



INTERNATIONAL CIVIL AVIATION ORGANIZATION

**TWENTY-SECOND MEETING OF THE
ASIA/PACIFIC AIR NAVIGATION PLANNING AND
IMPLEMENTATION REGIONAL GROUP (APANPIRG/22)**

Bangkok, Thailand, 5-9 September 2011

Agenda Item 5: Future work programme
SEAMLESS ATM SYMPOSIUM AND AD HOC MEETING OUTCOMES

(Presented by the Secretariat)

SUMMARY

This paper presents a summary of the ICAO Asia/Pacific Seamless Air Traffic Management Symposium and Ad Hoc Meeting (Bangkok, 15 to 17 August 2011).

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:

All GPIs

1 INTRODUCTION

1.1 The 46th Conference of Directors General of Civil Aviation, Asia and Pacific Regions (DGCA/46, Osaka, October 2009) first addressed the ‘Seamless Sky’ and how this may affect the Asia and Pacific (APAC) Regions. DGCA/46 issued the Kansai Statement, which requested, *inter alia*, the APANPIRG to be ‘a starting platform for the discussion on ‘Seamless ATM’.

1.2 The ICAO Asia/Pacific (APAC) Seamless Air Traffic Management (ATM) Symposium and Ad Hoc Meeting were held at the ICAO Asia and Pacific Regional Office, Bangkok, Thailand from 15 to 17 August 2011.

1.3 The Symposium and Meeting were attended by 84 delegates from Australia, Bangladesh, China, Cambodia, Democratic People’s Republic of Korea, Hong Kong China, India, Indonesia, Japan, Lao PDR, Malaysia, Republic of Korea, Singapore, Thailand, United States, CANSO, IATA, IFALPA, IFATCA and SESAR JU (Joint Undertaking).

Address by the ICAO Regional Director

1.4 The Seminar/Meeting was inaugurated by an address of Mr. Mokhtar A. Awan, Regional Director, ICAO Asia and Pacific Regional Office, who welcomed participants to Bangkok and the Seamless ATM Symposium and Ad Hoc Meeting.

1.5 Mr. Awan thanked Japan for initially organizing the Seamless meetings, which were unfortunately cancelled due to the Japanese tragedies in March 2011. He noted that the 21st Meeting of the Asia/Pacific Air Navigation Planning and Implementation Regional Group (APANPIRG/21, Bangkok, Thailand, 6 – 10 September 2010) had developed the following Conclusions:

Conclusion 21/8 – ICAO Asia/Pacific Seamless ATM Workshop

That, ICAO be invited to organize the Asia and Pacific Seamless ATM Workshop to be held in early 2011 inviting the APANPIRG member States and other parties of interest in order to foster discussion and action for the Asia and Pacific States in the planning of the future air traffic management system, considering the overall vision for the region for seamless ATM.

Conclusion 21/12 – Convening of the Seamless ATM Ad Hoc Meeting

That, while recognizing the seamless ATM needs to be addressed in a holistic manner, ICAO Regional Office be invited to organize a seamless ATM Ad Hoc working group meeting as soon as possible.

1.6 Mr. Awan drew the meeting's attention to the Global Air Navigation Plan (GANP, Doc 9750), which espoused the strategy of an interoperable ATM system. He noted the great differences in APAC ATM capability and development, including automation, CNS infrastructure, and cultural attitude. Civil-military coordination was viewed as being inseparable from civil systems, and it was therefore very important to have active military participation at meetings.

1.7 The Regional Director stated that 'Just Culture' was a key enabler. Environmental issues were recognized as a key driver. Mr. Awan stated that implementing the Seamless ATM concept was not easy, but this should not be an impediment, as it was absolutely necessary for the APAC Regions to succeed.

Address by IATA

1.8 Mr. Ken McLean, Director Safety, Operations & Infrastructure, International Air Transport Association, Regional Office - Safety, Operations & Infrastructure (Asia/Pacific), advised the Symposium that international airlines were understandably focused on cost issues.

1.9 Mr. McLean stated that this was a unique opportunity for the APAC Regions to leapfrog other regional developments. There was a need to develop airline capability to operate across regions, which was costly. Moreover, if this did not occur, then APAC economic growth could be stymied.

1.10 IATA contended that ATM systems should be using the capability of the aircraft. It was estimated that about 20% of European costs were due to the fragmentation of European States. However the key failing was the inability to use the airborne capability of modern aircraft.

1.11 It was stated that the DGCA Conference and airlines were looking for leadership. Airlines were prepared to put a significant amount of effort into an initiative such as the Network Management for Seamless development. Mr. McLean recommended that a body like a Task Force should be formed to develop Seamless ATM, as progress had been painfully slow and airlines would like to see some benefits now. He stated that one common ATM capability across Asia was necessary, and a mapping of the current State capabilities would be required to bring all the States up to a minimum level. 'Seamless Asia' was expected to see benefits for many years to come.

2. DISCUSSION

Seamless ATM Presentations

2.1 The following presentations and key points were made during the Seamless ATM Symposium (Monday 15 and Tuesday 16 August 2011):

- Seamless Global Drivers, ICAO HQ
 - It was unnecessary to implement new technology for the sake of it.
 - The goal was to achieve clear operational requirements and integration.
 - It was necessary to consider the central role of humans.
 - The notion of ‘this is my airspace, this is your airspace’ was an impediment to Seamless ATM.
 - The Global Air Navigation Plan (GANP) and Global Aviation Safety Plan (GASP) were the main drivers towards Seamless ATM, from prescriptive to performance-based systems.
- CARATS Seamless ATM Perspective, Japan Civil Aviation Bureau (JCAB)
 - The CARATS (Collaborative Actions for the Renovation of Air Traffic Systems) programme drivers were greater capacity and the environment.
 - Asian skies were like a jigsaw puzzle, consisting of 50 Flight Information Regions (FIRs) of various sizes, many that mirrored national boundaries.
 - ASEAN States were moving towards a Seamless Sky initiative; other Asian States should work together to also achieve the same result.
 - Currently, air traffic congestion was viewed individually sector by sector, so the lowest common denominator [sector] determined capacity.
- NextGen Seamless ATM Perspective, Federal Aviation Administration (FAA)
 - Congested airspace necessitated greater efficiency, such as moving from ground-based to space-based systems that better utilised airspace.
 - NextGen was not a single project but integration of different levels of roadmap systems, procedures, and capabilities through collaboration.
 - Moving from procedural and surveillance-based control (where the location of the aircraft is known) to trajectory-based control (where the future location of the aircraft is known) was critical.
 - Airport improvements, particularly capacity enhancements, were also an important component of NextGen, as was weather, which caused 70% of delays in the USA.
- SESAR Seamless ATM Perspective, SESAR JU
 - The Single European Sky Automation Research (SESAR) programme was partly funded by a public-private partnership.
 - A key consultation stakeholder was staff associations that dealt with Human Factors (HF), safety, and security aspects.
- Harmonizing ATM modernization programmes, ICAO HQ
 - ICAO needed to know about modernization projects so these could be taken into account for assistance.

- The Standards Roundtable assessment process included aviation industry standard creating bodies such as RTCA (Radio Technical Commission for Aeronautics), but the Roundtable itself was not formally constituted.
- Aviation System Block Upgrades and Conferences, ICAO HQ
 - The ‘Block Upgrade’ - Aviation System Block Upgrade (ASBUs) concept inferred an iterative improvement, from Block 0 (zero) to 3, and were driven by a statement of intended operational improvement.
 - An outline of the Global Air Navigation Industry Symposium (GANIS, Montréal, 20-23 September 2011) and information on the 12th Air Navigation Conference (19-30 November 2012) was presented.
 - A forum for the Asia/Pacific was needed to move the policy and have direct engagement with the implementers.
- Flexible use of airspace/Civil-military cooperation, ICAO HQ, ICAO APAC
 - Flexible Use Airspace (FUA) was an airspace management concept based on the principle that airspace should be a continuum in which all user requirements were accommodated to the greatest possible extent.
 - Special Use Airspace (SUA) needs to be regularly reviewed to ensure the correct designation, size and activation process.
 - Civil and the military have common interests, including access to airspace that is normally used by the other party.
 - Civil defence and Search and Rescue (SAR) operations, and Unmanned Aircraft Systems (UAS) were areas of joint civil –military interest.
 - The 47th DGCA Conference urged greater participation of military authorities in civil forums to facilitate optimum utilization of airspace.
 - Data sharing (including aircraft surveillance data) between the civil and military can also facilitate Collaborative Decision-Making (CDM), a vital component of Air Traffic Flow Management (ATFM).
- Airline Perspective, IATA Asia/Pacific
 - Specific technology was not necessarily considered relevant; what was relevant was the performance outcome.
 - APAC had 60% of the world’s population, but no specific plan beyond sovereign issues, and deal with environmental and economic drivers.
 - It was necessary to ‘think globally and act regionally’.
 - The key role of Informal ATM Coordination Groups was highlighted.
 - A small high level working group was suggested to develop the regional direction through key States, to act as an advisor to APANPIRG.
 - ‘Clustering’ or collective initiatives could be a strategy for issues such as safety assessment and Aeronautical Information Management (AIM).
- ANSP Perspective, CANSO Asia/Pacific
 - CANSO noted the need to focus on customers using a business approach.
 - The highly fragmented nature of airspace worked against Seamless ATM.
 - There was a lack of a unifying body like Eurocontrol; thus ICAO was critical to the APAC regions.

- Integrated PBN and ATFM, FAA
 - RNP and RNAV were not new, but the system integration was new.
 - PBN was being implemented with a geographical focus on 'Metroplex' development (busy terminal airspace serving multiple aerodromes).
 - Procedures that merged arrival procedures with RNP approaches that mirror visual approach procedures were being developed.
- Integration of UAS into ATM Systems, FAA
 - UAS integration depended on control and command of the aircraft, including 'lost link', and over-the-horizon capabilities, as well as 'sense and avoid' technologies, which were still critical immature technologies.
 - A new FAA Part 107 regulation for 25 kg and below UAS was planned with a Notice for Proposed Rule-Making (NPRM) expected in 2011.
- AIM-SWIM, FPL 2012, ICAO HQ, ICAO APAC
 - Work that was underway on integrating AIM changes into ATM with a 2013 Amendment 37 to Annex 15 and a 2016 comprehensive Annex 15 amendment plus PANS AIM planned.
 - AIM was seen as the glue that enabled an information-rich environment, supporting multiple ATM inter-related domains and effective CDM.
 - The aircraft would not just be a consumer of information, but a provider of information.
- ATM Procedures and Drivers, FAA
 - There was a need to coordinate more widespread application of new technology and procedures across the APAC regions, which would require a strong input from all stakeholders, with special emphasis on the Major Traffic Flows (MJFs).
 - ATM Coordination Groups were key enablers for multilateral ATM coordination.
 - Initiatives such as the Atlantic Interoperability Initiative to Reduce Emissions (AIRE) were an example of the inter-regional harmonization that was necessary.
 - Initial expansion of advanced ATM procedures had been in the oceanic areas where the culture was more accepting of change, and the airline fleet was relatively modern.
 - There were a lot of different activities going on, such as the Asia and South Pacific Initiative to Reduce Emissions (ASPIRE), which demonstrated the optimisation potential of gate-to-gate operations, including surface movements (the entire experience must be looked at, not just the airborne phases).
 - User Preferred Routes (UPRs) had been very successful and were growing, but Dynamic Airborne Re-route Procedures (DARPs) were underutilised at present.
 - Optimised Descent Profiles (ODP), a type of Continuous Descent Operation (CDO) with a known Top of Descent (TOD) point for greater ATC control, were being implemented.

- There are benefits from even a partial Tailored Arrival (TA), which can be subject to military collaboration.
- Climb Descent Procedure (CDP) and In-Trail Procedure (ITP) were useful enablers to optimising airspace usage, allowing levels to be swapped when they would otherwise be occupied by 'blocking' aircraft.
- Airline Operations, IATA Asia/Pacific
 - Most technologies and procedures required for Seamless ATM operation were available now.
 - Aircraft technology had advanced faster than ATM, so ground systems were behind airborne system capability.
 - Airlines did not care who owned the terrain below, but were concerned with standardised service provision, so we need to stop thinking of FIRs as national boundaries.
 - Flex-tracks could be conducted by any RNAV-capable aircraft.
 - Mixed mode (PBN and non-PBN) operations can compromise efficiencies, but there was a distinction between the lack of capability and the lack of certification.
- CNS Technology Roadmap, ICAO HQ
 - Comprehensive and dynamic CNS Roadmaps were required by the 37th Assembly.
- ATS Surveillance, Mr. Greg Atkins, Airservices Australia
 - The Automatic Dependent Surveillance – Broadcast (ADS-B) mandate took effect December 2012, requiring airlines to seek approval from their own regulators, affecting operators and States well beyond Australia.
 - Wide area multilateralisation (WAM) was seen as a niche 'filler' for ATS surveillance gaps.
 - The data-sharing agreement with Indonesia was to improve situational awareness, but the additional capabilities of error detection and safety nets were also extremely important.
- PBN-GNSS development, ICAO HQ, ICAO APAC
 - PBN only addressed the 'N' element
 - The recommendation to require Global Navigation Satellite System (GNSS) as a minimum specification for APAC approvals was a significant step towards an integrated approach.
 - New PBN navigation specifications and ATC separation standards based on these specifications were being developed that would assist Seamless development, such as RNP2.
 - PBN was viewed as an integral part of Seamless ATM development, as long as it was coordinated.

Seamless ATM Symposium Discussion

2.2 A 'round table' discussion provided an opportunity for participants to debate and summarise the information that had been presented during the Symposium.

2.3 The Co-Chairs noted that the necessary enabling technology was there but it was somewhat fragmented, and being implemented slowly. This was mainly because of rigid regulatory systems and the very diverse APAC economies and environment. Often overlooked was terminal airspace congestion. The Co-Chairs identified that there were many different programmes, concepts, many technologies that have been around for some times but were under-utilized.

2.4 China wanted a clear definition of Seamless ATM and suggested that progress should be prioritised into several projects.

2.5 Hong Kong China stated that it would be helpful if there was a list of tasks and a time line for achievement of these tasks; thus Seamless would become tangible.

2.6 Japan stated that in order to improve the way in which ANSPs worked, there was a need for clear guidance from ICAO from a body like a Task Force; and espoused the benefit of ANSP research and development collaboration.

2.7 The Republic of Korea stated that there was confusion caused by the proliferation of documents and terms such as the GANP with its 23 Global Plan Initiatives (GPIs), the many acronyms, the regional performance framework form and now Block Upgrades; thus there needed to be simple guidance.

2.8 Singapore suggested the scope of any work must focus on the systems and specific areas of improvement that enable seamlessness – not multiple projects, and followers could leapfrog steps from start to implementation, which could result in mass participation. Singapore asked whether the APAC regions needed to establish a dedicated pool of engineers to share expertise and resources.

2.9 SESAR JU advised that there were six main European service provision areas with almost 80% of the traffic, so if benefits focused on these areas, then others could benefit consequentially.

2.10 CANSO emphasised that there was a need to determine how to use the Seamless ATM 'box of tools'. There should be a focus on the MTFs and 'low hanging fruits' (simpler projects with good deliverables).

2.11 IATA stated that it was a reality that many ANSPs were institutional in their structure, which was quite different to the business model of airlines. There was a need to start looking at the gate-to-gate traffic flow perspective, and focus on capabilities, not technology. States did not need to replicate all aspects of Seamless ATM, as each had very different capabilities. A key part of Seamless ATM was the military aspect. The concept can be done on a regional basis, and the implementation can be done on a sub-regional basis. There was a need to support controllers much better in some less-developed States. Some States were vulnerable to vendors.

2.12 IFATCA stated that there was a need to ensure that there are not too many 'holes' if States did not participate, and thus it was important that all administrations were involved.

Ad-Hoc Meeting, Wednesday, 17 August 2011

2.13 The ICAO APAC Deputy Regional Director opened the Ad Hoc meeting, recalling the ICAO framework for Seamless ATM formed by the GANP and Operational Concept, and the direction from the DGCA Conference and APANPIRG.

- Development vision and programme: Australia, Airservices Australia
 - The BANJO Briefing and NOTAM Joint Operations initiative was a significant collaborative harmonised system between Australia and New Zealand, which also provided full contingency services.
 - ANSP system purchasing and evaluation collaboration was espoused.
 - ITSAP (Indonesian Transport Safety Package) was an agreement between Australia and Indonesia to improve the Indonesian transport safety system – building neighbour relationships was a key.
 - Australia maximised airspace through review – resulting in a reduction of restricted areas from 81 to 15.
 - Different levels of conditional entry had been appended to restricted areas by the independent airspace authority, providing greater flexibility.
 - AirServices Australia was working with the military to synchronise training, procurement of ATM and operating procedures.
 - Noise was winning the noise versus emissions debate, leading to conflicting requirements and less efficient PBN procedures, so understanding the environmental issues was important.
 - The problems and solutions for APAC were quite different from Europe and the USA.
- Development Vision and Programme: China, CAAC
 - China's annual traffic increase was approximately 15%.
 - High speed trains may assume an important role as part of an integrated transport system in the future.
 - China had some difficult problems such as mountainous terrain, insufficient airspace, and inflexible utilisation.
 - China recognised that CDM practices and a nation-wide ATFM system were needed.
 - Collaboration with the military was a priority to try and release more airspace and operate on a more flexible basis, particularly to increase temporary routes and reduce permanently segregated airspace.
 - The presentation noted that Trajectory Based Operations were an objective.
 - Compass (BeiDou) GNSS coverage with 12 satellites in Asia Pacific was expected by 2012 and global Coverage with 35 satellites by 2020.
 - Technology was not an end to itself and the goals must align with the performance objectives determined with the user.
 - Closer international cooperation was required, and Seamless ATM was viewed as a high level principle in China.

- Development vision and programme: Hong Kong, China, DGCA
 - The significant increase in traffic demand had created a personnel resource issue for qualified personnel, affecting PBN implementation due to lack of procedure designers and certification resources.
 - There were differing levels of civilian access to military airspace, and uncertainty of information from military for strategic or pre-tactical planning.
 - The creation of regional groups fostered by ICAO had assisted regional seamless cooperation.
 - Hong Kong China had already implemented ATS Inter-facility Datalink Communications (AIDC) between Sanya and Hong Kong and used a communications facility in the Sanya FIR for Seamless ATM services.
 - Hong Kong China encouraged States and administrations to participate in ATM coordination meetings.

- Development vision and programme: India, Airports Authority of India (AAI)
 - 35% airspace was reserved for military use.
 - The growth in air traffic had been highly challenging to manage, with conflicting user requirements from civil, military and space users.
 - Common regulations and uniform standards were considered to be very important, as was the integration of ground and air segments.
 - There was a challenge of providing skilled manpower (competency).
 - The introduction of AIM and ATFM supported Seamless ATM.
 - The GAGAN Space-Based Augmentation System (SBAS) was to be certified by June 2013.
 - ADS-B and MLAT would be used to augment radar surveillance; and significant automation upgrades and amalgamation of ATS centres were planned, plus.
 - There were significant plans to reduce the en-route separation standard to 10NM over Indian continental airspace, based on ATS surveillance.
 - The key drivers were suggested as cooperation, collaboration and participation with adjacent States.

- Development vision and programme: Singapore, CAAS
 - The high workload associated with tactical aircraft manoeuvring and constant radio control of air traffic was not optimal in terminal airspace.
 - The rigid airspace configuration caused airspace congestion.
 - Ground systems needed to be addressed, especially in the areas of aerodrome complexity, taxiing and pushback, and runway capacity.
 - Cross-border cooperation such as between Singapore and with Indonesia and Viet Nam for ADS-B collaborative data sharing was on-going.
 - The LORADS III ATC System features included Short Term Conflict Alert (STCA) with multiple hypotheses, and Level of Service symbology.
 - A key Seamless ATM development was the pairing of RNP AR and GLS/ILS approaches.

- Development vision and programme: Thailand, Aerothai, Thailand
 - There was regionally fragmented airspace with multiple FIRs, restricted by national borders.
 - There was cooperation with the military, although about 70% of airspace was affected by SUA.
 - It was expected that there would be military participation in the new ATM Centre.
 - An ATC Sector capacity evaluation tool was being developed.
 - There was significant ATM coordination group activity in the area, including the Mekong ATM Group, India-Myanmar-Thailand, Malaysia-Thailand and Singapore-Thailand initiatives.
 - The Seamless ASEAN Sky Initiative, lead by Thailand and Singapore was highlighted as having high level political support.
- Seamless ATM Research and Development Activities, ENRI, Japan
 - The Electronic Navigation Research Institute (ENRI) presented the research basis for ATM improvement in Japan, noting that GNSS performance in APAC regions was dissimilar.
 - ENRI had numerous research projects, including the areas of flight intention data, visualising controller workload and surface efficiency.
 - ATM design decisions must be made on data and research analysis.
- Regional Harmonization, ICAO APAC
 - The human elements were crucial for Seamless ATM, as national culture was a significant reason why even current technologies were not implemented in a seamless manner.
 - There were numerous APAC initiatives that contributed to Seamless ATM, including ATS surveillance data sharing, and almost seamless operations between some city pairs, common rules used by most Pacific Island States, and the draft Airspace and ATFM Concepts of Operations.
 - The APAC regions were characterised by a patchwork of airspace and overly conservative application of separation standards, probably because of the immaturity of ‘just culture’, non-punitive reporting and continuous SMS improvement systems in some administrations.
 - In Asia where there was significant ‘direct’ (not via satellite or a third party) communication and surveillance capability, but rigid routing and flight level allocation schemes were typical, leading to procedural separation limitations. A change in paradigm, not just technology was needed.
 - Aerodrome operators need to have sufficient aeronautical experience to be effectively involved in aviation planning and CDM.
 - APAC Regions could benefit from ensuring political decision-makers understood the need for regional cooperative development (the ‘national interest’ can be an impediment to Seamless ATM).
 - Simpler airspace and fewer ATS Centres were required if Seamless ATM was to be a reality.

Ad Hoc Meeting Discussion

2.14 A 'round table' discussion then provided an opportunity for participants to debate and summarise the information that had been presented during the Ad Hoc Meeting.

- Co-Chair summary:
 - There was a need for a Seamless Sky vision, which included the high level objectives, and a set of principles and guidelines.
 - There should be an Asian Skies Planning Team or Committee, to develop the vision and high level Seamless ATM concept, under APANPIRG.
 - The Group's tasks and objectives should keep evolving to deal with the challenges, and the group could track and monitor what was happening.
 - There should be a focus on the MTF and the ATM Coordination Group gaps, to ensure that the vision stayed in line with the Block Upgrades.
 - APAC regions did not need as detailed a plan as NextGen or SESAR.
 - Incremental targets could be set and suitable times for the body to complete its work, meeting more frequently than once a year.
 - The ATM modernization framework should be completed in two years.
 - This body should comprise members from key member States that had the expertise, technical support and resources to progress the work.
 - The group needed to be able to conduct its work and coordinate effectively between the APANPIRG meeting dates.
- China comments:
 - The body should be a high level coordination group that avoided overlap with other task forces and groups.
- Hong Kong China comments:
 - Everyone needs to make a collective effort.
- Japan comments:
 - All Air Navigation Service Providers must be 'on board'.
 - There was a need to share information about this work.
 - The meeting had to be high level.
- Singapore comments:
 - Block Upgrades must be part of the solution
 - The group's members must be sufficiently senior to support such a high-level group.
 - The group's scope should go beyond vision to specific capabilities and tangible deliverables, which can be implemented by Sub-Groups and/or ATM Coordination Groups.
 - Two years may not be enough to evaluate Seamless issues properly.
- IFATCA comments:
 - The establishment of core principles was not difficult as some information was already provided, such as the GPIs, Block Upgrades, etc.

- IATA comments:
 - A concept should be defined for each every traffic flow.
 - Work was achievable for a core team, which could then drill down to other expertise when required.
 - APAC had a broad Operational Concept, but it needed to add details.
 - Collaborative research and development was possible, so work was required to identify which States had research and development, and resources to support clustering capabilities (AIPS, manuals, etc.).
 - The regulators and military must be involved.

2.15 The Meeting agreed in principle to the formation of a group suggested by the Co-Chairs to explore Seamless ATM implementation in the region. As a result of this agreement, a **Draft Decision** is presented herein¹:

That, the Asia/Pacific Seamless ATM Planning Group (APSAPG) be formed, reporting to APANPIRG, in accordance with the Draft Terms of Reference appended in **Appendix A**.

2.16 From the Symposium and Ad Hoc Meeting's presentations and discussions, the following are recommended key principles, requirements and focus areas:

APSAPG Administration

- a) APSAPG membership (14): Australia, China, Hong Kong China, India, Japan, Republic of Korea, Singapore, Thailand, USA, ACI, CANSO, IATA, IFALPA, IFATCA. Military participants and advisors were encouraged, or APSAPG participants would take responsibility for consulting military colleagues.
- b) Meetings either twice or three times a year (dependent on resources).
- c) Work should focus on identifying Seamless ATM gaps, barriers and enablers for gate-to-gate operations on the busiest APAC MTFs in an incremental manner (project orientated), with an operational plan for each MTF.
- d) Information on Seamless ATM and APSAPG would be circulated by administrations and through an Internet site, which would aim to provide simple templates, guidance material and Seamless ATM principles for administrations.

3. ACTION BY THE MEETING

3.1 The meeting is invited to:

- a) note the information contained within this Working Paper; and
- b) discuss the Draft Decision to form an Asia/Pacific Seamless ATM Planning Group (APSAPG, paragraph 2.15 and 2.16)

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¹ The Secretariat developed the Draft Terms of Reference after the meeting

Appendix A: Draft Terms of Reference

ASIA-PACIFIC SEAMLESS ATM PLANNING GROUP (APSAPG)

APSAPG Objective and Scope

The objective of the Asia/Pacific (APAC) Seamless ATM Planning Group (APSAPG) is to determine the means for Seamless ATM development in the Asia and Pacific Regions.

APAC Seamless ATM Plan

The Plan will be aligned with the ICAO Global ATM Operational Concept (Doc 9854) and the Global Air Navigation Plan (Doc 9750), taking into account of the output from the GANIS in 2011 and AN Conference in 2012, and other global Seamless ATM initiatives that may affect the APAC Regions.

In defining the Concept Plan the APSAPG shall:

- conceptualise future Seamless APAC air traffic operations, paying due regard to traffic forecasts for major airports and major traffic flows;
- determine the key and minimum requirements (including but not limited to, technologies, regulations, training, airspace organisation) for seamless ATM for the following phases:
 - surface movements;
 - departure;
 - en-route; and
 - arrival and approach;
- verify the current status of APAC administration's Seamless ATM capability, including the identification of gaps affecting harmonization and interoperability;
- determine priorities, programmes, and mechanisms for implementation of Seamless ATM, including phases with broad timelines and projected deliverables; and
- develop guiding principles related to the Seamless ATM consultation and collaboration processes, including reference material for decision-makers.

Coordination

APSAPG shall coordinate through the Secretariat with other Regional Groups, including ASEAN and future modernisation of ATM systems in other regions to ensure trans-regional issues are managed.

Meeting

The membership of the APSAPG shall be composed of Australia, China, Hong Kong China, India, Japan, Republic of Korea, Singapore, Thailand, USA, ACI, CANSO, IATA, IFALPA, IFATCA that can provide the necessary expertise, research resources and leadership for the tasks and objectives of the APSAPG. Observers and Advisors from the Member States may be approved by the APSAPG Chair, in consultation with the Secretariat.

APSAPG is expected to meet approximately twice a year, subject to resources and work progress.

Reporting

The APSAPG shall submit a preliminary/interim study to APANPIRG/23 in 2012 and a final study to APANPIRG/24 in 2013.
