



International Civil Aviation Organization

**The First Meeting of the Air Traffic Management Sub-Group of APANPIRG  
(ATM/SG/1)**

Bangkok, Thailand, 20-24 May 2013

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**Agenda Item 5: ATM Coordination (Meetings, Route Development, Contingency Planning)**

**ATM COLLABORATION BETWEEN SINGAPORE AND VIET NAM**

(Presented by Singapore and Viet Nam)

**SUMMARY**

This paper presents an update on the collaborative efforts between Singapore and Viet Nam to enhance Air Traffic Management (ATM) between Ho Chi Minh and Singapore FIRs

The various initiatives aim at enhancing safety and efficiency through a measured increase in capacity to meet the future growth of air traffic in this region.

This paper relates to –

**Strategic Objectives:**

A: *Safety – Enhance global civil aviation safety*

C: *Environmental Protection and Sustainable Development of Air Transport – Foster harmonized and economically viable development of international civil aviation that does not unduly harm the environment*

**Global Plan Initiatives:**

GPI-5 RNAV and RNP (Performance-based navigation)

GPI-6 Air traffic flow management

GPI-8 Collaborative airspace design and management

GPI-17 Data link applications

**1. INTRODUCTION**

1.1 Air traffic movement in this region has grown at a steady rate for the past decade. Boeing has estimated that air traffic in the Asia Pacific region will continue to grow by 6.7% for the next 20 years. Flights between Ho Chi Minh and Singapore FIRs have seen similar steady growth. Key ATS routes, L642 and M771, which traverse between Ho Chi Minh and Singapore FIRs serves flights between South East Asia and Pearl River Delta are also a Major Traffic Flow (MTF) within the Asia Pacific Region.

1.2 Singapore and Viet Nam, through regular ATS coordination meetings and close collaboration, recognised the need to work closely in order to enhance safety and efficiency for air traffic. Singapore and Viet Nam's approach to these collaborations is consistent with the principles that can be applied to the development of the Seamless ATM Plan by the APSAPG. These initiatives allow both ANSPs and aircraft operators to reduce co-ordination workload between controllers, minimize delays to airlines and enjoy greater efficiency.

1.3 To prepare the region for the future growth of air traffic, Singapore and Viet Nam support the call by ICAO to establish a seamless environment for air traffic to operate in. As a result, Singapore and Viet Nam have implemented ADS-B surveillance data sharing and are working on the cross boundary application of surveillance separation.

## 2. DISCUSSION

### Implementation of Reduced Horizontal Separation with Surveillance

2.1 Back in July 2008, under the auspice of the ICAO RNP-SEA Task Force, Singapore and Viet Nam implemented the reduction of horizontal separation on ATS routes L642 and M771 based on the PBN RNP10 specification. This allowed the longitudinal separation to be reduced to 50 NM between flights that are ADS-C and CPDLC equipped.

2.2 Progressively, at the SEACG/17 Meeting held in May 2010 in Singapore, the meeting noted the outcomes from the SEA ADS-B WG/5 meeting which highlighted the plan to implement ADS-B surveillance for ATS routes L642 and M771 in the South China Sea area. ATS routes L642 and M771 are two of the busier routes serving flights operating between the airports in the South East Asia region and the Pearl River Delta area and beyond. At the SEA ADS-B WG/6 Meeting in February 2011 in Singapore, Hong Kong, China highlighted the need to strengthen collaboration and to harmonize the implementation of seamless surveillance coverage on ATS routes L642 and M771. Working with Viet Nam on ADS-B data sharing, Singapore subsequently published a mandate in December 2010 for the planned implementation of ADS-B in December 2013 and designated portion of airspace at FL290 and above to be ADS-B exclusive.

2.3 The implementation of ADS-B within Singapore FIR will achieve end-to-end surveillance cover on ATS routes L642 and M771. Singapore and Viet Nam have agreed on a progressive phased approach to reduce horizontal separation to allow operators to reap the full benefits of ADS-B surveillance on the respective ATS routes. The following phased approach to reduce horizontal separation was adopted;

- From the current 50NM to 40NM by end of 2013;
- 30NM by end of 2014; and
- 20NM by end of 2015.

2.4 Along with L642 and M771, Singapore and Vietnam have also agreed to enhance the capacity for other ATS routes between Ho Chi Minh and Singapore FIRs i.e. on ATS routes M753 and N892. A similar phased approach on ATS routes M753 and N892 for the reduction in horizontal separation using surveillance have been adopted as follows;

- From the current 80NM to 40NM by end of 2013;
- 30NM by end of 2014; and
- 20NM by end of 2015.

### AIDC Implementation

2.5 Singapore and Viet Nam are also in discussions for the AIDC operational trial, with a proposed full AIDC implementation between Ho Chi Minh and Singapore ACCs by March 2014. With the high volume of traffic between Ho Chi Minh and Singapore FIRs, AIDC will help to enhance safety and efficiency.

2.6           ATS Coordination meetings between Singapore and Viet Nam are held regularly thereby providing a suitable platform to collaboratively resolve various operational issues. Where necessary, other ATM stakeholders are also invited to provide the necessary inputs to resolve those issues. The important starting point is the desire and will to enhance the services provided to the aviation stakeholders. The regular cooperation also provides the foundation for future enhancement.

**3.       ACTION BY THE MEETING**

3.1           The meeting is invited to:

- a) note the close collaboration between Singapore and Viet Nam to enhance ATM in this region;
- b) note progress of enhancing capacity on ATS Routes L642, M771, M753 and N892;
- c) encourage States to collaborate to enhance capacity and to achieve seamless ATM within Asia Pacific Region.

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