



International Civil Aviation Organization

**Second Meeting of the Southeast Asia Route Review Task Force
(SEA-RR/TF/2)**

Bangkok, Thailand, 22 – 26 March 2010

Agenda Item 6: ATS Route Development

**REDUCED HORIZONTAL SEPARATION ON RNAV ROUTES
BETWEEN INDONESIA AND SINGAPORE**

(Presented by Indonesia and Singapore)

SUMMARY

The implementation of reduced horizontal separation based on Performance Based Navigation specifications brings about an improvement in safety, airspace capacity, flight efficiency and environmental benefits. The essential element to progress the implementation is collaboration with the States involved.

This paper highlights the collaboration efforts between Indonesia and Singapore to implement reduced horizontal separation on two ATS Routes that serves traffic between South-East Asia and Australasia.

Action by SEA-RR/TF/2 is at Paragraph 3.

1. INTRODUCTION

1.1 The implementation of The Revised ATS Route Structure, Asia to the Middle East and Europe, South of the Himalayas (EMARSSH) in 2002, have brought about much-needed improvements in safety, airspace capacity, flight efficiency and environmental benefits in this region. Since then, air traffic movements in this region have grown significantly despite the economic downturn in the previous 2 years. The current work carried out by the Bay of Bengal Reduced Horizontal Separation Implementation Task Force (BOB-RHS/TF) is a positive way forward to further enhance safety and improve capacity to meet the growing demand.

1.2 Similarly, the Southeast Asia Route Review Task Force (SEA-RR/TF) convened last December 2009 to review the existing route structures in the Western Pacific and South China Sea (WPAC/SCS) area south of the Fukuoka FIR. The ongoing work by this task force shines positive light to the effort of collaboration by various stakeholders to improve capacity and efficiency in the region.

1.3 States could also work closely together with a common goal to enhance safety and efficiency for air traffic in our region.

2. DISCUSSION

2.1 In January 2010, Indonesia had re-designated various ATS routes within Jakarta and Ujung Pandang FIR to RNAV routes. This sets the path to enable further improvements by reaping the benefits of Performance Base Navigation (PBN).

2.2 Indonesia and Singapore worked closely to study the areas in which air traffic safety and efficiency could be further enhanced and improved. Air traffic that traverses through Singapore FIR and Jakarta FIR and vice versa not only serves the region but also flights from South-East Asia to Australasia and back. Both States also worked closely with IATA to obtain users' feedback where such improvements in efficiency can best serve their needs.

2.3 The first step that Indonesia and Singapore took in improving efficiency was to focus on two of the major routes that serve South-East Asia and Australasia and back. The two routes are A464 and A576. The current minimum longitudinal separation on these 2 routes is 10 minutes based on the Mach number technique. Based on the feedback gathered from operators, majority of the flights plying on the 2 routes already have RNAV10 capabilities.

2.4 Taking advantage on the availability of Direct Controller – Pilot Communication (DCPC) facilities throughout these 2 routes, Indonesia and Singapore set the following proposed timeline towards reduction of horizontal separation;

April 2010	-	Implementation of RNAV10 route M774 and lowering the upper limit of ATS route A464.
3 rd Quarter 2010	-	Targeted implementation of RNAV10 route M635 and lowering the upper limit of ATS route A576 and implementation of 50 NM lateral separation in Singapore FIR
2 nd Quarter 2011	-	Targeted implementation of 50NM longitudinal separation of 50NM on both M635 and M774.

2.5 The timeline set forth above take into account the need to conduct en-route safety assessments by the respective En-route Monitoring Agencies (EMAs). This would also entail the need to collect traffic data samples and gross navigation errors reports within the respective FIRs to support the analysis of the safety assessments.

2.6 While the work on the above is on-going, both States agreed to continue to work closely to look for other areas in which safety and efficiency could be further enhanced.

3. ACTION BY THE MEETING

3.1 The meeting is invited to:

- a) Note the timeline towards reducing horizontal separation on ATS route M774 and M635;
- b) Note the need for the respective EMAs to gather traffic sample data, gross navigation errors and conduct safety assessments to support the reduction in horizontal separation on these routes;
- c) Look at areas where reduced horizontal separation could be implemented through collaboration between States.

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