



International Civil Aviation Organization

**Fourth Meeting of the ICAO Asia/Pacific Seamless ATM Planning Group
(APSAPG/3)**

Hong Kong, China, 03 – 07 June 2013

Agenda Item 2: Review Outcomes of Related Meetings

RELEVANT MEETING OUTCOMES

(Presented by the Secretariat)

SUMMARY

This paper presents information from relevant meetings regarding Seamless ATM.

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-1 Flexible use of airspace
- GPI-2 Reduced vertical separation minima
- GPI-3 Harmonization of level systems
- GPI-4 Alignment of upper airspace classifications
- GPI-5 RNAV and RNP (Performance-based navigation)
- GPI-6 Air traffic flow management
- GPI-7 Dynamic and flexible ATS route management
- GPI-8 Collaborative airspace design and management
- GPI-9 Situational awareness
- GPI-10 Terminal area design and management
- GPI-11 RNP and RNAV SIDs and STARs
- GPI-12 Functional integration of ground systems with airborne systems
- GPI-13 Aerodrome design and management
- GPI-14 Runway operations
- GPI-15 Match IMC and VMC operating capacity
- GPI-16 Decision support systems and alerting systems
- GPI-17 Data link applications
- GPI-18 Aeronautical information
- GPI-19 Meteorological Systems
- GPI-20 WGS-84
- GPI-21 Navigation systems
- GPI-22 Communication infrastructure
- GPI-23 Aeronautical radio spectrum

1. INTRODUCTION

1.1 The combined Third Meeting of the South Asia/Indian Ocean ATM Coordination Group (SAIOACG/3) and Twentieth Meeting of the South-East Asia ATM Coordination Group (SEACG/20) was held in Bangkok, Thailand from 18 to 22 February 2013. The meeting was attended by 60 participants from Brunei Darussalam, Cambodia, China, Hong Kong China, India, Indonesia, I.R. Iran, Lao PDR, Malaysia, Maldives, Myanmar, Philippines, Singapore, Thailand, United States, IATA and ICAO. India and Hong Kong China co-chaired the meeting.

1.2 The Data-link Performance Monitoring Seminar was held at Bangkok, Thailand on 27 March 2013 in conjunction with the Second Meeting of the Future Air Navigation Systems Interoperability Team-Asia (FIT-Asia/2, 28-29 March 2013).

1.3 The Eighteenth Meeting of the Regional Airspace Safety Monitoring Advisory Group (RASMG/18) was held from 1-4 April 2013 at Bangkok.

1.4 The AIM Quality Assurance Seminar and the Eighth Meeting of the Aeronautical Information Services – Aeronautical Information Management Implementation Task Force (AAITF/8) were held in Ulaanbaatar, Mongolia, from 6 – 10 May 2013.

1.5 The First Meeting of the APANPIRG Air Traffic Management Sub-Group (ATM/SG/1) was held at Bangkok, Thailand from 20 to 24 May 2013.

2. DISCUSSION

SAIOACG/SEACG Outcomes

Small Working Group Reports

2.1 Small Working Groups (SWG) were formed by SAIOACG/2 and SEACG/19 to:

- assess the current status and planning of implementation;
- identify barriers to implementation;
- make recommendations to assist harmonized ATM procedures and applications;
- make recommendations that assist implementation in accordance with the Asia/Pacific Air Navigation and ATFM Concepts of Operations, and the Asia/Pacific Seamless ATM initiatives, related to the Air Traffic Flow Management (ATFM), Communication (COM) and ATS Surveillance (SUR) fields.

2.2 As a result of the SAIOACG/SEACG ATFM SWG discussion, the following Draft Conclusions and Draft Decision were agreed, for consideration by the ATM Sub-Group and APANPIRG (see the ATM/SG deliverables later in this paper):

Draft Conclusion SAIOACG3/SEACG20-1: ATFM Capacity Assessments

Draft Conclusion SAIOACG3/SEACG20-2: ATFM Information Sharing

Draft Decision SAIOACG3/SEACG20-3: Asia/Pacific ATFM Steering Group

2.3 As a result of the SAIOACG/SEACG COM SWG discussion, the following Draft Conclusions were agreed, for consideration by the ATM Sub-Group and APANPIRG:

Draft Conclusion SAIOACG3/SEACG20-4: South China Sea ATS Facilities

Draft Conclusion SAIOACG3/SEACG20-5: AIDC Implementation

2.4 In summary, recommendations identified by the SAIOACG and SEACG **SUR** SWGs were as follows.

- 1) States with overlapping surveillance coverage should implement direct speech circuit to allow tactical coordination between surveillance controllers, in addition to AIDC, instead of relaying the information.
- 2) States with overlapping surveillance coverage should consider introducing surveillance handoff procedures.

A reduction in spacing at the transfer of control point could be reviewed on a step by step basis, starting with a comfortable agreed spacing for a period of time before reducing the spacing further. This should be subject to the safety assessment of each individual State, which should consider radar handoff requirements. Several States agreed to examine the current spacing requirements at the transfer of control points.
- 3) ADS-B with VHF Communications should be considered in areas where there was a lack of infrastructure. Sharing of ADS-B data and VHF Communications between adjacent States should also be considered to improve safety and efficiency. In this regard, India will continue liaison with Myanmar to conclude a data sharing agreement (see SAIOACG Task List). China and Hong Kong China expressed concern regarding ADS-B training for aircrew. IATA would reinforce among airlines China's request for airlines to participate in their ADS-B tests within the Sanya FIR.
- 4) The SWG would continue developing the current charts. India agreed to provide more information. ICAO would request Vietnam to provide information on their coverage to complete the picture.

2.5 The SAIOACG/SEACG meeting noted that in South Asia, traffic continued to be separated by 50NM or even 80NM at some identified transfer of control points within ATS surveillance coverage. Moreover, noted that in the South China Sea 30NM to 40NM was applied within ATS surveillance capability, while conservative procedural separations such as 60NM and 80NM were applied outside ATS surveillance coverage, and not in accordance with the Asia/Pacific Air Navigation Concept of Operations.

2.6 The reports of the Small Working Groups indicated that there was multiple overlapping surveillance coverage in a large part of both the airspaces under review, except for some small segments in the oceanic areas. The meeting noted that ADS/CPDLC was also available. Hence, even without further enhancement from ADSB work currently taking place, there was huge potential to enhance the capacity of the airspace further through implementing surveillance separation in the areas already under surveillance, and RNP10 or RNP4 in the areas with ADS/CPDLC.

2.7 It was recalled that at the SEACGG/19 meeting, States were requested to give consideration to, and agree to commit to:

- a) ATS surveillance separation within surveillance coverage;
- b) seamless surveillance separation between the busy city pairs using radar hand-off procedures;
- c) 50/50NM separation where there was Direct Controller Pilot Communications (DCPC) but no ATS surveillance; and
- d) 30/30NM separation where Automatic Dependent Surveillance-Contract (ADS-C)/ CPDLC capability existed for RNP4 approved aircraft.

2.8 The SAIOACG/SEACG meeting noted the work of India in ADS-B implementation. The Indian ADS-B plan was aimed at providing redundancy where radar coverage existed and also to fill the surveillance gaps, where radar coverage was not possible due to high terrain and remote areas. India reiterated its willingness to share ADS-B data with Myanmar, Maldives, Sri Lanka, Malaysia and Indonesia. In addition to the fourteen stations, India planned to install seven ADS-B ground stations by mid 2013. This plan was consistent with the Upper Airspace Harmonisation plan of the Kolkata and Delhi FIRs, and to supplement surveillance coverage in the Kolkata and Chennai FIRs.

2.9 Hong Kong, China also provided the meeting with an update of the status and progress of ADS-B implementation in Hong Kong, China.

2.10 India had implemented Data-link Departure Clearance, D-ATIS and D-VOLMET services to enhance ATM operational efficiency in the provision of ATS so as to provide efficient and reliable departure clearance services at Mumbai, Delhi, Kolkata, Chennai, Bangalore and Hyderabad, D-ATIS messages from more than 55 airports and D-VOLMET messages from Mumbai and Kolkata airport, thereby reducing the workload for both pilots and air traffic controllers.

2.11 IATA proposed that ANSPs implement ATS surveillance-based 20NM separations on South China Sea ATS routes M771 and L642 by the first quarter of 2015. They noted that the routes were already covered by surveillance, and bearing in mind the upgrades to the ATM systems at Hong Kong, China were expected to be complete by the end of 2014. Hong Kong, China and Singapore indicated agreement for ATS surveillance-based separations within the 2015 timeline.

2.12 India presented a proposal to introduce 30NM longitudinal separation within the Bay of Bengal Arabian Sea and Indian Ocean Airspace in a phased manner, which was a residual task from the Bay of Bengal Reduced Horizontal Separation Task Force (BOB-RHS/TF). India suggested a complete restructuring of the RNP routes in the airspace concerned to support 30/30NM separation. The meeting congratulated India on the advancement of this more efficient standard, but noted that it was unnecessary to restructure the routes, and noted that it was preferable to designate portions of airspace, rather than routes in a piecemeal fashion.

2.13 The meeting noted India's efforts on the restructuring of Indian airspace and ATS routes to improve efficiency, and reduce adverse environmental impacts through improved ATS automation systems and implementation of PBN-based RNP10 and RNAV5 city pair ATS routes. India's Master Plan was to restructure the entire Indian airspace, with each FIR having only one Upper Area Control Centre (ACC) with multiple sectors to be operated from four major cities, thereby amalgamating 11 ACCs into four ACCs initially and subsequently into 2 ACCs.

2.14 India was willing to cooperate and support its neighbouring States to jointly develop PBN RNAV5 routes and arrival/departure procedures to form a seamless network of PBN routes and arrival/departure procedures in the sub-continent. The meeting noted that the use of RNAV5 routes should be considered with respect to RNAV2 and RNP2 navigation specifications, which would become increasingly preferred in the near future.

FIT-Asia/2

2.1 There was a considerable lack of data-link problem reporting among FIT-Asia States and airspace users, and few FIT Asia States had arrangements in place for the analysis of problem reports (PRs) by a competent Central Reporting Agency (CRA).

2.2 The FIT-Asia/2 meeting recognised that monitoring, reporting and analysis of data-link performance and problems was essential for the achievement and maintenance of the level of system performance required for application of RNP-based separation standards.

RASMGAG18

2.3 The RASMGAG meeting recognised that the En-route Monitoring Agencies (EMAs) could have a role like a Regional Monitoring Agency (RMA) in respect of identifying airframes that were not performing as expected in respect of their data-link performance data. Thus the meeting agreed that it was logical to expand the EMA roles to include monitoring of RCP/RSP approvals, although it was recognised that EMAs were not assigned to all the FIRs in the region. The meeting agreed to the following Draft Conclusion, for APANPIRG's consideration:

Draft Conclusion RASMGAG 18-2: En-Route Monitoring Agency Role and Tasks

Considering the requirement for a defined process of monitoring airframe Required Communication Performance (RCP) and Required Surveillance Performance (RSP) compliance, and analysis of data-link performance affecting horizontal separation standards that utilise data-link, Asia/Pacific States should:

- a) in collaboration with RASMGAG, assign an En-Route Monitoring Agency (EMA) for each FIR; and
- b) support the assigned EMA with the provision of information regarding -
 - i. observed aircraft horizontal navigation performance; and
 - ii. observed non-compliant data-link performance of individual aircraft; and
 - iii. aircraft data-link approvals, and
- c) recognise the potential benefit of EMAs in providing risk analysis to support horizontal separation implementation.

2.4 The Secretariat presented an overview of regional safety assessment results. **Figure 1** indicated the regional RVSM TLS compliance as reported to RASMGAG/18.

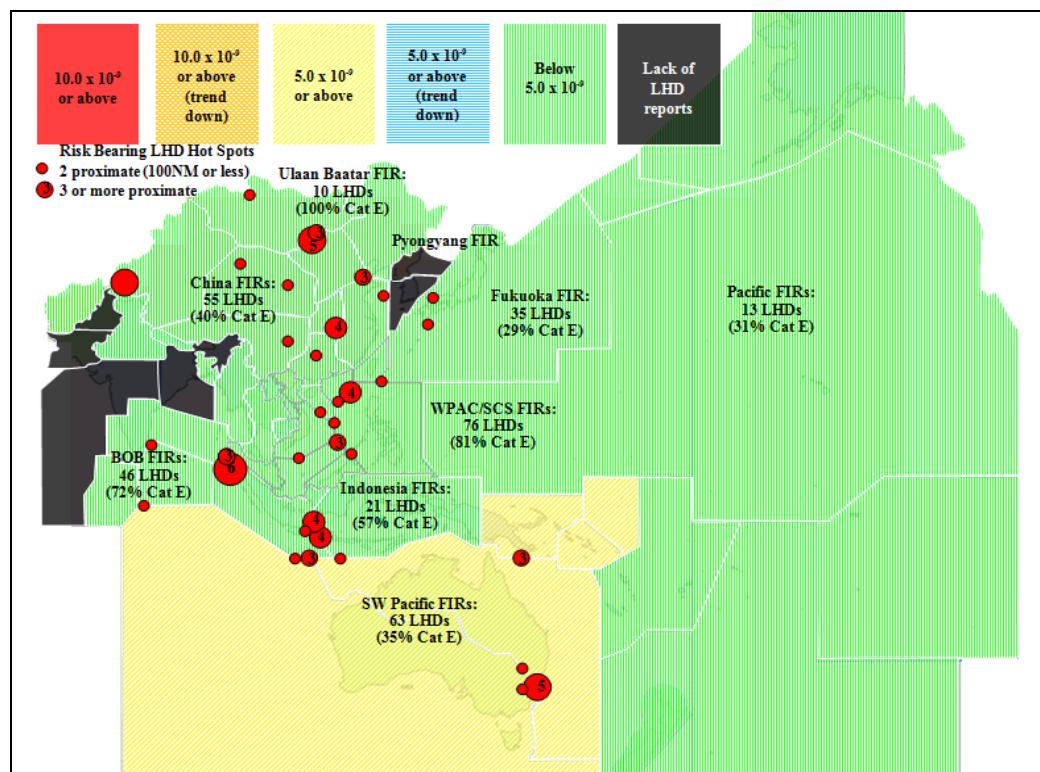


Figure 23: Asia/Pacific TLS compliance reported to RASMGAG/18

2.5

Figures 22 and 23 indicated the following sub-regional regional trends.

- South Asia continued to operate below the Target Level of Safety (TLS), although there were hot spots evident at the interface between Indian, Indonesian and Malaysian airspace. India had previously noted potential lack of reporting of safety issues by ATC, and this was evident by the lack of Large Height Deviation (LHD) reports from within the Mumbai and Kolkata FIRs. In addition, there appears to have been a lack of reporting within the Karachi and Lahore FIRs (Pakistan airspace).
- Southeast Asia had dropped below the TLS after some years not meeting the target, indicating that some of the corrective and preventive actions taken had been effective. However, the overall positive result tended to mask continuing problems associated with the Manila FIR, which saw a large number of LHD hot spots close to the FIR boundary with adjacent States.
- East Asia (particularly Mongolia and Japan) had made improvements, and the overall assessment met the TLS. However, there were a number of LHD hot spots at the interface between Mongolia and China, Pakistan and China, and internally within China near Wuhan and Beijing. The continued lack of reporting over many years from the Pyongyang FIR was also a concern.
- Southwest Pacific had maintained an upwards trend from RASMAG/17 to be consistently above the TLS. However, the prime driver for the high risk figure was a single LHD from March 2012 that remained within the data sample used for calculations. The monthly risk for the Southwest Pacific airspace is well below the average monthly risk which gives an annual risk of 5.0×10^{-9} . There were a number of LHD hot spots, including the interface between Australia and Indonesian airspace (particularly Jakarta FIR), and between Australia and Papua New Guinea airspace.
- Pacific airspace had been consistently below TLS.

2.6

Stemming from the analysis of hot spots, there appeared to be an urgent need for prioritisation of AIDC (ATS Inter-facility Data-link Communications) implementation as a risk mitigation measure at the following interface hot spots. These hot spots were also where category E LHDs (ATC to ATC transfer errors as a result of human factors issues) formed a significant portion of the total reports. The meeting agreed to the following Draft Conclusion for APANPIRG's consideration:

Draft Conclusion RASMAG/18-4: Prioritisation of AIDC Implementation

Considering that ATS Inter-facility Data-link Communications (AIDC) is an important means of minimising Large Height Deviations (LHD), Asia/Pacific States should support the expedition of AIDC through collaborative projects at the following significant LHD interface areas:

- a) Indonesia: between Jakarta and Chennai/Ujung Pandang/Brisbane/Melbourne FIRs;
- b) India: between Chennai and Kuala Lumpur FIRs;
- c) Philippines: between Manila and Fukuoka/Taibei/Hong Kong/Sanya/Ho Chi Minh/Singapore/Kota Kinabalu/ Ujung Pandang FIRs; and
- d) China: between –
 - i. Urumqi and Lahore FIRs; and
 - ii. Beijing and Ulaan Baatar FIRs.

2.7 The following Asia/Pacific EMAs reported horizontal risk assessments as follows, which all met the TLS of 5.0×10^{-9} (**Table 3**):

Separation Standard	EMA	Estimated Risk
50NM Lateral Risk	BOBASMA	0.74×10^{-9}
	PARMO	4.33×10^{-9}
	SEASMA	1.89×10^{-9}
30NM Lateral Risk	PARMO	0.45×10^{-9}
	BOBASMA	0.90×10^{-9}
	SEASMA	0.79×10^{-9}
30NM Longitudinal Risk	PARMO	3.73×10^{-9}

Table 3: Comparison of Horizontal Risk Assessments

AAITF/8

2.8 The AAITF meeting was informed that the position statement formulated by APSAPG, and subsequently endorsed by APANPIRG, elevated the ASBU Element B0-30 *Service Improvement through Digital Aeronautical Information Management* to Priority 1 – *Critical Upgrade*.

2.9 Draft version 0.8 of the Asia/Pacific Seamless ATM Plan referred ATM Service Level (PASL) references to AIM were presented to the meeting without comment:

- PASL Phase 1, expected to be implemented by 12 November 2015, includes “*ATM systems should be supported by digitally-based AIM systems through implementation of Phase 1 and 2 of the AIS-AIM Roadmap (ASBU Priority1)*”
- PASL Phase II, expected implementation by 9 November 2018, includes “*ATM systems should be supported by complete implementation of AIM Phase 3*”.

2.10 Many States indicated progress in individual AIS – AIM implementation steps by reporting a percentage completion, but this made it quite difficult for other States to assess their progress. It was, however, clear that progress was different between States, and significantly different than the AIS-AIM Roadmap, in which Phase 1 was intended to be completed by November 2010 and Phase 2 by November 2013.

2.11 Clearly the Asia/Pacific Region is, overall, well behind schedule in the implementation of the AIS-AIM Roadmap Steps. Taking the overall Regional view, and based on current scheduling reported by the 16 respondent States, when Annex 15 Amendment 37 comes into effect:

- Phase 1 AIM Transition will be 82% completed;
- Phase 2 AIM Transition will be 63% completed
- Phases 1 & 2 Transition will be 69% completed.

ATM/SG/1

2.12 Pakistan provided WP18 discussing the establishment of transition altitudes. ICAO Doc 8168 (PANS-OPS Volume I) required that as far as possible, states should establish a common transition altitudes for all of its aerodromes or at least for group of aerodromes. On the basis of an agreement, this harmonization of transition altitude may be extended for aerodromes of adjacent states, states within one ICAO region or even for aerodromes for two or more ICAO Regions. ICAO PANS-OPS provision also required that the height above the aerodrome of the transition altitude shall be as low as possible but normally not less than 900 m (3,000ft).

2.13 The information provided included discussion of the difficulty in harmonizing transition altitudes in States with large variations in aerodrome elevations, the possibility of confusion and errors on the flight deck if a wide variety of transition altitudes was used.

2.14 Within Asia/Pacific States a number of countries had adopted the approach of harmonized transition altitude over the entire airspace, and some were using transition altitudes above 10,000 feet. Transition altitudes higher than 3,000 feet above aerodrome elevation would reduce the risk of collision with terrain due to uncorrected pressure differential. Harmonized and appropriately formulated transition altitudes would reduce cockpit workload and improve terminal airspace efficiency.

2.15 India stated that this subject was worthy of further discussion in appropriate meetings. New Zealand agreed, noting that a regionally harmonised solution was unlikely, given the different geographical and meteorological conditions between States. The Secretariat clarified to the meeting that the term 'low as possible but normally not less than 900 m (3,000ft)' did not mean that the transition altitude needed to be designated close to 3,000ft, but a medium or even higher value could be chosen if appropriate. The meeting noted that this item may be identified as a candidate for further research within the Asia/Pacific Seamless ATM Plan.

2.16 IATA advised the meeting that at the recent Third Meeting of the South Asia/Indian Ocean ATM Coordination Group (SAIOACG/3) and Twentieth Meeting of the South-East Asia ATM Coordination Group (SEACG/20) combined meeting, the Surveillance Small Working Group (SUR) had compiled a comprehensive regional overview of the application of separations applied at FIR transfer of control points. This had identified areas between states where overlapping surveillance and communication coverage existed, but the conservative procedural separation of 10 minute or 80nm continued to be used.

2.17 IATA stated that over recent decades regional infrastructure had improved significantly and with the majority of the region now being within surveillance and communication coverage, it was necessary to review the application of this procedural separation. The ATM/SG Chair supported the proposal to apply surveillance-based separation within surveillance coverage, to improve efficiency and capacity.

2.18 Due to expected air traffic growth rate higher than the global average, India stated there was a need to establish uniform application of rules and procedures in upper airspace. A new Indian airspace management strategy had been developed, including the initial amalgamation of 11 Area Control Centres (ACCs) into four and subsequently two, and the networking and integration of surveillance data to enable application of uniform radar separation throughout India's FIRs. The meeting acknowledged India's effort and early implementation of Seamless ATM initiatives.

2.19 India provided an update on their progress implementing Block 0 ASBU modules. India was in the process of updating the national Air Navigation Plan in line with the ASBU, keeping in mind the ICAO strategic objectives of safety, capacity, efficiency and environmental considerations.

2.20 Singapore suggested a need for a greater emphasis on harmonizing en-route PBN implementation as a key enabler to progress seamless ATM in the region. While acknowledging the efforts of ATM bodies in progressing en-route PBN implementation in the past, Singapore noted that without a region-wide coordinated effort, fragmented PBN implementation progress could result, hampering Seamless ATM efforts.

2.21 IATA supported the principles and philosophies suggested by Singapore, and asked that route development consider the capabilities available, not the standard limitations, thus the smallest separation could be applied. New Zealand also supported the concept. The meeting noted that utilising ATS surveillance-based separations generally resulted in a reduction of controller workload.

2.22 Singapore presented a proposal for a proactive approach to progress with the implementation of the Asia/Pacific Seamless ATM Plan. They identified a need to keep up momentum towards implementation of the plan and identifying challenges early. In this regard, the ATM/SG noted that appropriate work programs and tasks associated with the implementation of the plan should be established early, before the ATM/SG/2 meeting in 2014.

2.23 Singapore noted the good progress the Asia/Pacific region had made in the development of the Asia Pacific Seamless ATM Plan under the ambit of the APSAPG. Singapore's contribution in the collaboration process proposed that further enhancement to Plan put focus on five future oriented modules beyond Block 0, including PBN, ATFM, ADS-B, System-Wide Information Management / Information Management (SWIM/IM) and integration of meteorology (MET) into ATM.

2.24 Hong Kong, China stated that the Seamless ATM Plan was a plan aiming to foster a seamless ATM environment for the whole Asia/Pacific Region, and should be collaborative, practical and visionary. The Paper highlighted the salient points in version 0.8d of the draft Plan.

2.25 Hong Kong, China noted that in the Plan, airspace was categorized by reference to its CNS (Communications, Navigation and Surveillance) capability. Moreover, the Plan established two Performance Objectives, namely PARS (Preferred Aerodrome/Airspace and Route Specifications) and PASL (Preferred ATM Service Levels).

2.26 Hong Kong, China pointed out that although RNP 2 specifications had recently been published in the latest edition of the PBN Manual (Doc 9613, 4th Edition - 2013); however the essential components such as the respective flight procedure design criteria, separation standards and operational approval guidance document were yet to be made available. Hong Kong, China stressed that the large amount of outstanding preparation work to be undertaken by operators and ANSPs required expedition by ICAO of this material supporting RNP 2.

2.27 The meeting recognised that the request for expedition of RNP 2 material was already the subject of a PBN/TF Draft Conclusion. Moreover, the meeting noted that until the material was expected to be available at some stage during PARS Phase I, States could utilise RNAV 2 or RNAV 5, and plan for the early implementation of RNP 2.

2.28 Japan presented its comments on the draft Seamless ATM Plan, focussing on the PARS and PASL Phase I and II timeframe, horizontal separation minima, and AIDC implementation. Japan proposed a more open-ended start to the PARS/PASL Phases because PARS/PASL Phase I covered a lot of elements which made the Plan too 'aggressive' and 'impractical'. Also, Japan informed the meeting that 2018 for Block 1 meant the readiness of necessary ICAO provisions, and did not mean the implementation date.

2.29 The United States recalled that the Seamless ATM programme was intended to have an ‘aggressive’ schedule, which was not provided by with the use of the word ‘from’. Moreover, they stressed that there should be a common target, not an open-ended date. The United States submitted that the use of the major AIRAC cycle dates in November was appropriate for a common implementation. India was broadly in favour of the implementation timelines. The meeting discussed this further, and agreed that a ‘hard’ date was preferable as an implementation strategy. Japan urged States to make their further submissions to the APSAPG/4 meeting.

2.30 Commenting on the suggestion by Japan to delete the list of the minimum set of AIDC messages contained within the Seamless ATM Plan (and subject of a Draft Conclusion from the SAIOACG3/SEACG20 meeting), the United States confirmed that these five messages were the minimum required to establish a safe and efficient handover, and it was critical to use consistent standards.

2.31 The ATM/SG meeting noted the inclusion of a reference in the draft Seamless ATM Plan to the possibility of research into harmonisation of transition altitudes. Recalling the earlier discussion on this subject, the Secretariat clarified that the reference was consistent with a recommendation from the 12th Air Navigation Conference, and that it should be clear that the Plan reference was for research, not an endorsement of a harmonised transition altitude.

2.32 The ATM/SG meeting extensively discussed the proposed band of separation standards proposed by the Seamless ATM Plan, and in particular the reference to ‘not greater than 10NM’ for Category S (ATS surveilled) en-route airspace. It was clarified to the meeting that the intention was to provide a ‘cap’ on the largest minimum separation to be chosen by an ANSP, in order to promote consistency.

2.33 The United States recalled that at least one US ACC had implemented a temporary minimum separation requirement of 7NM in response to increased operational errors, and so although it was recommended that States moved to a 5NM standard, it was appropriate to have a band to choose from, in accordance with local circumstances.

2.34 Japan commented that the draft Plan regarding the separations of 5NM for Category T, 10NM for Category S, and 50NM for Category R airspace were not clear; thus Japan requested consistent wording.

2.35 The Secretariat agreed to consider alternative wording for the draft Seamless ATM Plan, to make it clear that what was intended was a band between the minimum separation standard in Doc 4444 (PANS ATM) to the limiting cap, so that States could choose the minimum standard that was appropriate. It was clarified to the meeting that the cap was not intended to convey the meaning that this separation distance be used as the only spacing between aircraft, as that would be determined by each individual conflict pair in a tactical manner.

2.36 A list of Draft Conclusions and Decision relevant to APSAPG agreed by the ATM/SG/1 for consideration by APANPIRG/24 is as follows:

Draft Conclusion ATM/SG/1-3: Air Traffic Flow Management Capacity Assessments

That States be urged to establish capacity assessment and adjustment mechanisms, and regular review for all aerodromes and ATC sectors where traffic demand is expected to reach capacity, or is experiencing traffic congestion, and to report the assessment outcomes to the Asia/Pacific Regional Office prior to 1 May 2014.

Draft Conclusion ATM/SG/I-4: Air Traffic Flow Management Information Sharing

That States, where ATFM processes are in place, including within adjacent airspace, be urged to share information, which may include:

- a) capacity assessment: including factors of interest affecting capacity, such as special use airspace status, runway closures and weather information;
- b) traffic demand information: which may include flight schedules, flight plan, repetitive flight plan data as well as associated surveillance updates of flight status; and
- c) ATFM Daily Plan.

Draft Conclusion ATM/SG/I-6: South China Sea ATS Facilities

That the provision of surveillance and communications services in the South China Sea area, where radar, ADS-B and/or VHF voice communications are currently not provided, be reviewed by China, Hong Kong China, Malaysia, Philippines, Singapore and Viet Nam, to consider:

- a) enhancement of current services;
- b) delegation or amendment of airspace service volumes; and
- c) cooperative agreements to exchange communications and surveillance capability.

Draft Conclusion ATM/SG/I-7: AIDC Implementation

Recognizing that:

- States implementing AIDC messaging may be doing so without previous knowledge or experience;
- States may be implementing AIDC within a sub-regional environment without AIDC having previously been implemented; and
- Significant safety, ATC capacity and workload benefits will immediately arise from implementation of an appropriately selected initial suite of AIDC messages;

States should:

- a) engage as soon as possible in AIDC trials to develop knowledge and address any related ATM or communications system issues;
- b) implement operational AIDC messaging as a matter of priority, in accordance with APANPIRG Conclusion 19/19; and
- c) implement as far as practicable, the AIDC messages Advanced Boundary Information (ABI), Coordinate Estimate (EST), Acceptance (ACP), Transfer of Control (TOC) and Assumption of Control (AOC).

Draft Decision ATM/SG/I-5: Asia/Pacific ATFM Steering Group

That the Asia/Pacific ATFM Steering Group be reconvened by 1 October 2013, to develop an ATFM framework, and address ATFM implementation issues.

3. ACTION BY THE MEETING

3.1 The meeting is invited to:

- a) note the information contained in this paper; and
 - b) discuss any relevant matters as appropriate.
-