



International Civil Aviation Organization

**THE TENTH MEETING OF THE SOUTH EAST
ASIA AND BAY OF BENGAL SUB-REGIONAL
ADS-B IMPLEMENTATION WORKING GROUP
(SEA/BOB ADS-B WG/10)**



Singapore, 11 - 13 November 2014

Agenda Item 3: Review implementation and co-ordination activities and sub-regional implementation plans

BENEFITS OF CROSS BORDER ADS-B DATA SHARING

(Presented by Singapore)

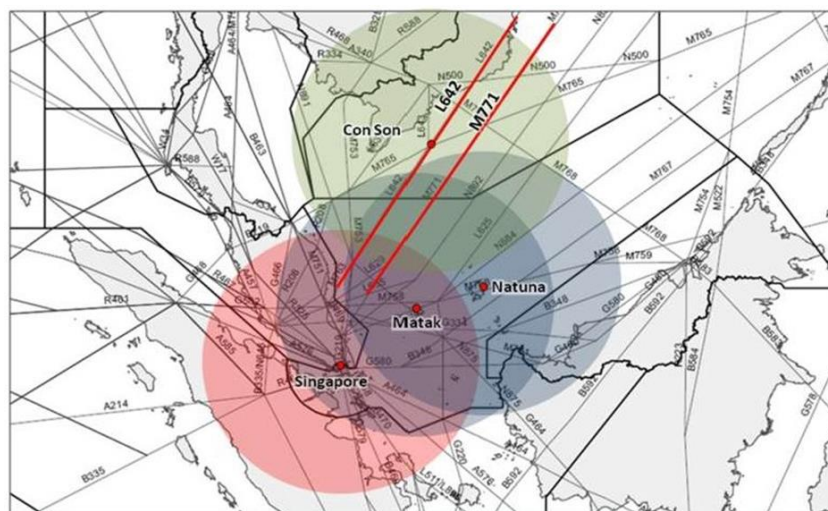
SUMMARY

This paper shares with the Working Group the benefits enjoyed by the aviation community following the ADS-B data sharing between Indonesia, Singapore and Viet Nam.

1. Introduction

1.1 Indonesia signed the collaboration agreement with Singapore in Dec 2010. In Nov 2011, Singapore received the ADS-B data from Matak and Natuna ADS-B stations and Indonesia received the ADS-B data from Singapore ADS-B station. In the same month, Singapore signed the collaboration agreement with Viet Nam in Nov 2011. In Aug 2013, Singapore received the ADS-B data from Con Son. Vietnam also shared the VHF facilities at Con Son with Singapore.

1.2 Using the facilities provided by Indonesia and Vietnam, Singapore commenced ADS-B operations on 12 Dec 2013 by reducing the separation along major routes such as L642 and M771 from between 50NM to 80NM down to 40NM. On 24 Jul 2014, separation is reduced to 30NM. There are plans to further reduce the separation to 20NM by 2015.



1.3 It has been about almost one year since the commencement of ADS-B operations. This paper provides some insights on the benefits brought about by the above ADS-B data sharing collaborations.

2. Discussions

2.1 The introduction of ADS-B has provided improved situation awareness for ATC. The controller is able to detect unreported deviations and provide better traffic information during contingency situations.

2.2 With the implementation of ADS-B, longitudinal separation between suitably equipped aircraft has been reduced from 50NM to 30NM. IATA, with its member airlines, has supported the implementation of ADS-B in the South China Sea (SCS) region to improve ATS route capacity. More aircraft is assigned their optimum heights. Less greenhouse gases were emitted due to better fuel efficiency.

2.3 Based on a sample month in September 2014, the percentage of aircraft operating in ADS-B airspace is 87%; the remainder 13% operates at **FL290 or below**. These who operated outside of ADS-B airspace are either non-equipped aircraft or aircraft with operational limitations. These comprises mostly of General/Business Aviation operators and also commercial carriers.

2.4 Through the engagement with operators when issues are detected, we are able to develop a better understanding of issues faced by operators and the mitigation measures to adopt.

3. Action by the meeting

3.1 The meeting is invited to:

- a) note improvements made to operations, resulting from the ADS-B data sharing;
- b) discuss any potential issues and the possibility of quantifying the benefits, which may require inputs from other ANSPs and IATA.
