



ICAO

International Civil Aviation Organization
North American, Central American and Caribbean Office

WORKING PAPER

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ADS-B/OUT/M — WP/15
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**Automatic Dependent Surveillance – Broadcast OUT Implementation Meeting for the
NAM/CAR Regions (ADS-B/OUT/M)
Ottawa, Canada, 21-23 August 2019**

Agenda Item 5: Other Business

LATAM/CAR CNS/ATM HARMONIZATION

(Presented by IATA)

EXECUTIVE SUMMARY	
This Working Paper provides an overview of the different procedures, methodologies and standards used across the Americas, when implementing or applying the same technology or procedure.	
Action:	Suggested action is presented in Section 4.
<i>Strategic Objectives:</i>	<ul style="list-style-type: none">• Safety• Air Navigation Capacity and Efficiency• Economic Development of Air Transport
<i>References:</i>	<ul style="list-style-type: none">• ICAO Doc. 9750 GANP• ICAO Doc. 9854• ICAO Doc. 9883

1. Introduction

1.1 During the last years, the different CNS and ATM implementations in the region have taken different directions, according to the traffic demand, operational needs, Air navigation services provider (ANSP)/State budget availability, strategies, etc.

1.2 These differences have created an environment that differs from the seamless and interoperable goals described in the ICAO provisions increasing the complexity when operators plan their flights across airspaces/flight information regions (FIRs).

2 Differences in the region

2.1 When implementing ADS-B:

2.1.1 ***In publication:*** Some States have published a comprehensive description of the use and requirements with ADS-B, the minimum performance required, the reason and objectives, contingencies, operational targets, guidance for airlines, etc. But in some cases, only the changes in few lines on the Aeronautical information Publications (AIP).

2.1.2 ***In application:*** Some States recognize and consider the ADS-B a primary and sole surveillance source to provide radar like separation and in some cases it's only for contingency when the secondary radar fails.

2.1.3 ***In operation:*** In some ANSPs the separation minima that could be achieved with Do-260B is 3NM and in some 3 times or more (up to 6 times) the minimum specified in the procedures for air navigation services - Air Traffic Management (PANS ATM) document.

2.2 Other differences of examples that we see and that requires harmonization in the region are:

- ICAO Avionics mandates (TCAS 7.1, TCAS X, ULB, etc.)
- Radar separation (3NM, 5NM, 8NM, 10NM, 20NM) – for the same conditions
- Procedural separation (10NM, 20NM, 40NM, 80NM/10MIN) – for the same conditions
- FPLs processes – for the same conditions and equipment
- ATFM (Slots APTO vs Slots ATC – capacity estimations – TMIs, etc.) – for similar conditions
- AIDC (interoperable?)
- ICAO Phraseology (XXXXX via.)
- OPS approval for PBN
- Coordinated action plans between regulators and Air Navigation Services Providers.
- BADA or A/C performance database updates (performance or type of A/C)
- Coordinated neighboring waypoint changes (FPLs errors in ATM system)
- Others.

3 Proposals

3.1 Having a regional seamless implementation for all the previous mentioned points might be unrealistic but some of the implementations could be targeted to have a positive impact without the need of more technology or more CNS investment, until what is available today is no longer capable to provide benefits.

3.2 A more realistic approach could be reached if we use the homogenous traffic flow area, in order to avoid impacting airspaces where the operational needs are not at the point where it requires a new enhancement. This could be reinforced by coordinated decommission/transmission plan in a timely manner in the region (ex. PSR for ADS-B in the homogeneous area 1A to have 5NM separation enroute).

3.3 A regional harmonized concept of operations is required in order to identify the needs and requirements where the CNS regional implementation groups could target their strategies and avoid having an **underused technology** by the ATM teams (from the examples in 2.2, radar separation, ADS-B implementation, AMHS – for FPLs, VHF communications, ATM system)

3.4 Before any CNS enhancement in the region, there should be at least:

- Harmonization or regulations in the region to attend the different performance-based requirements (*Ex. standard publication and requirements for DO-260B or to use a separation minimum under the same conditions*).
- Harmonized ANSP agreements in performance on how to use X technology under the same conditions (*Ex. Where coverage VHF + ADS-B = radar like separation*)

4 Suggested Action

4.1 The Meeting is invited to:

- a) review the information provided on this Working Paper;
- b) take action in order to harmonize the implementations in the region to have a seamless and interoperable airspace per homogeneous traffic areas; and
- c) any order proper action.