International Civil Aviation Organization

AUTOMATIC DEPENDENT SURVEILLANCE – BROADCAST SEMINAR AND ELEVENTH MEETING OF AUTOMATIC DEPENDENT SURVEILLANCE – BROADCAST (ADS-B) STUDY AND IMPLEMENTATION TASK FORCE (ADS-B SITF/11)

Jeju, Republic of Korea, 24-27 April 2012

Agenda Item 8: Any other business

ASIA PACIFIC REGIONAL LONG TERM HEIGHT MONITORING

(Presented by IATA)

SUMMARY

This paper presents recognition of the availability of ADS-B as a cost effective solution to enable long term height monitoring capability, and encourages States to implement the ADS-B solution as they roll out their ADS-B programs in the Region.

This paper relates to –

Strategic Objectives:
A: **Safety** – Enhance global civil aviation safety

Global Plan Initiatives:
GPI-2 Reduced vertical separation minima
GPI-12 Functional integration of ground systems with airborne systems

1. INTRODUCTION

1.1 In September 2009 APANPIRG/20 adopted the Asia Pacific Regional Impact Statement prepared by the Regional Airspace Monitoring Advisory Group (RASMAG) to provide general guidance to States in the provision of RVSM Long Term Height Monitoring.

1.2 It is recommended that the monitoring program should make provision for a combination of ground-based systems (HMU, AGHME and potentially ADS-B) as well as airborne systems (EGMU). We may want to recommend ground based systems alone and be silent on EGMU as it is not airline preferred

1.3 The Regional Impact Statement has since been updated with version 3 adopted in October 2010.

2. DISCUSSION

2.1 At RASMAG/15 1-4 Aug 2011, Australia reported that both the Separation and Airspace Safety Panel (SASP) and Regional Monitoring Agencies Coordination Group (RMACG) had now formally endorsed the use of ADS-B as a height monitoring system.

2.2 With ADS-B now a viable solution, it is important that ADS-B be recognized as such with an amendment in the Regional guidance material.

2.3 Given the high cost and administrative issues involving GMU, and similar cost issues regarding installing and maintaining an HMU it is important the potential cost effectiveness of ADS-B should also be recognized.

2.4 The impact statement itself notes the significant cost of installing, operating and maintaining Height Monitoring systems. However with ADS-B, its prime function as a surveillance tool can enable significant cost advantages for RVSM Monitoring over a dedicated facility.

2.5 Given the number of States with Asia Pacific with ADS-B programs underway, there is significant potential for a wide coverage (matrix) of Height Monitoring capability based on ADS-B within this region.

2.6 Recognising that ADS-B requires aircraft equipage and potentially equipage mandates, there may be a delay before this capability can be fully utilised. However given the significant potential cost savings, this capability should still be considered before we see a proliferation of dedicated ground based facilities.

2.7 The impact statement concludes:

> *APANPIRG in close coordination with RASMAG and Asia/Pacific RMAs will need to be involved in recommending the types and appropriate locations of monitoring systems to most effectively monitor the Asia/Pacific aircraft population with the least infrastructure investment.*

2.8 At RASMAG/16; 20-24 Feb 2012; The work of Australia and the FAA in developing the ADS-B system as an alternative, because it had the potential to monitor each airframe on a regular basis during normal operations without added cost, was acknowledged.

2.9 India stated that it was implementing ADS-B in 14 locations and that this data could be provided for RMA use.

2.11 China informed the meeting that it plans to implement ADS-B in the future, especially in the Western part of China, indicating they would use both HMU in the eastern part of China supplemented by ADS-B systems and EGMU for height-keeping monitoring.

2.12 Other States with ADS-B implementation programs are encouraged to provide data for RMA use.

2.13 Australia also reported on a recent AAMA review showing 297 aircraft have been successfully monitored since November 2010. Of the number successfully monitored, 247 (83%) of these have been monitored using ADS-B data.

2.14 RASMAG/16 agreed that the Chairman and Secretary would draft an update to the Asia/Pacific Regional Impact Statement - RVSM Global Long Term Height Monitoring Requirements document and circulate this to the RMAs and IATA prior to RASMAG/17 for their input.

2.15 Bearing in mind the successful monitoring by Australia; IATA urges other states with current ADS-B installations and those with near term plans to consider earliest implementation of Height monitoring via ADS-B.

2.16 This does not mean that States need to develop their own systems to perform RVSM monitoring using ADS-B. States need only to be willing and able to provide their ADSB data to their responsible Regional Monitoring Agency[1] (RMA) for processing in the same way that EGMU data is provided to RMAs.

3. ACTION BY THE MEETING

3.1 The meeting is invited to:

a) note the information contained in this paper;

b) support ADS-B as the preferred solution for RVSM Height Monitoring where suitable capability exists or will exist in the medium term;

c) encourage States to reassess current implementation plans for the implementation of dedicated ground based facilities where ADS-B may provide a more cost effective alternative;

d) revise the regional plan ‘recommending the types and appropriate locations of monitoring systems to most effectively monitor the aircraft population with the least infrastructure investment’; and

e) coordinate efforts with adjacent regions.

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[1] http://legacy.icao.int/icao/en/ro/allpirg/allpirg5/wp15_eng.pdf
http://www.ecacnav.com/content.asp?PageID=61 or http://www.chinarma.cn/English/mainpage.html or