



International Civil Aviation Organization

**FIFTH MEETING OF THE SOUTHEAST ASIA
SUB-REGIONAL ADS-B IMPLEMENTATION
WORKING GROUP (SEA ADS-B WG/5)**



Jakarta, Indonesia, 21 – 22 January 2010

Agenda Item 5: Review of sub-regional implementation plan

- Near-term implementation plan, including operational plan

ADS-B DATA SHARING: INDONESIA-AUSTRALIA

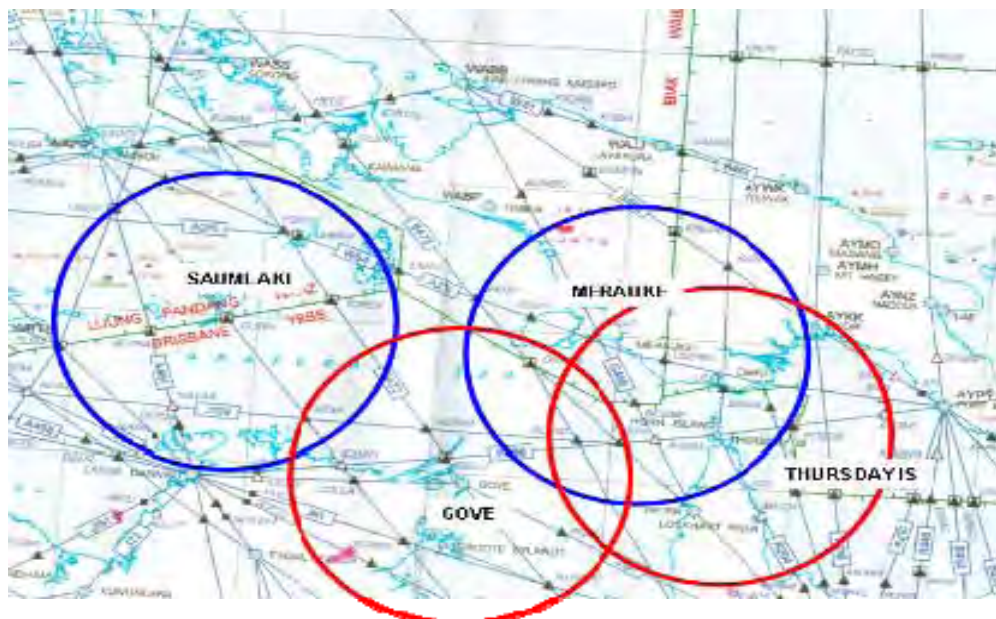
(Presented by Australia and Indonesia)

SUMMARY

The purpose of this paper is to inform SEA ADS-B WG/5 that Australia and Indonesia are progressing with the plan to share ADS-B during 2010. The meeting is invited to support the continued execution of this plan and development of future phases.

1 Introduction

- 1.1 At **SEA ADS-B WG/4 (WP6)** Australia and Indonesia presented a “strawman” proposal for a data sharing project to improve FIR boundary safety and efficiency.
- 1.2 Phase 1 involves Australia providing data from Gove and Thursday Island Ground stations and Indonesia providing data from Merauke and Saumlaki.



2 Australian Approval

2.1 Airservices Australia has approved Phase 1 and funds have been made available for development and deployment of the ADS-B filter. Further work will commence as soon as the data sharing agreement is signed between Indonesia and Australia.

3 Indonesian Approval

3.1 Indonesia's DGCA has also approved Phase 1 and an ADS-B Filter has been installed in MAATS, Makassar. The ADS-B Filter has been tested and integrated into the ATC System in MAATS (Eurocat-X). The tests were conducted using ADS-B data from a location in Indonesia to simulate Australian sites and the result were successful.

4 Current status

4.1 All 4 ADS-B ground stations are installed and operating. The following shows the overlap achieved by these ground stations already.

4.2 A satellite datalink will be used to exchange the ADS-B data using multicast IF and using Asterix Category 21 Version 0.23.



4.3 Over several days, the ground stations have been able to receive ADS-B services in Australia.

4.4 International flights entering Indonesia can be monitored by the Controller in MAATS Indonesia.

4.5 A draft ADS-B agreement has been developed and is in the final stages of co-ordination before signature by Australia and Indonesia. The agreement is based in large part on the sample agreement developed by **SEA ADS-B WG**.

4.6 Both Indonesia and Australia have developed and are in the process of testing ADS-B filters to control and manage data flow under the data sharing agreement.

4.7 The planned schedule is now as follows:

	Milestone	Planned date
1.	Signature of Data sharing agreement	TBD because Indonesia needs approval from Foreign and Defence Ministries
2.	Complete Inter FIR datalink installed for testing	February 2010
3.	Completion of data link testing:	March 2010
4.	Use of ADS-B data for situational awareness by ATC	May 2010 for Australia
5.	Use of ADS-B data for monitoring by ATC	May 2010 for Indonesia
6.	Use of ADS-B data for situational awareness by ATC	2011 for Indonesia

5 Project Objectives

5.1 The project intends to share ADS-B data to provide situational awareness and to support safety nets. In Phase 1 it is NOT proposed to use the data for the application of 5 Nm separation standards. The data will be used to support existing procedural separation standards. The expected project outcomes are :

- reduced numbers of safety incidents at the FIR boundary
- earlier detection of ATC and pilot errors (co-ordination errors, incorrect Flight level etc)
- increased support and confidence in data sharing to allow introduction of radar-like separation at the FIR boundary in a future phase.
- technical & operational analysis of data in preparation for future application of radar like separation services

6 Next Phases

6.1 It is hoped that the project will extend to Phase 1B and possibly phase 2. These future phases will add more sites and extend the operational use of ADS-B at the boundary.

6.2 The current plan is to make phase 1A operational before requesting approval to commence phase 1B.

6.3 Phase 1B - This phase, if approved, would comprise the sharing of 3 sites from Indonesia and 3 sites from Australia as follows :

Australia : Darwin, Broome, Doongan
Indonesia : Waingapu, Kintamani, Kupang

ADS-B ground stations are already operating at all these sites except Darwin.

6.4 Phase 2 - This phase, if approved, could transition to full radar-like separation when both parties have in place suitable ATC infrastructure such as :

- ❖ duplicated data communication capability
- ❖ DCPC for both parties at the boundary

- ❖ revised boundary separation standards and MOUs

- ❖ Policies, regulations and extensive training

7 Recommendation

It is recommended that

- 7.1 The meeting note that the proposed plan presented at SEA WG/4 has been approved by both Indonesian and Australia organisations and is progressing well
- 7.2 The meeting note that the benefits of data sharing will only be provided for ADS-B equipped aircraft.
- 7.3 The meeting support the continued execution of this plan and development of future phases.
