



International Civil Aviation Organization

**Third Meeting of Air Traffic Management Sub Group
(ATM-SG3) of APANPIRG**

Bangkok, Thailand, 03 - 07 August 2015

Agenda Item 4: ATM Systems (Modernization, Seamless ATM, CNS, ATFM)

ADS-B Implementation & Data Sharing

(Presented by Indonesia)

SUMMARY

This paper presents the ADS-B implementation in Indonesia and encourages to the neighbouring countries to perform the ADS-B data sharing with Indonesia.

1. INTRODUCTION

1.1. Accordance with the AIRAC AIP supplement number 08/15 dated 30th April 2015, started from 25th June 2015, Indonesia has implemented the ADS-B for ATS surveillance separation, in particular level.

The advantage of the ADS-B implementation for ATS surveillance separation has been perceived by Controllers, especially in enhancing safety and capacity.

1.2. Indonesia has installed 30 ADS-B ground stations and covering 90% of Indonesia airspace (Jakarta FIR & Ujung Pandang FIR) and some boundary areas. This allows Indonesia to perform the ADS-B data collaboration with neighbouring countries (ATSUs).

2. DISCUSSION

2.1. ADS-B Implementation

ADS-B for ATS surveillance separation has been implemented in Jakarta FIR and Ujung Pandang FIR from FL290 to FL460, within ADS-B coverage. Until 31st December 2017, carriage of ADS-B equipment at that level is optional. However within ADS-B (only) surveillance coverage, priority will be given to aircraft which ADS-B equipped over non ADS-B equipped aircraft.

Started from 1st January 2018, all aircraft flying within Jakarta FIR and Ujung Pandang FIR from FL290 and above must carry serviceable ADS-B equipment.

2.2. ADS-B Data Sharing

2.2.1. The ADS-B data sharing between neighbouring countries (ATSUs) are needed, in order to improve safety, capacity and efficiency, especially for cross border flights.

2.2.2. In all regions of Indonesia, there are 9 ADS-B ground stations in the western part of Indonesia (Aceh, Medan, Matak, Natuna, Pekanbaru, Pontianak, Palembang, Jakarta and Cilacap) have been integrated with ATC System in Jakarta ATS Center (Jakarta FIR), and 21 ADS-B ground stations in the eastern part of Indonesia (Merauke, Timika, Ambon, Biak, Sorong, Galela, Manado, Palu, Kendari, Malino, Tarakan, Balikpapan, Pangkalan Bun, Banjarmasin, Surabaya, Semarang, Kintamani, Waingapu, Alor, Kupang and Saumlaki) have been integrated with ATC System in Makassar ATS Center (Ujung Pandang FIR).



Figure 1. ADS-B Integration in Indonesia

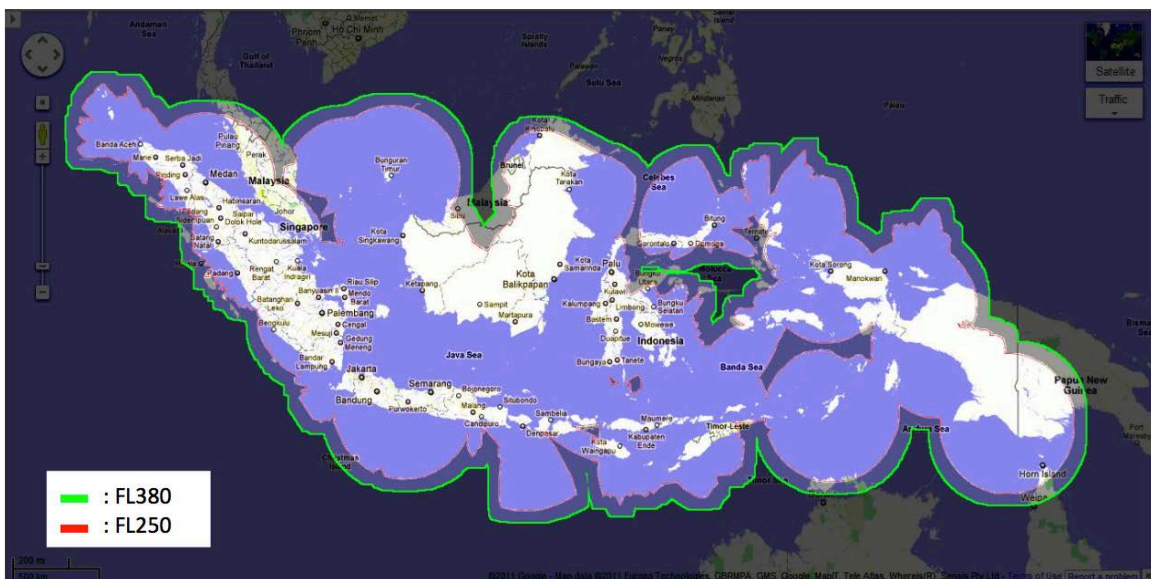


Figure 2. ADS-B Coverage Simulation

Considering the coverage of ADS-B including in the boundary region, allowing Indonesia to conduct the data sharing with neighbouring ATS unit. This is in line with the result of the APANPIRG/15 that *decide to encourage neighbouring countries to*

perform ADS-B data collaboration and to build mechanisms and infrastructure needed to achieve that goal.

2.2.3. Indonesia and Australia had started to conduct the ADS-B data sharing in 2010. And now, both countries have shared 12 ADS-B ground stations, 8 from Indonesia (Merauke, Saumlaki, Kupang, Kintamani, Waingapu, Alor, Semarang & Timika) and 4 from Australia (Broome, Doongan, Gove and Thursday Island).

2.2.4. Indonesia shares ADS-B data for Singapore from Natuna and Matak island, and Singapore transmits ADS-B data from Singapore.

2.3. There are possibilities for ADS-B sharing between Indonesia and Papua New Guinea, Philippines, Malaysia and India.

3. ACTION BY THE MEETING

The meeting invite to:

- a) note the content of this working paper;
- b) perform the ADS-B data sharing with Indonesia, and arrange the schedule if needed;
- c) discuss other relevant matters as appropriate.
