

*International Civil Aviation Organization*



**AUTOMATIC DEPENDENT SURVEILLANCE –  
BROADCAST SEMINAR AND ELEVENTH MEETING  
OF AUTOMATIC DEPENDENT SURVEILLANCE –  
BROADCAST (ADS-B) STUDY AND  
IMPLEMENTATION TASK FORCE (ADS-B SITF/11)**



Jeju, Republic of Korea, 24-27 April 2012

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**Agenda Item 2: Review the outcome of the APANPIRG/22 on ADS-B SITF/10 and  
SEA/BOB ADS-B WG/7 Meetings**

**APANPIRG/22 OUTCOMES – ATM PERSPECTIVE**

(Presented by the Secretariat)

**SUMMARY**

This paper presents the outcomes from the Twenty-Second Meeting of the Asia/Pacific Air Navigation Planning and Implementation Regional Group (APANPIRG/22, 5 - 9 September 2011) relevant to the ADS-B SI Task Force.

This paper relates to –

**Strategic Objectives:**

**A: Safety** – Enhance global civil aviation safety

**C: Environmental Protection and Sustainable Development of Air Transport** – Foster harmonized and economically viable development of international civil aviation that does not unduly harm the environment

**1. INTRODUCTION**

1.1 The 22<sup>nd</sup> Meeting of the Asia/Pacific Air Navigation Planning and Implementation Regional Group (APANPIRG/22, 5-9 September 2011) was held in Bangkok, Thailand.

**2. DISCUSSION**

Future APAC Airspace Concept of Operations

2.1 IATA had presented a future Concept of Operations at the ATM/AIS/SAR/SG/21 meeting (Bangkok, 27 June – 1 July 2011), which was intended as a planning tool for ANSP and airlines. The Concept was not intended to compel States, although this framework was expected be

followed unless there were compelling reasons to do otherwise. The Concept was likely to be iterative, although it was written in a generic fashion to minimize the need for updates.

2.2 APANPIRG/22 agreed to the following Conclusion:

***Conclusion 22/7 – Asia/Pacific Air Navigation Concept of Operations***

*That, the Asia/Pacific Air Navigation Concept of Operations provided in Appendix F to the Report on Agenda Item 3.2 be adopted and published on the APAC website as regional guidance material for navigation facility, service and avionics equipage planning.*

2.3 The following excerpts from the Concept of Operation were particularly germane to the BOB-SEA ADS-B SI/TF:

- **Surveillance:** in areas where the provision of direct ATS surveillance is possible, ATC separation must be based on these surveillance systems (i.e. radar, multilateration and ADS-B). In areas where direct surveillance is not possible, ADS-C surveillance (and associated CPDLC capability) must be enabled providing reduced horizontal separations (i.e. RNP4 30/30 and planning for RNP2).
- Establishing equipage mandates requiring operators to equip with a specific technology is an acceptable concept provided the timeline for compliance is developed after due consultation and the benefits in equipage are clearly identified and agreed.
- **Safety Nets:** powered aeroplanes operating above FL195 and within terminal controlled airspace (CTA and CTR) associated with major international aerodrome must have an operable mode S transponder, ACAS (airborne collision avoidance system), and the ATS surveillance systems must be fitted with STCA (Short Term Conflict Alert) and MSAW (Minimum Safe Altitude Warning).

ADS-B Mandate

2.4 The ATM/AIS/SAR/SG/21 discussed the matter of priority for ADS-B aircraft, noting the work of the ADS-B Study and Implementation Task Force (ADS-B SITF/10). Previous APANPIRG ADS-B Conclusions had dealt with aircraft equipage but not the prioritization of ADS-B aircraft in airspace designated for the purpose of ADS-B.

2.5 The Sub-Group developed a Draft Conclusion, which enabled a mandate for the use of ADS-B equipped aircraft and priority for ADS-B equipped aircraft in designated airspace, if the State desired such a requirement (note: this would not compel a State to designate ADS-B airspace).

2.6 APANPIRG/22 agreed to the following Conclusion:

***Conclusion 22/8 – ADS-B Airspace Mandate***

*That, States intending to implement ADS-B based surveillance services may designate portions of airspace within their area of responsibility:*

- a) *mandate the carriage and use of ADS-B equipment; or*
- b) *provide priority for access to such airspace for aircraft with operative ADS-B as equipment over those aircraft not operating ADS-B equipment.*

2.7 The Bay of Bengal ATM Coordination Group (BBACG) agreed to an IATA proposal of ‘connector’ routes in the Mumbai FIR as a first stage towards User Preferred Routes (UPR). Seamless ATM initiatives promoted discussion on the need for BBACG to increase its scope to include Major Traffic Flows AR-1 and AR-4. As a result, the BBACG agreed to a change in its Terms of Reference to include the AR-1 and AR-4 MTF. The Sub-Group noted this, and after some discussion preferred the new name South Asia Indian Ocean ATM Coordination Group.

2.8 The APANPIRG/22 meeting agreed to the following Conclusion and Decision:

***Conclusion 22/5 – Major Traffic Flow (New)***

*That, the traffic flow between the Middle East airports such as Dubai and Abu Dhabi to Australasian or South East Asian airports such as Sydney and Singapore be recognized as APAC Major Traffic Flow AR-10 and recommended as an amendment to the Global Air Navigation Plan (Doc 9750).*

***Decision 22/6 – Establishment of SAIOACG***

*That, the BBACG be renamed as the South Asia Indian Ocean ATM Coordination Group – SAIOACG to cover a geographical area which includes Major Traffic Flows AR-1, AR-4 and AR-10, and that the TOR as appended at Appendix E to Report on Agenda item 3.2 be adopted.*

2.9 The establishment of the SAIOACG created a cohesive body that can assist the BOB-SEA ADS-B SI/WG to plan and implement ADS-B systems by establishing ATM requirements for these systems. The Bay of Bengal is clearly a challenge but already India was moving forward with plans for ADS-B at Port Blair, and there had been discussion about sea-borne ADS-B platforms which may allow for the delivery of seamless ADS-B services across the oceanic area.

**3. ACTION BY THE MEETING**

3.1 The meeting is invited to:

- a) note the information contained in this paper; and
- b) discuss any relevant matters as appropriate.

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