



*International Civil Aviation Organization*

CAR/SAM REGIONAL PLANNING AND EXECUTION GROUP (GREPECAS)

**Sixth CNS Committee Meeting of the GREPECAS ATM/CNS Subgroup  
(CNS/COMM/6)**

Santo Domingo, Dominican Republic, 30 June to 4 July 2008

CNS/COMM/6-IP/08

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- Agenda Item 3:           Surveillance systems developments**  
**3.2     Follow up to the surveillance systems planning/ implementation/  
       trials (ADS-C, ADS-B, Radar Mode S, multilateralation, etc.)**

**AUTOMATIC DEPENDENT SURVEILLANCE – BROADCAST (ADS-B)**

(Presented by United States)

**SUMMARY**

The United States (U.S.) Federal Aviation Administration (FAA) has awarded a national contract to provide Automatic Dependent Surveillance – Broadcast (ADS-B) services. States interested in implementing Surveillance Broadcast Services in the near future have the opportunity to request assistance from the United States to provide technical, programmatic, and contract management support for their procurement.

**1       INTRODUCTION**

1.1.     The National Airspace System (NAS) of the U.S. is under stress from increasing demand for air transportation that threatens to outpace the capacity of existing surveillance infrastructure.

1.2.     In order to address this problem and design a viable platform for future air traffic needs, the FAA, in cooperation with the U.S. Departments of Commerce, Defense, Homeland Security, and the National Aeronautics and Space Administration, launched an effort to align their resources to develop the Next Generation Air Transportation System, or NextGen.

**2       DISCUSSION**

2.1     An essential component of the NextGen integrated plan is a surveillance system that can increase safety, capacity, and efficiency of air travel. ADS-B technology has been identified as the surveillance solution that can meet these needs by providing critical flight information simultaneously to pilots and air traffic controllers. ADS-B transmits air traffic and flight information to aircraft, vehicles, and ground stations to improve situational awareness and provide unprecedented levels of service inside the cockpit and to air traffic control facilities.

2.2 The U.S. ADS-B program will be deploying communications, weather, and ADS-B stations on oil platforms in the Gulf of Mexico, beginning this year. Aircraft that fly between the Caribbean / South America (CAR/SAM) region and the U.S. already have some ADS-B capable equipment on board the aircraft that meets existing specifications. In addition, helicopters operating offshore will have the capability to receive instrument flight rules (IFR) surveillance services. The United States wishes to identify these airframes in preparation for an ADS-B service in the Gulf of Mexico.

2.3 ADS-B is a low-cost surveillance system with increased accuracy and faster update rate. ADS-B can provide the air navigation service providers with tools to increase capacity, specifically where legacy oceanic (time-based) separation is used today. Finally, there are air-to-air applications that can provide increased situational awareness and safety benefits.

2.4 At the first meeting of the GREPECAS ATM/CNS Subgroup – CNS Committee, Surveillance Task Force in June 2007, several members of the CAR/SAM region of the International Civil Aviation Organization expressed an interest in conducting an ADS-B partnership effort in the region. To determine the feasibility of using ADS-B as a surveillance tool in the CAR/SAM, which includes E-CAR, it is necessary to understand the performance gaps that could be mitigated and benefits possible with improved Surveillance and Broadcast Services. This might include collecting surveillance and infrastructure data, airspace use and demand information, and conducting alternatives definition and analysis.

2.5 The FAA sees benefits from future use of ADS-B and is ready to participate with States by providing Surveillance and Broadcast Services including technical, programmatic, and contract management for procuring surveillance services.

2.6 This paper outlines a process for States to follow if they would like to explore options for procuring surveillance services.

### 3 PROCESS

3.1 The State makes an official request via memorandum, e-mail, or fax to:  
Federal Aviation Administration  
Office of International Aviation, AWH-10  
800 Independence Ave. S.W.  
Washington D.C.  
(202) 267-5032 Fax

3.2 The FAA and the State develop a bilateral agreement that both parties sign.

3.3 A Timeline is established in accordance to the terms of the bilateral agreement.

3.4 Procurement of surveillance services begins.

### 4 ROLES AND RESPONSIBILITIES

4.1 The U.S. FAA will:

- Following request from a Civil Aviation Authority (CAA), negotiate and enter into a bilateral agreement;
- Provide analysis and technical assistance to explore Surveillance and Broadcast Services solutions and benefits; and

- Provide a service provider option for the participating State to procure surveillance services.

4.2 The interested CAA will:

- Establish a bilateral agreement with the U.S.;
- Provide ground-based surveillance technology;
- Provide infrastructure necessary to install ground stations in suitable geographic locations. The infrastructure will include: telecommunications, power, and equipment shelters;
- Collect and record surveillance data from aircraft transitioning, departing, or landing at various airports; and
- Participate in data reduction and analysis.

5 CONCLUSION

5.1 The FAA sees benefits from future use of ADS-B and is ready to participate with States by providing Surveillance and Broadcast Services including technical, programmatic, and contract management for procuring surveillance services.

5.2 The FAA will consider working with States on arrangements for procuring surveillance services.

5.3 Interested States should contact the FAA Office of International Aviation via letter, fax, or e-mail to express interest in procuring surveillance services. Additionally, interested States should identify point of contact information to begin discussions necessary to enter into a bilateral agreement with the FAA.