

International Civil Aviation Organization



**AUTOMATIC DEPENDENT
SURVEILLANCE – BROADCAST SEMINAR
AND FOURTEENTH MEETING OF
AUTOMATIC DEPENDENT
SURVEILLANCE – BROADCAST (ADS-B)
STUDY AND IMPLEMENTATION TASK
FORCE (ADS-B SITF/14)**



Christchurch, New Zealand, 14 – 17 April 2015

Agenda Item 5: Development of Asia/Pacific Regional ADS-B implementation plan and sub-regional ADS-B implementation plan – Update on near-term implementation plan in South China Sea

UPDATE ON THE ADS-B COLLABORATION PROJECT IN THE SOUTH CHINA SEA

(Presented by Singapore)

SUMMARY

This paper updates the Task Force on the progress of the collaborative efforts of Indonesia, Singapore and Viet Nam to achieve a seamless ADS-B surveillance coverage over a portion of the South China Sea area with the aim of improving safety, capacity and efficiency, as well as the way forward.

1. Introduction

1.1 Under the initial phase of the ADS-B collaboration project over the South China Sea area:

- a) Singapore would share its ADS-B data from Singapore with Indonesia;
- b) Indonesia would share its ADS-B data from Matak and Natuna with Singapore;
- c) Indonesia would provide access of the VHF radio facilities at Matak and Natuna to Singapore for air traffic services (ATS);
- d) Viet Nam would share its ADS-B data from Con Son with Singapore; and
- e) Viet Nam would provide access of the VHF radio facilities at Con Son to Singapore for ATS.

1.2 The purpose of the collaboration is to provide surveillance and DCPC coverage over a portion of the South China Sea area including two main ATS routes L642 and M771.

1.3 At the ADS-B SITF/13 meeting held in April 2014, the following updates were provided:

- a) Singapore had received ADS-B data from the Indonesian islands of Matak and Natuna while Indonesia received ADS-B data from Singapore. The implementation of DCPC services from Matak and Natuna were on going.
- b) Singapore had received ADS-B data from Con Son. The VHF radio sets at Con Son for DCPC services have also been commissioned and used operationally for ATS in Singapore FIR.

1.4 This paper serves to update the meeting on the significant progress since then and the way forward.

2. Discussions

Technical Implementation

2.1 Following the last update, the DCPC services at Matak and Natuna were commissioned in end 2014.

2.2 The commissioning of the DCPC services at Matak and Natuna marks the end of the initial Phase of the South China Sea ADS-B collaboration project.

Operationalization

2.3 The implementation of ADS-B under the collaboration project extended surveillance coverage on ATS routes L642 and M771 along with M753, N892, L644 and N891. See **Figure 1** of **Annex A**. Singapore and Viet Nam have agreed on a progressive phased approach to reduce longitudinal separation to allow airspace users to reap the optimum benefits of ADS-B on the respective ATS routes. The following phased approach to reduce longitudinal separation, for aircraft that are suitably equipped, has been adopted;

- a) From the previous 50 NM to 40 NM on 12 December 2013;
- b) 30 NM commenced on 24 July 2014; and
- c) 20 NM planned for end of 2015.

2.4 Singapore is also exploring the possibility of implementing reduced separation onto more routes such as L625 and M758. See **Figure 2** of **Annex A**.

Subsequent Phases

2.5 Singapore is exploring with Brunei, the Philippines and Viet Nam on ways to cover the remaining surveillance gaps in the South China Sea.

2.6 Thus far, high level memoranda of cooperation were signed between Singapore and the Philippines and between Singapore and Brunei on 11 February 2014 and 27 November 2014 respectively, agreeing in-principle on ADS-B collaboration. Viet Nam has also in-principle agreed to provide additional ADS-B data to Singapore to cover surveillance gaps.

3. Action by the meeting

3.1 The meeting is invited to:

- a) note the progress of the project and the collaborations between States involved in working towards enhancing safety, capacity and efficiency of ATS in this region;
- b) encourage ADS-B collaboration between States.

Annex A

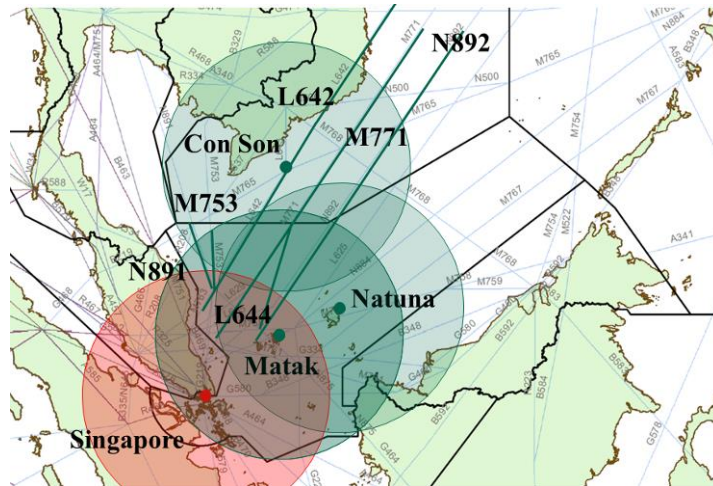


Fig 1: Initial Phase of ADS-B collaboration project over the South China Sea

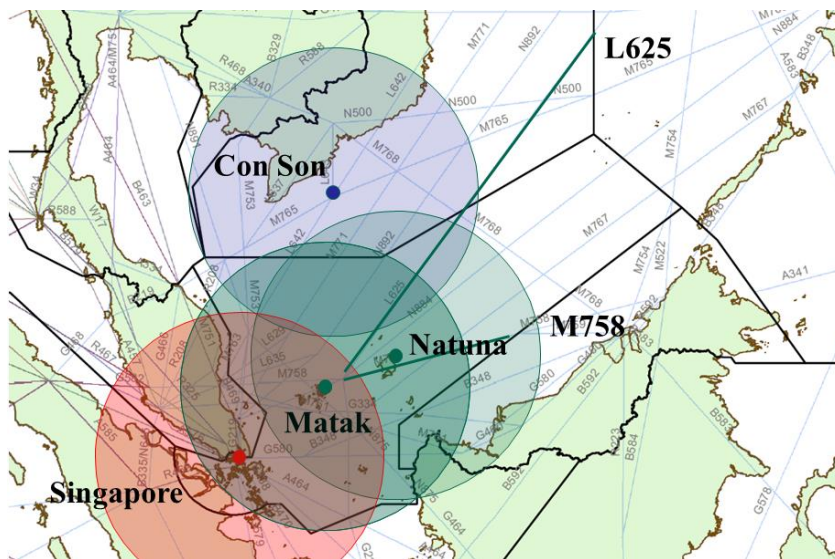


Fig 2: Additional routes considered for ADS-B services
