



ICAO

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North American, Central American and Caribbean Office

WORKING PAPER

ADS-B/LEG — WP/07
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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 6: ADS-B regulation considerations

DISCONTINUATION OF ADS-B OUT OPERATIONAL APPROVAL FOR U.S. OPERATORS

(Presented by the United States)

EXECUTIVE SUMMARY

This working paper describes why ADS-B OUT operational approval is not required and why FAA will discontinue issuing such operational approvals in the near future. This is consistent with ICAO APANPIRG/26 Conclusion 26/41 that States not require operational approval for the operational use of ADS-B OUT by air traffic control (ATC), as well as the observation that there is no safety benefit derived from operational approval. ADS-B equipment monitoring is more effective.

Action:	Suggested actions are presented in Section 4.
<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">• FAA Advisor Circular 90-114A, Change 1• [E]TSO-C195b, which invokes DO-317B/ED-194A

1. Introduction

1.1 Although the FAA has issued and currently issues ADS-B OUT operational approval for U.S.-registered operators upon request, this paper explains why the FAA views this as unnecessary and notifies the meeting that by the end of 2018, the FAA will no longer issue ADS-B OUT operational approvals for U.S.-registered operators.

2. Discussion

2.1 Origin of Operational Approval Requirement

2.1.1 In 2010, the ICAO Asia/Pacific Air Navigation Planning and Implementation Regional work Group (APANPIRG) adopted conclusion 21/39, which proposed that the aircraft operator must have the relevant operational approval from the State of Registry. To comply with this requirement, a number of ICAO Asia/Pacific States have required State of Registry operational approvals in order to receive ADS-B-based surveillance services in their airspace. Since then, to ensure that U.S. operators can operate in these regions, the FAA has maintained and issued an operational approval in the form of an operations specification (OpSpec) to requesting U.S. operators.

2.2 In September 2015, member states adopted APANPIRG conclusions 26/41 and 26/42 which remove requirements for operational approval. The U.S. fully supported those conclusions.

2.3 The U.S. has determined there is no practical safety or operational benefits derived to issue and maintain the operations specification. There exist other, more effective, means to prevent negative operational or safety impacts.

2.4 Justification for No Operational Approval Requirement

2.4.1 The specific justifications for discontinuing issuance of operational approval for ADS-B OUT are:

- Airworthiness approval and certification of the installed equipment are required; this is the first safety barrier.
- Continuous monitoring of equipment performance has proven to be the most effective means of oversight. The best source of performance information comes from monitoring the dynamic output of the avionics itself as received by air navigation service provider (ANSP) systems.
- Where ADS-B avionics performance may have a negative safety impact on ATC services, identified aircraft can be added to an automated no-services or exclusion list to prevent processing of erroneous data by an ANSP system. Many ANSPs, including the FAA, have implemented this exclusion capability to mitigate safety hazards posed to ATC services by ADS-B OUT transmitting hazardous or misleading information.
- ADS-B IN applications, which incorporate ACAS validation techniques, will mitigate incorrect position reporting errors. See FAA TSO-C195b, which invokes RTCA DO-317B / EUROCAE ED-194A.
- Once installed and properly operating, ADS-B OUT requires no additional operational training or additional operational procedures beyond those of a Mode S transponder and GNSS receiver.

- States, including the U.S., should still require operational approval to conduct certain ADS-B IN operations such as CDTI-Assisted Visual Separation (CAVS), In-Trail Procedure (ITP) and Interval Management (IM), as such applications require specific operational training and procedures. See FAA Advisor Circular 90-114A, Change 1 (or subsequent versions).
- The FAA currently maintains over 1,300 OpSpecs and the number continues to rise. Requiring operational approval for ADS-B OUT places a burden on the regulator and operator alike.
- The requirement for operational approval causes confusion among U.S. operators, since the FAA does not require operational approval for ADS-B operations in the U.S. National Airspace System, including for operations after January 1, 2020.
- The FAA's research of States' air traffic publications and circulars, as well as direct inquiries, could find no State that continues to require that an operator carry State of Registry operational approval.

2.5 By the end of 2018, the FAA will no longer issue an OpSpec to U.S.-registered operators for receiving ATC services using ADS-B OUT.

3. Conclusion

3.1 This paper described why ADS-B OUT operational approval is not required and why FAA will discontinue issuing such operational approvals in the near future. ADS-B equipment monitoring is more effective and should be considered where ADS-B is used for ATC services.

4. Suggested actions

4.1 States are invited to:

- a) fully consider this information when determining what ADS-B regulations are necessary.