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

Establishment of RNAV5 Corridor between Singapore and Indonesia

(Presented by IATA)

SUMMARY

This paper outlines a proposal to establish an RNAV corridor between Singapore and Indonesia.

1. **INTRODUCTION**

1.1 Utilisation of ATM capability can be key to the delivery of airspace efficiencies.

2. **DISCUSSION**

2.1 At SEA-RR/TF/1, the meeting endorsed some reasonably broad principles for consideration when undertaking route enhancements

- The establishment of uni-directional routes
- The utilisation of ATM capabilities
- The establishment of 'bypass routes" to segregate over-flights from arrivals and departures

2.2 The utilisation of ATM capability in particular provides potential for substantial efficiency gains when considered over an entire route. The primary SCS routes of L642/M771 in particular were identified as routes where full direct surveillance and VHF communication coverage would enable enormous capacity gains.

2.3 At the BOB-RHS/TF/2 meeting in February this year, Singapore and Indonesia jointly presented plans for the establishment of two RNP 10 routes in the short term, M774 (A464) and M635 (A576). The delivery of 50nm longitudinal separations is expected to commence in Q4 2010. The information presented is also repeated in IP/02 at this meeting.

2.4 IATA noted that while it endorses the establishment of RNP10 routes, the longitudinal separation associated with the RNP10 navigation specification, contains specific aircraft communication requirements. The natural evolution to RNP4 and its associated separations contains specific requirements for application of both lateral and longitudinal separations.

2.5 These requirements can be extremely costly to airlines and can limit the efficiencies that could be available with the implementation of RNAV routes.

2.6 The establishment of RNAV5 however, does not include similar requirements except when direct surveillance is based on ADS-B. Apart from ADS-B, most commercial aircraft operating within this region could comply with RNAV5 requirements with little difficulty.

2.7 The establishment of RNAV5 routes can deliver substantial benefits with route spacing generally between 10-30nm depending on the safety assessment. Separations are based on ATM capabilities.

2.8 With this in mind IATA noted that Indonesia and Singapore enjoyed complete surveillance and VHF coverage for the primary routes between Singapore-Jakarta-Bali-Singapore. These routes are reasonably heavily trafficked with Indonesia experiencing average traffic growth of approximately 20%.

2.9 While endorsing the current plans to establish RNP10 (and 50nm longitudinal) separation, IATA suggests instead of next establishing RNP4 requirements, the needs of all stakeholders could better be supported by establishing RNAV5 uni-directional routes in this "triangle" of airports.

2.10 This corridor of routes could easily be extended further with the addition of other States and their capabilities.

2.11 IATA notes that if required, Japan established their "Sky Highway" based on RNAV5 in Oct 2009 so experience is available within the region to assist with necessary analysis, safety assessments, etc.

3. ACTION BY THE MEETING

3.1 The meeting is invited to:

a) Discuss and endorse the concept of establishing RNAV 5 uni-directional routes where ATM capability exists

3.2 Indonesia and Singapore are invited to:

a) Continue with their existing plans to establish RNP10 and the associated separation reductions
b) Agree in principle to establish an RNAV5 corridor with uni-directional routes between Singapore-Bali-Jakarta-Singapore with the objective of implementing in 2011
c) Consider the requirements for the establishment of RNAV5 routes to establish firm timelines

3.3 Adjacent states are invited to:

a) Consider the benefits of RNAV5 routes and consider their own ATM capabilities
b) Where appropriate, extend the plans for RNAV5 beyond the initial corridor

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