8 French Guiana has plans to implement in 2019, 5 ADS-B stations in the following locations: Rochambeau (airport), Mont-Matoury, Maripasoula, Mana and Saint Georges.

Guyana

2.9 Guyana has implemented a project to implement 5 ADS-B Skysurv stations. They were initially implanted 4 in the following locations: Port Kaituma (SYPK), Kamarang (SYKM), KAITEUR SYKA) and Annai (SYAN). Figure 2 presents the ADS-B coverage planned for Guyana

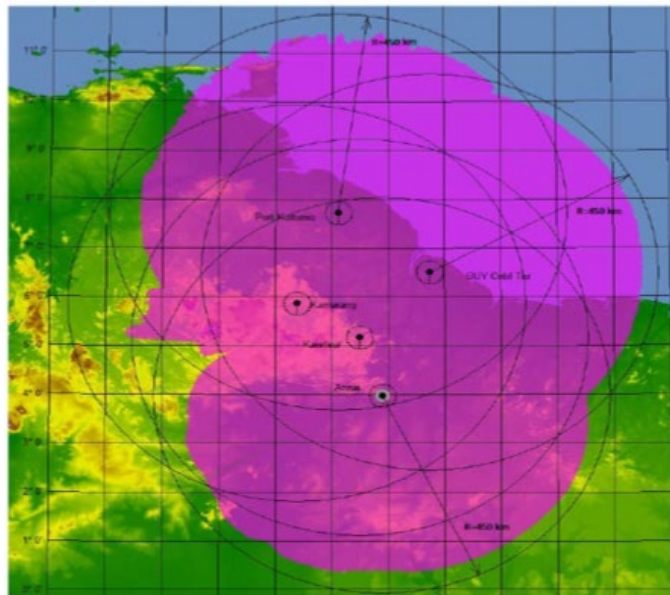


Figure 2 – ADS-B Coverage in Guyana for FL 300

Paraguay

2.10 Paraguay has implemented 6 ADS-B stations at the M. R. Alonso Unified Control Center, Guarani Airport, Concepción Airport, San Juan Baptista, Mariscal Estigarribia Airport and Bahia Negra Airport.

Satellite ADS-B implementation initiative*Study on the convenience and feasibility of the Satellite ADS-B in a regional implementation*

2.11 Pursuant to Project RLA/06/901 - *Assistance for the implementation of a regional ATM system considering the operational concept of ATM and the support of corresponding technology in communications, navigation and surveillance (CNS)*, and within the framework of its activities approved during the Eleventh Meeting of the Coordination Committee (RCC/11) held in Lima, Peru on October 5, 2017, it was considered necessary to prepare a study to analyze the convenience and feasibility of adopting the satellite ADS-B service at a regional level within the framework of the action plan for the implementation of surveillance, multilateration and ADS systems in the Region.

2.12 In this regard, the General Directorate of Civil Aviation of Ecuador was asked for the support of Mr. Iván Salas Garzón, CNS Specialist, for the preparation of this study in a mission held in Lima, Peru from April 23 to 27 of this year, where a preliminary study was prepared and presented at the SAM/IG/21 Meeting, carried out in Lima, from 21 to 25 May, 2018.

2.13 The Implementation Group approved the preliminary study and requested that the States provide more information for the conclusion of the study. In this regard, the CNS Specialist was assigned to conclude the study in the week of September 24 to 28, 2018, which was effectively fulfilled and the final product was presented at the SAM/IG 22 Meeting, held in Lima, from 19 to 23 November 23, 2018.

2.14 The Secretariat of the Meeting presented the Working Paper 17 (SAM/IG/22-WP/17) that can be accessed through the following link:

<https://www.icao.int/SAM/Pages/MeetingsDocumentation.aspx?m=2018-SAMIG22>

2.15 The study indicates the convenience and feasibility of a regional implementation of the Satellite ADS-B and points out recommendations for a possible regional implementation.

2.16 The SAM/IG/22 Meeting approved the study and requested the Secretariat to circulate the document for the knowledge of all the States of the Region, for the evaluation of those responsible for the planning of each country, with a view to supporting the discussions as to participate in a regional implementation at the next Meeting (SAM/IG/23), to be held in Salvador-Brazil, from May 20 to 24, 2019.

3. Suggested action

3.1 The Meeting is invited to:

- a) Take note of the information presented in this Working Paper;
- b) Review the information presented in the Working Paper 17 of the SAM/IG/22 Meeting (see link in item 2.14); and
- c) Agree on other actions deemed necessary.