



International Civil Aviation Organization

**FIFTEENTH MEETING OF THE ADS-B STUDY AND IMPLEMENTATION
TASK FORCE (ADS-B SITF/15)**

Bangkok, Thailand, 18 - 20 April 2016

**Agenda Item 4: Review States' activities and interregional issues on implementation of
ADS-B and multilateralism**

ADS-B COLLABORATION IN SOUTH CHINA SEA REGION

(Presented by the Singapore)

SUMMARY

This paper updates the Task Force on the developments of ADS-B collaborations in the South China Sea region.

1. Introduction

1.1 In the South China Sea region, procedural separation used to be applied onto several air routes where surveillance or DCPC gaps are present. ADS-B collaboration, which involves the sharing of ADS-B data and the provision of access to VHF radio facilities, can help to cover these surveillance and DCPC gaps.

1.2 ICAO, through its ADS-B Study and Implementation Task Force (ADS-B SITF) and the Southeast Asia / Bay of Bengal ADS-B Working Group (SEA/BOB ADS-B WG), together with Civil Air Navigation Services Organization (CANSO) and International Air Transport Association (IATA) encourage ADS-B collaboration among States.

2. Reduction of Separation

2.1 In the South China Sea region, the surveillance and DCPC gaps on some of the major trunk routes were covered following the collaboration between Indonesia and Singapore and between Singapore and Viet Nam. These trunk routes include ATS routes L642, M771 and N892. Since 12 December 2013, part of Singapore FIR covering L642, M771 and N892 was mandated as ADS-B airspace. Instead of procedural separation, 40NM longitudinal separation was initially applied on L642, M771 and N892. In June 2014, the separation was further reduced to 30NM. (See diagrams below)

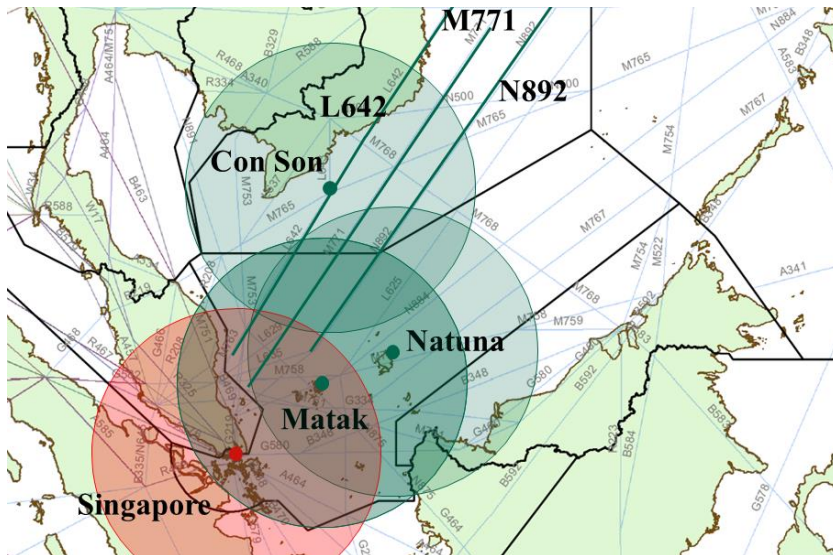


Figure 1: Theoretical coverage of ADS-B sensors

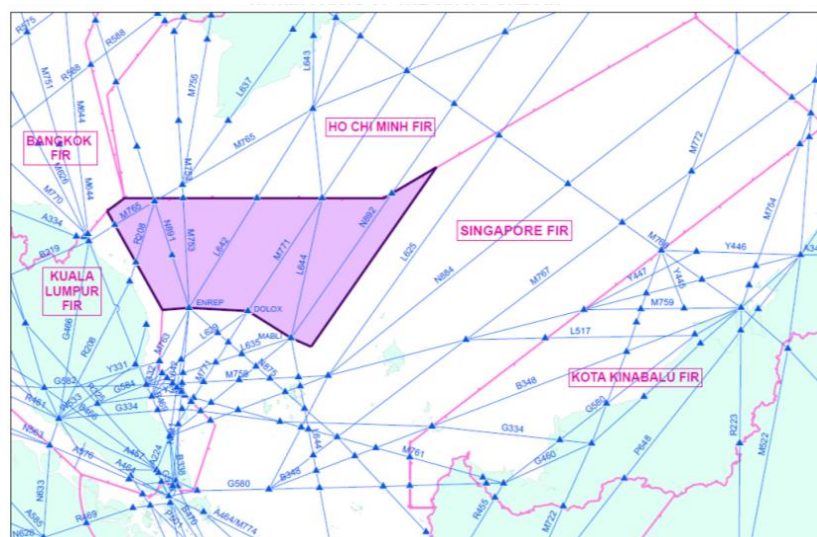


Figure 2: ADS-B mandated airspace

2.2 To further reduce the longitudinal separation to 20NM for L642, M771 and N892, a joint operational trial with Viet Nam may be conducted to assess the operational impact to Ho Chi Minh FIR, and beyond, prior to eventual implementation of the reduced separation.

2.3 Singapore will also work with Viet Nam and Indonesia to reduce the separation on other routes in the South China Seas area, such as L625 and M758, that have ADS-B and VHF coverage.



3.1 Recognizing the benefits of ADS-B collaboration and riding on the momentum of successful implementations, the Philippines and Singapore signed an ADS-B collaboration agreement in October 2015. This collaboration will help to cover part of the surveillance and DCPC gaps on the north eastern portion of ATS routes N884 and M767 (See diagram below). The implementation is expected to be completed in 2017.



3.3 Viet Nam and Singapore are working on further collaboration to enhance the existing ADS-B coverage.

4. Conclusion

4.1 The meeting is invited to:

- a) note the progress of the ADS-B collaborations among States in the South China Sea region with the aim of enhancing safety, capacity and efficiency of air traffic services in the region; and
- b) urge States for ADS-B collaborations to further enhance existing surveillance and DCPC coverage.
