



Agenda Item 3: Review of GREPECAS Programmes and Projects

3.3 Projects under the Automation and ATM Situational Awareness Programme (B0-RSEQ, B0-FICE, B0-SNET, B0-ASUR and B0-SURF)

IMPLEMENTATION OF ADS-B IN COLOMBIA

(Presented by Colombia)

SUMMARY	
The purpose of this paper is to present the study carried out by the Civil Aviation Authority of Colombia for the implementation of ADS-B. The regulation about the mandate of the ADS- B was published on March 7, 2016.	
References:	
<ul style="list-style-type: none">• ICAO Document 9924 “Aeronautics Surveillance Manual”.• Technical Operational considerations guidance for the ADS-B implementation in the SAM Region.• FAA Regulation.• Australian Regulation.	
Strategic Objectives	<i>A - Safety</i> <i>B - Air navigation capacity and efficiency</i>

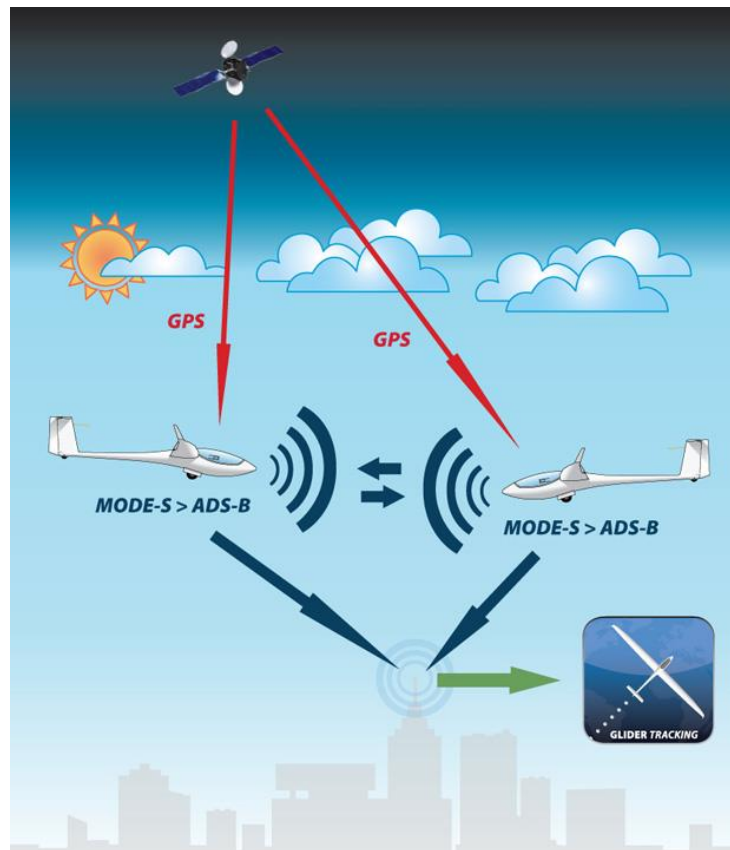
1. Introduction

1.1 The development of the aviation industry has aroused new systems improving operational safety. One of these systems is the ADS- B (Automatic Dependent Surveillance) which could replace the secondary radar with better accuracy, greater coverage and significantly lower costs of infrastructure. This surveillance system has already been successfully implemented since 2013 in Australia and in other states the regulation was already published for the implementation from 2020.

2. Discussion

2.1 In the ICAO Document 9924 "Aeronautical Surveillance Manual" ADS- B is defined as a radio equipment of automatic dependent surveillance, which transmits from the aircraft position (latitude, longitude and altitude), velocity, identification and other aircraft data. The SAM Implementation Group published the "Technical Considerations Operational Guide for implementation of ADS-B in the SAM Region", version 1.2, in May 2013. Likewise, the FAA published in January 2015 the regulation §91.225 "Automatic dependent Surveillance-Broadcast (ADS -B) Out equipment and use" and §91.227 "Automatic dependent Surveillance-Broadcast (ADS- B) Out equipment performance requirements".

2.2 The Civil Aviation Authority of Colombia conducted an evaluation of the documents and regulations mentioned in item 2.1, and initiated a plan of implementation of ADS-B. It was determined to implement only the 1090 MHz Extended Squitter (1090ES), unlike the FAA who implemented the 1090ES and the Universal Access Transceiver (UAT), operating at a frequency of 978 MHz. The Telecommunications Division has installed in a period of two years 11 ADS-B stations. Currently the Civil Aviation Authority of Colombia is acquiring ADS-B equipment for the inspection aircraft in order to verify and put in service the stations.



2.3 The ADS-B mandate from January 1st, 2020, was published in our regulation [RAC 4](#) paragraph 4.2.2.6. A sensitization meeting with Colombian operators was already carried out and other meetings are scheduled to monitor the installation of the equipment in aircraft, as this regulation applies to regular and no regular commercial aviation operators and general aviation.

3. **Conclusion**

3.1 ICAO SAM Office published a guide for the implementation of ADS-B in the SAM Region, however, few States have begun this process. Colombia has taken a step forward and is willing to work as ICAO deems appropriate in order to harmonize the SAM Region with this surveillance system.

4. **Suggested actions**

4.1. Invite SAM States to begin with the process of implementation of ADS-B using the experience of other States such as Australia, USA and now Colombia.

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