

INTERNATIONAL CIVIL AVIATION ORGANIZATION
ASIA AND PACIFIC OFFICE



REPORT OF THE TWENTIETH MEETING OF THE
ATM/AIS/SAR SUB-GROUP of APANPIRG
(ATM/AIS/SAR/SG/20)

Singapore, 5 to 9 July 2010

The views expressed in this report should be taken as those of the
group and not the Organization

Approved by the meeting
and published by ICAO Asia and Pacific Office

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ATM/AIS/SAR/SG/20

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Attachment 1 List of Participants

Attachment 2 List of Working Papers and Information Papers

PART I – HISTORY OF THE MEETING

1. Introduction

1.1 The Twentieth Meeting of the APANPIRG Air Traffic Management/Aeronautical Information Services/Search and Rescue Sub-Group (ATM/AIS/SAR/SG/20) hosted by the Civil Aviation Authority of Singapore was held at Hotel Pan Pacific, Singapore from 05 to 09 July 2010.

2. Attendance

2.1 The meeting was attended by 80 participants from 20 States, 2 Special Administrative Regions of China and 3 International Organizations. A list of participants is provided at **Attachment 1** to this Report.

3. Officers and Secretariat

3.1 Mr. Colman Ng, Assistant Director-General, Civil Aviation Department of Hong Kong, China acted as Chairman of the Sub-Group and presided over the meeting throughout its duration.

3.2 Mr. Kyotaro Harano, Regional Officer ATM, ICAO Asia/Pacific Office, was the Secretary of the meeting. He was assisted by Mr. K.P. Rimal, Technical Consultant, Mr. John Richardson, ATM Expert and Ms. Sunisa Charoenmin, Technical Assistant ATM of the ICAO Asia and Pacific Regional Office,

4. Language and Documentation

4.1 The ATM/AIS/SAR Sub-Group met as a plenary throughout the meeting. The working language of the meeting was English inclusive of all documentation and this Report. Thirty-seven working papers (WPs) and twenty-three information papers (IPs) were presented at the meeting. A list of papers is included in **Attachment 2** to this report.

5. Opening of the Meeting

ICAO Regional Office

5.1 Mr. Kyotaro Harano, on behalf of Mr. Mokhtar A. Awan, Regional Director, ICAO Asia and Pacific Office extended a warm welcome to the participants and conveyed his warm greetings and best wishes for a successful and productive meeting. He expressed his gratitude to the Civil Aviation Authority of Singapore for hosting this important meeting at a short notice and for the warm hospitality and excellent arrangement made for the meeting. He thanked all the participants for making changes to their travel plan from Bangkok to Singapore and regretted any inconveniences caused by the change of venue at the last moment. He further stated that this was the first meeting of the Sub-Group held away from the Regional Office with only one Secretary serving the meeting. This being the 20th meeting of the Sub-Group he congratulated all the participants for their contribution and support. He thanked the Chairman for his leadership, support and hard work.

Statement of Chairperson of the Sub-Group

5.2 Mr. Colman Ng welcomed all participants to the meeting. He recalled that last year the aviation industry had a turbulent time due to the global economic recession which has gradually rebound since then. He remarked that the volcanic eruptions gave rise to disruption to air services causing severe impact to airlines. Over the past few years, he commended the efforts of the Sub-Group in making significant progress in the development and implementation of RVSM, RNP routes, PBN designer training, formulation of ADS-B Road Map and other SAR/AIS activities. Since the last meeting there are still a number of outstanding issues that needs to be addressed such as deficiencies in the ATM/AIS/SAR field, PBN procedures implementation and sustainability of CRA, implementation of the new flight plan and ATS message format etc. He thanked the Singapore Government for their generosity and support to host this meeting at short notice due to recent events in Bangkok that necessitated the change of venue. He also thanked the Secretariat for their hard work in preparing for the meeting away from the Bangkok Regional Office and wished participants a fruitful and rewarding meeting. Mr. Owen Dell, who was attending the meeting, recalled that he was elected as the first Chairman of the Sub-Group meeting held 20 years ago when he had represented New Zealand and noted the significant changes had taken place over the years in the ATM/AIS/SAR fields.

6. **Terms of Reference (TORs) of the ATM/AIS/SAR Sub-Group of APANPIRG**

6.1 The TOR of the Sub-Group is as follows:

1. Ensure the continuing and coherent development of the ASIA/PAC Regional Air Navigation Plan in the ATM/AIS/SAR fields in accordance with the Global Air Navigation Plan and the Global Aviation Safety Plan;
2. Review and identify deficiencies that impede the implementation or provision of efficient ATM/AIS/SAR services in the Asia/Pacific region;
3. Monitor CNS/ATM systems research and development, trials and demonstrations in the fields of ATM/AIS/SAR and facilitate the transfer of this information and expertise between States;
4. Make specific recommendations aimed at improving ATM/AIS/SAR services by the use of existing procedures and facilities and/or through the evolutionary implementation of CNS/ATM systems;
5. Review and identify inter-regional co-ordination issues in the fields of ATM/AIS/SAR and recommend actions to address those issues; and
6. Ensure ATS environmental initiatives are consistently identified and progressed, and act as the Asia/Pacific regional focal point for the reporting of outcomes from ATS environmental initiatives.

(Last updated APANPIRG/19, September 2008)

7. **Draft Conclusions, Draft Decisions and Decisions of the ATM/AIS/SAR Sub-Group**

7.1 The ATM/AIS/SAR Sub-Group records its actions in the form of Draft Conclusions, Draft Decisions and Decisions within the following definitions:

- a) **Draft Conclusions** deal with matters that, according to APANPIRG terms of reference, require the attention of States, or action by the ICAO in accordance with established procedures.
- b) **Draft Decisions** deal with the matters of concern only to APANPIRG and its contributory bodies; and
- c) **Decisions** of ATM/AIS/SAR Sub-Group relate solely to matters dealing with the internal working arrangements of the ATM/AIS/SAR Sub-Group.

8. **List of Decisions and Draft Conclusions/Decisions**

8.1 List of Draft Conclusions

- Draft Conclusion SG 20/1 – Common Set of Performance Metrics for All the Regions
- Draft Conclusion SG 20/2 – Regional Guidance Material for the Implementation of Amendment 1 to PANS-ATM
- Draft Conclusion SG 20/4 – Strategy for Implementation of New Flight Plan Format
- Draft Conclusion SG 20/5 – Notification of State Transition Date to the NEW Flight Plan Format
- Draft Conclusion SG 20/8 – Use of Global database for allocation of Five-Letter Name-Codes in the Asia and Pacific Regions
- Draft Conclusion SG 20/9 – ICAO Asia/Pacific Seamless ATM Workshop
- Draft Conclusion SG 20/13 – CRA Arrangement under RASMAG Responsibility
- Draft Conclusion SG 20/14 – Transfer FASID Table ATS 2 from ATS to MET
- Draft Conclusion SG 20/15 – Elimination of Air Navigation Deficiency

8.2 List of Draft Decisions

- Draft Decision SG 20/12 – Develop Sub-Regional Volcanic Ash Contingency Plan

8.3 List of Decisions

- ATM/AIS/SAR Sub-Group Decision 20/3 – Phased Approach to Implement the NEW Flight Plan Format
- ATM/AIS/SAR Sub-Group Decision 20/6 – Terms of Reference of the AIS-AIM Implementation Task Force
- ATM/AIS/SAR Sub-Group Decision 20/7 – Monitor the Progress at the AIS-AIM Study Group
- ATM/AIS/SAR Sub-Group Decision 20/10 – Dissolve the present ATFM Task Force
- ATM/AIS/SAR Sub-Group Decision 20/11 – Terms of Reference (TORs) of the South-East Asia ATM Coordination Group

**AGENDA ITEM 1: ADOPTION OF PROVISIONAL
AGENDA**

PART II – REPORT ON AGENDA ITEMS

Agenda Item 1: Adoption of Provisional Agenda

1.1 The Provisional Agenda of the meeting was presented for review and consideration. The meeting reviewed and adopted the Agenda as the agenda of the meeting without any change as follows:

- | | |
|------------------------|--|
| <u>Agenda Item 1:</u> | Adoption of Provisional Agenda |
| <u>Agenda Item 2:</u> | Review the APANPIRG/20 Report and subsequent ANC/Council Actions with respect to ATM/AIS/SAR issues |
| <u>Agenda Item 3:</u> | Regional Performance Framework and Metrics |
| <u>Agenda Item 4:</u> | Review and progress the tasks assigned to the ATM/AIS/SAR/SG by APANPIRG |
| <u>Agenda Item 5:</u> | Consider problems and make specific recommendations concerning the provision of ATM/AIS/SAR in the Asia/Pacific Region |
| <u>Agenda Item 6:</u> | Review of ATS coordination group meetings |
| <u>Agenda Item 7:</u> | Review outcome of the Twelfth Meeting of the Regional Airspace Safety Monitoring Advisory (RASMAG/12) |
| <u>Agenda Item 8:</u> | Review developments relating to CNS/ATM implementation |
| <u>Agenda Item 9:</u> | Deficiencies in the Air Navigation field |
| <u>Agenda Item 10:</u> | Update the ATM/AIS/SAR Task List |
| <u>Agenda Item 11:</u> | Any other business |
| <u>Agenda Item 12:</u> | Date and venue for next meeting |

**AGENDA ITEM 2: REVIEW THE APANPIRG/20
REPORT AND SUBSEQUENT
ANC/COUNCIL ACTIONS, WITH
RESPECT TO ATM/AIS/SAR
ISSUES**

Agenda Item 2: Review the APANPIRG/20 Report and Subsequent ANC/Council Actions with respect to ATM/AIS/SAR issues

Review of Outstanding Conclusions and Decisions of APANPIRG

2.1 The meeting reviewed and updated the list of Outstanding Conclusions and Decisions of the Asia/Pacific Air Navigation Planning and Implementation Regional Group (APANPIRG) meetings held prior to its 20th meeting (APANPIRG/20, September 2009) in the ATM/AIS/SAR fields, as shown at **Appendix A** to the Report on Agenda Item 2. The meeting also reviewed and updated the list of new Conclusions and Decisions from APANPIRG/20 with respect to ATM/AIS/SAR issues as shown at **Appendix B** to the Report on Agenda Item 2.

2.2 While reviewing the lists, the meeting considered that with respect to Conclusion 18/53, it was considered necessary to encourage States who had not submitted their Performance Based Navigation (PBN) implementation plan to submit as soon as possible.

2.3 With respect to Conclusion 20/8, it was noted that by the due date of 1 July 2010, only Australia, Hong Kong China and Japan had submitted their scheduled date and implementation methodology to ICAO. The meeting therefore requested the Secretariat to urge States to submit their plans as soon as possible.

2.4 It was noted that the updated lists of Outstanding Conclusions and Decisions, and the list of the APANPIRG/20 Conclusions and Decisions would be presented to APANPIRG/21 to be held in Bangkok from 6 to 10 September 2010.

Review of ANC/Council Actions on the Report of APANPIRG/20

2.5 The meeting noted the actions taken by the Air Navigation Commission (ANC) on the Report of the APANPIRG/20 in the ATM/AIS/SAR fields. It was clarified that in accordance with the revised procedure adopted by the Council (C-DEC 177/14, dated 20 March 2006), Planning and Implementation Regional Groups reports would not be presented to the Council unless the Commission deems it necessary for the Council to take action on any of the Conclusions. In the case of APANPIRG/20 Report, as there were no specific items that required Council action, it was not presented to the Council. The meeting noted ANC action on specific items of interest as follows:

Air Traffic Management

2.6 With reference to Conclusion 20/12 regarding the adoption of the *ATFM Communications Handbook for the Asia/Pacific Region*, the ANC was informed that the Secretariat was in the process of developing a global ATFM guidance material with a target date of completion in 2011.

2.7 While noting Conclusion 20/23, the ANC welcomed the initiative of APANPIRG in preparing an impact statement for the Reduced Vertical Separation Minimum (RVSM) long-term height monitoring requirements and noted that it would serve as regional guidance material for developing regional monitoring infrastructure.

Communications/Navigation/Surveillance

2.8 With regard to *Satellite data link communication capability*, the ANC noted the concerns of APANPIRG for ensuring the availability and sustainability of infrastructure to fulfill operational requirements for satellite data link communication services (Conclusion 20/34 refers). It had been further noted that the same issue was highlighted by the North Atlantic Systems Planning

Group (NAT SPG) in September 2008. The ANC had noted that ICAO would undertake a case study on the ownership and control of the air navigation services infrastructure, including the development of a draft service level agreement for use by air navigation service providers (ANSPs), to ensure that private third party service providers perform in line with recognized safety and performance requirements. Furthermore, it was recognized that usage of two or more autonomous networks by States and international organizations would provide much better availability. The ANC invited the Secretariat to monitor further developments in this regard.

2.9 *PBN implementation:* Confirming the request of APANPIRG in its Conclusions 20/37 (PBN guidance material), 20/42 (PBN safety assessment) and 20/48 (Flight inspection and validation of flight procedures), the ANC requested the Secretary General to address these performance based navigation (PBN) issues through appropriate ANC Panels and Study Groups.

Regional Air Navigation Deficiencies

2.10 *Addressing deficiencies:* The ANC requested the Secretary General to urge States to develop and implement an action plan for each deficiency, and to provide information to the Regional Office.

Future Work Programme

2.11 *Future ATM systems.* In relation to paragraph 5.6 of the report, the ANC noted that Japan had proposed to position APANPIRG as a platform to discuss the future ATM of Asia/Pacific Region and establish a new Sub-Group or a dedicated project under APANPIRG, which, after considerable discussions, referred the subject to the 46th Directors General of Civil Aviation (DGCA) Conference (October 2009, Osaka) for its review. The ANC noted that the DGCA Conference agreed (Action item 46/1 of the 46th DGCA Conference refers) to use the existing mechanism of APANPIRG as the starting platform to discuss the issues.

Follow-Up Action Plan by the ANC on Selected Conclusions/Decisions

2.12 The follow-up Action Plan by the Commission on selected Conclusions/Decisions of APANPIRG/20 in the ATM/AIS/SAR fields presented in a tabular format was reviewed as provided in **Appendix C** to the Report on Agenda Item 2.

ATM/AIS/SAR/SG/20
Appendix A to the Report on Agenda Item 2

Conclusion/ Decision No. --- Strategic Objective*	Title of Conclusion/ Decision	Text of Conclusion/Decision	Follow-up Action	To be initiated by	Deliverable	Target date	Status
C 18/53 D	Development of State PBN Implementation Plans	That, the Regional Office encourages States to begin development of their State PBN implementation plans in harmony with the development of the Asia/Pacific Regional PBN implementation plan being coordinated by the Asia/Pacific PBN Task Force for submission to APANPIRG/19 (2008).	Encourage States to develop State PBN implementation plan by 2009	ICAO APAC Office	State Letter based on regional PBN implementation plan to be developed by PBN task force	2009 Revised 2010	COMPLETED. PBN/TF has developed models for such plans. 10 States submitted State PBN Implementation Plan for review by the PBNTF.
C 18/59 D	Resolution of ATM and OPS Deficiencies in the South West Pacific Small Island Developing States (SIDS)	That, in recognizing the safety implications of the long-standing ATM and OPS deficiencies in the South-West Pacific SIDS included in the APANPIRG Deficiency Data Base, ICAO, in coordination with the international organizations and regional bodies concerned, considers providing urgent assistance to these States in order to build their capacity to provide the required services in a sustainable and cost-efficient manner	Assist in establishment of TC project	ICAO HQ	TC Project	2008	ON GOING -TC project in MET and AGA area have been established and to be further followed up. Deficiencies in ATM field need to be addressed.

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Appendix A to the Report on Agenda Item 2

Conclusion/ Decision No. --- Strategic Objective*	Title of Conclusion/ Decision	Text of Conclusion/Decision	Follow-up Action	To be initiated by	Deliverable	Target date	Status
<p>C 19/3</p> <p>A D</p>	<p>Assistance in South West Pacific Small Island States and Mongolia, Myanmar and Timor Leste in implementing the requirements of aerodrome certification and SMS</p>	<p>That, in recognizing the importance on the implementation of Annex 14, Volume I provisions related to aerodrome certification and SMS in the South West Pacific Small Island States and Mongolia, Myanmar and Timor-Leste, ICAO considers providing assistance to these States in order to build their capacity to provide the required services in a sustainable and cost efficient manner.</p> <p><i>[Note: An appropriate form of providing assistance could include establishment of an ICAO technical cooperation project with funding sought from donor agencies.]</i></p>	<p>Assist in establishment of TC Project</p>	<p>ICAO HQ/ICAO APAC Office</p>	<p>appropriate assistance Project</p>	<p>2009/ 2010</p>	<p>ONGOING</p> <p>SL dated 13/02/09 sent to these States to update status on implementation.</p> <p>ANC: Supported for the establishment of ICAO TC Project.</p> <p><i>IFFAS application being processed.</i></p>

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Appendix A to the Report on Agenda Item 2

Conclusion/ Decision No. --- Strategic Objective*	Title of Conclusion/ Decision	Text of Conclusion/Decision	Follow-up Action	To be initiated by	Deliverable	Target date	Status
C 19/18 A D	ATS Message Management Center (AMC) Software	That, to facilitate implementation and management of ATN in Asia/Pacific Region, ICAO be urged to facilitate transfer of Eurocontrol AMC Software to Aerothai and to allow Aerothai to modify the Software to suit the requirements of Asia/Pacific Region.	Coordinate with parties concerned.	ICAO HQ	MOU signed and AMC software transferred.	May 2009 Revised June 2009	ANC: Noted that the secretariat is reviewing the feasibility. CLOSED ICAO HQ issued State Letter on 19 April 2009 asking all States to use European AMC service for the off-line address management. AMC also provides other guidance to the States and conducted training for users in regions.

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Appendix A to the Report on Agenda Item 2

Conclusion/ Decision No. --- Strategic Objective*	Title of Conclusion/ Decision	Text of Conclusion/Decision	Follow-up Action	To be initiated by	Deliverable	Target date	Status
<p>C 19/45</p> <p>A D</p>	<p>Transition to ISCS 3rd Generation</p>	<p>That, in view of the plans by the ISCS Provider State to upgrade the ISCS broadcast to a new 3rd Generation service (ISCS 3G) by the end of 2009:</p> <p>a) the ISCS Provider State be urged to provide timely information to the ISCS user States on the planned changes including specifications of the hardware and software changes, transition timeline and expected cost implications for the users if any; and</p> <p>b) the ISCS user States be urged to keep abreast of the planned developments through the established channels of communication with the ISCS Provider State and plan well in advance any resources required for the transition to the ISCS 3G;</p> <p><i>Notes:</i></p> <p>1) <i>The ISCS Provider State will use the established network of ISCS focal points as its basis for keeping States informed.</i></p> <p>2) <i>The Secretariat will undertake the task to keep the list of ISCS focal points up-to-date to ensure efficient communication between the ISCS Provider State and the ISCS user States in the ASIA/PAC Region.</i></p>	<p>Provide specifications</p> <p>Notify ISCS user States</p>	<p>ISCS provider State</p> <p>ICAO APAC Office</p>	<p>Specification information available</p> <p>State Letter</p>	<p>Mar 2009</p> <p>Apr 2009</p>	<p><u>COMPLETE</u> C 19/45 reinstated in C 20/61 which was completed through SL- T4/8.4, T 4/8.4.1: AP073/10 (MET) sent 10 May 2010</p>

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Appendix A to the Report on Agenda Item 2

Conclusion/ Decision No. --- Strategic Objective*	Title of Conclusion/ Decision	Text of Conclusion/Decision	Follow-up Action	To be initiated by	Deliverable	Target date	Status
		3) All information on the planned transition will be available on: http://www.weather.gov/iscs					
C 19/53 D	Convening MET/ATM TF meeting and organizing MET/ATM seminar	That, a meeting of MET/ATM Task Force be convened in 2009 to review and update the Work Programme of the group and prepare a programme for the second ASIA/PAC MET/ATM Seminar to be held in 2010. <i>Note: Coordination with the ATM/AIS/SAR Sub-group is essential for the planned meeting of the MET/ATM TF.</i>	Organize meeting	ICAO APAC Office	Meeting convened	Dec 2009	<u>COMPLETE</u> (MET/ATM TF/1 Meeting 2-4 Dec 2009) MET/ATM Seminar to be held by Jan 2011

* **Note:** ICAO has established the following Strategic Objectives for the period 2005-2010:

A: Safety - Enhance global civil aviation safety; **B: Security** - Enhance global civil aviation security; **C: Environmental Protection** - Minimize the adverse effect of global civil aviation on the environment; **D: Efficiency** - Enhance the efficiency of aviation operations; **E: Continuity** - Maintain the continuity of aviation operations; **F: Rule of Law** - Strengthen law governing international civil aviation.

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Appendix B to the Report on Agenda Item 2

APANPIRG/20 Conclusions/Decisions – Action Plan

Conclusion/ Decision No --- Strategic Objective*	Title of Conclusion/Decision	Text of Conclusion/Decision	Follow-up Action	To be initiated by	Deliverable	Target date	Status as of 31 May 2010	ANC action
C 20/1	Performance Framework Workshop/Seminar	That, ICAO be invited to conduct additional Workshop(s)/Seminar(s) on performance frameworks to provide guidance to the States in developing their national performance frameworks.	Prepare Issue Form	ICAO APAC Office	Issue Form transmitted to HQ	Dec 2009	COMPLETED Issue Forms transmitted on 21 October 2009	

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Appendix B to the Report on Agenda Item 2

Conclusion/ Decision No --- Strategic Objective*	Title of Conclusion/Decision	Text of Conclusion/Decision	Follow-up Action	To be initiated by	Deliverable	Target date	Status as of 31 May 2010	ANC action
C 20/2	Asia Pacific Regional Performance Objectives	That, the Asia Pacific Regional Performance Objectives and associated Performance Framework Forms (PFFs) as contained in Appendix A to the APANPIRG/20 Report on Agenda Item 3.0 be adopted.	<p>a) Notify States</p> <p>b) Include on Regional Office website under APANPIRG</p>	<p>ICAO APAC Office</p> <p>ICAO APAC Office</p> <p>ICAO HQ/ ANB</p> <p>ICAO HQ/ ANB</p>	<p>State Letter</p> <p>Available on website</p> <p>Brief to ANC</p> <p>Convene ALLPIRG/6 Meeting</p>	<p>Dec 2009</p> <p>Dec 2009</p> <p>Jan 2010</p> <p>2011</p>	<p>COMPLETED S L dated 29 January 2010</p> <p>COMPLETED</p>	<p>Noted</p> <p>Welcomed the approach and confirmed the need for the States to derive national performance objectives based on the regional objectives.</p> <p>Requested the Secretariat to provide a brief to ANC on performance framework and its rollout plan</p> <p>Requested to convene ALLPIRG meeting for harmonizing the implementation of performance framework</p>

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Conclusion/ Decision No --- Strategic Objective*	Title of Conclusion/Decision	Text of Conclusion/Decision	Follow-up Action	To be initiated by	Deliverable	Target date	Status as of 31 May 2010	ANC action
C 20/3	Align Regional & National Performance Objectives	That, the Regional Office encourages use by States of the PFF template adopted for the regional PFFs and circulate MS Word soft copy versions of the regional PFFs adopted by APANPIRG to enable States to derive national performance objectives based on the regional objectives.	Notify States	ICAO APAC Office	State Letter	Dec 2009	COMPLETED State letter dated 10 December 2009	Noted

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Conclusion/ Decision No --- Strategic Objective*	Title of Conclusion/Decision	Text of Conclusion/Decision	Follow-up Action	To be initiated by	Deliverable	Target date	Status as of 31 May 2010	ANC action
C 20/4	Asia/Pacific Performance Metrics	<p>That the following metrics be adopted as a part of Asia/Pacific regional performance monitoring and measurement:</p> <p>APAC Metric 1 Percentage of RMA sub-regions achieving the regional Target Level of Safety (TLS) for RVSM operations, referenced as of April each year.</p> <p>APAC Metric 2 Percentage of instrument runway ends with an approach procedure with vertical guidance.</p> <p>APAC Metric 3 Percentage of en-route and terminal PBN routes implemented on a sub-regional basis in accordance with the regional PBN plan.</p> <p>APAC Metric 4 Average delays for departures at State's primary international airports for the busiest hour on a weekly basis</p>	<p>a) Notify States</p> <p>b) Include on Regional Office website under APANPIRG</p> <p>ICAO Headquarters ANB</p>	<p>ICAO APAC Office</p> <p>ICAO APAC Office</p>	<p>State Letter</p> <p>Available on website</p> <p>A common set of performance metrics</p>	<p>Dec 2009</p> <p>Dec 2009</p> <p>2011</p>	<p>COMPLETED Issued SL</p> <p>COMPLETED</p>	<p>Noted</p> <p>Requested the Secretariat to develop a common set of performance metrics for all the regions so as to facilitate comparative analysis of regional developments</p>

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Conclusion/ Decision No --- Strategic Objective*	Title of Conclusion/Decision	Text of Conclusion/Decision	Follow-up Action	To be initiated by	Deliverable	Target date	Status as of 31 May 2010	ANC action
C 20/5	Data Collection for Regional Metrics	That States, organizations and stakeholders collect and process data to support the regional metrics adopted by APANPIRG, leveraging to the extent possible all existing data and ongoing efforts, and provide a progress report to APANPIRG/21.	<p>a) Notify States</p> <p>b) Provide data to regional meetings</p>	<p>ICAO APAC Office</p> <p>APAC States</p>	<p>State Letter</p> <p>Data available to regional meetings and APANPIRG to support metrics</p>	<p>Dec 2009</p> <p>Continuous</p>	<p>COMPLETED SL dated 1 Feb 2010</p>	<p>Noted</p>
D 20/6	Dissolution of Western Pacific/South China Sea RVSM Scrutiny Working Group	<p>That, having completed the Terms of Reference established by APANPIRG,</p> <p>a) the Western Pacific/South China Sea RVSM Scrutiny Working Group (WPAC/SCS RSG) be commended for the swift and effective outcomes in satisfactorily addressing RVSM safety performance in the WPAC/SCS area, and</p> <p>b) the WPAC/SCS RSG be dissolved and any residual work items be allocated to Southeast Asia ATS Coordination Group (SEACG) and/or the Regional Airspace Safety Monitoring Advisory Group (RASMAG) and ATM/AIS/SAR Sub-Group as necessary.</p>	<p>a) Notify States</p> <p>b) Transition any remaining items to South East Asia ATS Coordination Group (SEACG)</p>	<p>ICAO APAC Office</p> <p>ICAO APAC Office, SEACG</p>	<p>State Letter</p> <p>Remaining items covered by SEACG</p>	<p>May 2010</p> <p>May 2010</p>	<p>COMPLETED</p> <p>COMPLETED</p>	

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Conclusion/ Decision No --- Strategic Objective*	Title of Conclusion/Decision	Text of Conclusion/Decision	Follow-up Action	To be initiated by	Deliverable	Target date	Status as of 31 May 2010	ANC action
C 20/7	Adopt Interim Strategy for Implementation of New Flight Plan Format	That the <i>Interim Strategy for the Implementation of new ICAO Flight Plan Format and Supporting ATS Messages</i> provided in Appendix A to the APANPIRG/20 Report on Agenda Item 3.2 be adopted and published as the interim edition, and States and users be urged to commence implementation planning based on the interim strategy.	Notify States	ICAO APAC Office	State Letter	Dec 2009	COMPLETED AP003/10 (ATM), 8 January 2010	Noted
C 20/8	Notification of State Transition Date to New Flight Plan Format	That, in order to align regional implementation planning, States inform the Regional Office by 1 July 2010 of their scheduled date and implementation methodology for transition to the new Flight Plan and ATS Message formats.	States formulate implementation strategies	APAC States	Notify Regional Office of methodology and target implementation date	Not later than 1 July 2010		
C 20/9	SSR Code Coordination with ORCAM Secretariat	That, recognizing that four of the ten European (EUR) region SSR code Participating Areas (PAs) border Asian States, the Regional Office facilitate coordination with the European Originating Region Code Assignment Method (ORCAM) Secretariat to implement code management arrangements that avoid SSR code conflicts at the EUR/ASIA interface.	Invite ORCAM Secretariat to join coordination	ICAO APAC Office	Letter to ORCAM Secretariat via EUR/NAT Office to invite coordination	Feb 2010	Closed	

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Conclusion/ Decision No --- Strategic Objective*	Title of Conclusion/Decision	Text of Conclusion/Decision	Follow-up Action	To be initiated by	Deliverable	Target date	Status as of 31 May 2010	ANC action
C 20/10	ATFM Compliance- Advice to Airlines and Airports	That, on behalf of the ATFM/TF, the Regional Office seeks assistance in properly complying with ATFM procedures from the specific airlines and airports identified by the ATFM/TF as contributing to poor ATFM performance because of early or late departures.	Advise affected States and Airlines	ATFM/TF ICAO APAC Office	Data provided to ICAO APAC Office Letters containing data transmitted to affected States and Airlines	Dec 2009 Dec 2009	ATFM/TF/13 COMPLETED AP-ATM0038	
C 20/11	ATFM Steering Group and Concept of Operations	That a regional ATFM Steering Group be constituted and tasked with preparing an Asia/Pacific Regional ATFM Concept of Operations based on analysis of regional data and traffic flows. The ATFM Steering Group should consider the outcomes and recommendations from the October 2008 ATFM Seminar/Workshop (Fukuoka, Japan) and information about the CAR/SAM ATFM Project contained in IP/3 to APANPIRG/20 as guidance in deriving its Objectives and Terms of Reference.	Conduct first meeting of Steering Group	ICAO APAC Office	First meeting of Steering group conducted	Second half 2010		

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Conclusion/ Decision No --- Strategic Objective*	Title of Conclusion/Decision	Text of Conclusion/Decision	Follow-up Action	To be initiated by	Deliverable	Target date	Status as of 31 May 2010	ANC action
C 20/12	Adopt ATFM Communications Manual	That the <i>Air Traffic Flow Management (ATFM) Communications Handbook for the Asia/Pacific Region</i> , as shown in Appendix B to the APANPIRG/20 Report on Agenda Item 3.2, be adopted and circulated as regional guidance material.	Notify States	ICAO APAC Office ICAO HQ ANB/ATM	State Letter Global guidance	Dec 2009 2011	COMPLETED AP007/10 (ATM), 13 January 2010	Noted Noted that the Secretariat is in the process of developing globally-applicable ATFM guidance material
C 20/13	Conduct Regional ATFM Survey	That a survey of Asia/Pacific States be conducted based on the questionnaire at Appendix C to the APANPIRG/20 Report on Agenda Item 3.2, with the objective of benchmarking the current status of Air Traffic Flow Management (ATFM) activities in the Asia/Pacific Region.	Conduct survey	ICAO APAC Office	Survey conducted and outputs compiled	March 2010	COMPLETED AP038/10 (ATM), 8 March 2010	

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Conclusion/ Decision No --- Strategic Objective*	Title of Conclusion/Decision	Text of Conclusion/Decision	Follow-up Action	To be initiated by	Deliverable	Target date	Status as of 31 May 2010	ANC action
D 20/14	Support for Global ICD for AFTN AIDC	That recognizing the benefits to be gained from globally harmonized interface arrangements for AIDC, APANPIRG supports the work being undertaken by the United States to coordinate a global Interface Control Document for AFTN AIDC and invites the Asia/Pacific Regional Office to act as the regional point of contact for this work.	Notify States	ICAO APAC Office	State Letter	Feb 2010	COMPLETED AP-ATM0041, 26 January 2010	Noted
C 20/15	Survey of RNP 4 Equipage and Approvals	That during 2010 the Regional Office conducts a regional survey to establish the current and near term equipage and approvals status for RNP 4 operations.	Conduct survey	ICAO APAC Office	Survey conducted and outputs compiled	March 2010	AP074/10 (ATM), 10 May 2010	

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Conclusion/ Decision No --- Strategic Objective*	Title of Conclusion/Decision	Text of Conclusion/Decision	Follow-up Action	To be initiated by	Deliverable	Target date	Status as of 31 May 2010	ANC action
C 20/16	Assistance to States to Implement Electronic Terrain and Obstacle Data (eTOD)	<p>That, in light of the fact that:</p> <p>a) within the Asia and Pacific region, there is a varying degree of implementation status and readiness for the existing Annex 15, Chapter 10 eTOD Standards and Recommended Practices (SARPs);</p> <p>b) significant cost and institutional issues prevail as impediments to global eTOD implementation; and</p> <p>ICAO consider providing short- and long-term assistance to States in order to build their capacity to provide eTOD in a sustainable and cost efficient manner.</p> <p><i>Note: An appropriate form of providing assistance could include establishment of an ICAO Technical Cooperation Project with funding sought from donor agencies.</i></p>	Prepare Issue Form	ICAO APAC Office	Issue Form transmitted to HQ	Dec 2009	COMPLETED Issue Forms transmitted on 21 October 2009	

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Conclusion/ Decision No --- Strategic Objective*	Title of Conclusion/Decision	Text of Conclusion/Decision	Follow-up Action	To be initiated by	Deliverable	Target date	Status as of 31 May 2010	ANC action
C 20/17	SAR Guidance on 121.5 MHz Search Planning	Recognizing that large populations of aircraft would continue to use 121.5MHz distress beacons after the February 2009 cessation of COSPAS SARSAT Satellite tracking capability, States consider the guidance material “ <i>Search Planning for Audible 121.5 Distress Beacon Alerts</i> ” contained in Appendix G to the APANPIRG/20 Report on Agenda Item 3.2 when developing SAR procedures and training documentation.	Notify States	ICAO APAC Office	State Letter	Feb2010	COMPLETED AP027/10 (ATM), 8 February 2010	
C 20/18	Provide SAR 121.5 MHz Guidance to ICAO/IMO JWG	That the Regional Office seek the assistance of the United States in providing a copy of the guidance material “ <i>Search Planning for Audible 121.5 Distress Beacon Alerts</i> ” contained in Appendix G to the APANPIRG/20 Report on Agenda Item 3.2 to the ICAO/IMO Joint Working group on SAR for consideration as an amendment to the <i>International Aeronautical and Maritime SAR (IAMSAR) Manual</i> .	Coordinate with USA	ICAO APAC Office	Regional Office Letter	Feb 2010	COMPLETED AP-ATM0057, 16 February 2010	

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Conclusion/ Decision No --- Strategic Objective*	Title of Conclusion/Decision	Text of Conclusion/Decision	Follow-up Action	To be initiated by	Deliverable	Target date	Status as of 31 May 2010	ANC action
D 20/19	ATM/AIS/SAR Task List	That the ATM/AIS/SAR Sub-Group Task List and attachments contained in Appendix A to the ATM/AIS/SAR/SG/19 Report on Agenda Item 10 be adopted as the current work programme for the ATM/AIS/SAR Sub-Group of APANPIRG.	Notify ATM/AIS/SAR Sub Group	ICAO APAC Office	Working Paper to next ATM/AIS/S AR Sub Group meeting	June 2010		
C 20/20	Adopt RVSM Minimum Monitoring Requirements	That the RVSM Minimum Monitoring Requirements (MMRs) shown in Appendix B to the APANPIRG/20 Report on Agenda Item 3.3 be adopted as the MMRs applicable for the Asia/Pacific Region.	a) Notify States b) Include on Regional Office website under “APAC eDocuments”	ICAO APAC Office ICAO APAC Office	State Letter Available on website	Dec 2009 Dec 2009	COMPLETED AP014/10 (ATM), 18 January 2010 COMPLETED	Noted

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Conclusion/ Decision No --- Strategic Objective*	Title of Conclusion/Decision	Text of Conclusion/Decision	Follow-up Action	To be initiated by	Deliverable	Target date	Status as of 31 May 2010	ANC action
D 20/21	Expand use of safety monitoring data	That the arrangements for annual month of December traffic sample data by all States to satisfy airspace safety monitoring analysis called for by APANPIRG Conclusion 16/4 be expanded to enable this data to also be available for airspace planning and implementation purposes. This will apply only where such data is not otherwise available to regional or State implementing bodies and only with specific written authority of the ICAO Asia/Pacific Regional Office on each occasion.	Notify States prior to annual December traffic sample data collection	ICAO APAC Office	State Letter	Nov 2009	COMPLETED AP165/09 (ATM), 11 November 2009	

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Conclusion/ Decision No --- Strategic Objective*	Title of Conclusion/Decision	Text of Conclusion/Decision	Follow-up Action	To be initiated by	Deliverable	Target date	Status as of 31 May 2010	ANC action
C 20/22	Provide Annual Update of RVSM Approvals to RMAs	That, in addition to the continuous update of RVSM Approvals data called for by Conclusion 19/15 and APANPIRG RMA requirements, States provide an update of RVSM Approvals data in conjunction with the annual December traffic sample data submission required by Conclusion 16/4.	<p>a) Notify States prior to annual December traffic sample data collection</p> <p>b) States provide RVSM Approvals data</p>	<p>ICAO APAC Office</p> <p>APAC States</p>	<p>State Letter</p> <p>States provide update of RVSM Approvals status to APANPIRG RMAs as part of December traffic sample data submission</p>	<p>Nov 2009</p> <p>Jan 2010</p>	COMPLETED State letter issued	

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Conclusion/ Decision No --- Strategic Objective*	Title of Conclusion/Decision	Text of Conclusion/Decision	Follow-up Action	To be initiated by	Deliverable	Target date	Status as of 31 May 2010	ANC action
C 20/23	Adopt RVSM Monitoring Impact Statement	That the <i>Asia/Pacific Regional Impact Statement – RVSM Global Long Term Height Monitoring Requirements effective from November 2010</i> , as shown in Appendix C to the APANPIRG/20 report on Agenda Item 3.3, be adopted and circulated as Asia/Pacific regional guidance material.	a) Notify States b) Include on Regional Office website under “APAC eDocuments”	ICAO APAC Office ICAO APAC Office	State Letter Available on website	Dec 2009 Dec 2009	COMPLETED AP153/09 (ATM), 2 November 2009 COMPLETED	Noted and welcomed the initiative of APANPIRG in preparing an impact statement for RVSM long-term height monitoring requirements.
D 20/24	En-route Monitoring Agency (EMA)	That the term En-route Monitoring Agency (EMA) be used to describe an organization providing airspace safety assessment, monitoring and implementation services for international airspace in the Asia/Pacific Region to support implementation and operation of reduced horizontal (lateral and longitudinal) separation.	Notify States	ICAO APAC Office	State Letter	Dec 2009	COMPLETED AP163/09 (ATM), 10 November 2009	Noted

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Conclusion/ Decision No --- Strategic Objective*	Title of Conclusion/Decision	Text of Conclusion/Decision	Follow-up Action	To be initiated by	Deliverable	Target date	Status as of 31 May 2010	ANC action
C 20/25	Adopt En-route Monitoring Agency (EMA) Handbook	That the <i>Asia/Pacific En-route Monitoring Agency (EMA) Handbook</i> , as shown in Appendix D to the APANPIRG/20 report on Agenda Item 3.3, be adopted and circulated as Asia/Pacific regional guidance material.	a) Notify States	ICAO APAC Office	State Letter	Dec 2009	COMPLETED AP163/09 (ATM), 10 November 2009	Noted
			b) Include on Regional Office website under “APAC eDocuments”	ICAO APAC Office	Available on website	Dec 2009	COMPLETED	
D 20/26	Revision of Subject/Tasks List of ATNICG	That, the revised Subject/Tasks List of ATNICG provided in Appendix A to the Report on Agenda Item 3.4 be adopted.	Notify ATNICG WG/6 and ATNICG	ICAO APAC Office	ATNICG informed and paper prepared	Sept 2009 May 2010	ATNICG WG/6 held from 22 to 25 Sept 2009 informed. . ATNICG/7 notified	

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Conclusion/ Decision No --- Strategic Objective*	Title of Conclusion/Decision	Text of Conclusion/Decision	Follow-up Action	To be initiated by	Deliverable	Target date	Status as of 31 May 2010	ANC action
C 20/27	ATN/AMHS Guidance Material	<p>That, the following guidance materials for ATN/AMHS Implementation be adopted and published.</p> <ul style="list-style-type: none"> - Version 3.1 of the Asia/Pacific IDRP Routing Policy provided in Appendix B to the Report on Agenda Item 3.4; - AMHS/ATN Network Management Operational Procedure Guidelines provided in Appendix C; - Amended AMHS Conformance Testing (AMHS Manual provided in Appendix D; and - Aeronautical Telecommunication Network Security Checklist provided in Appendix E. 	Publish on website	ICAO APAC Office	Published on website. States notified	Oct 2009	COMPLETED State Letter dated 12 October 2009 issued	
C 20/28	Short-term procedure for Global AMHS address Coordination	That, ICAO request States to register their AMHS addresses with EUROCONTROL AMC through Aeronautical Radio of Thailand (Aerothai) and provide a copy of this information to ICAO Asia/Pacific Office.	Notify States	ICAO APAC Office	State Letter	Nov 2009	COMPLETED State Letter dated 3 November 2009 issued	

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Conclusion/ Decision No --- Strategic Objective*	Title of Conclusion/Decision	Text of Conclusion/Decision	Follow-up Action	To be initiated by	Deliverable	Target date	Status as of 31 May 2010	ANC action
C 20/29	AMHS Addressing Scheme	That, a) States be urged to update information in respect of their administrations in the regional AMHS Naming Register; and b) States hosting BBIS hubs be requested to process both the XF and CAAS addressing schemes.	Notify States	ICAO APAC Office	State Letter	Nov 2009	COMPLETED State Letter dated 3 November issued	
C 20/30	Revision of FASID Tables CNS-1B, CNS-1C and CNS-1E	That, FASID Tables CNS-1B, 1C and 1E for ATN Router Plan, AMHS Routing Plan and AIDC Routing Plan be replaced with the revised CNS Tables provided in Appendices F, G and H respectively to the Report on Agenda Item 3.4.	Prepare amendment proposal	ICAO APAC Office	Amendment proposal to HQ	March 2010	COMPLETED State letter issued on 26 March 2010	

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Conclusion/ Decision No --- Strategic Objective*	Title of Conclusion/Decision	Text of Conclusion/Decision	Follow-up Action	To be initiated by	Deliverable	Target date	Status as of 31 May 2010	ANC action
C 20/31	State and Operator aircraft information for GOLD	<p>That,</p> <p>a) States be urged to provide Region & State Information for inclusion in the GOLD Appendix E, by sending the completed forms(s) provided in Annex 1 to the Report on agenda item 3.4 for their flight information regions (FIRs) or control areas (CTAs) by 30 October 2009; and</p> <p>a) IATA be urged to coordinate with member airlines for providing operator & aircraft information for the GOLD Appendix F by sending completed form(s) as provided in Annex 2 to the Report on agenda item 3.4 for each variance, clarification, or addition to applicable aircraft type by 30 October 2009.</p>	Notify States	ICAO APAC Office	State Letter	Sept 2009	COMPLETED State Letter dated 25 September 2009.	
C 20/32	Second Satellite Data-link Operational Continuity Meeting	That, ICAO be invited to organize 2 nd Satellite Data-link Operational Continuity Meeting in 2010 for stakeholders to review the developments on the performance and provision of satellite data link communication in the Asia/Pacific Region and develop a solution.	Coordination and organize SOCM/2 Meeting	ICAO APAC Office	Meeting conducted	Oct 2010		

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Conclusion/ Decision No --- Strategic Objective*	Title of Conclusion/Decision	Text of Conclusion/Decision	Follow-up Action	To be initiated by	Deliverable	Target date	Status as of 31 May 2010	ANC action
C 20/33	Coordinate Implementation of Reduced Horizontal Separations with CSPs	That, recognizing the technical limitations in satellite data link communications capability for the provision of ADS-C and CPDLC, States intending to implement reduced horizontal separations based on RNAV 10 and RNP 4 PBN specifications in oceanic and remote area commence early coordination with Communication Service Providers (CSPs) in order to ascertain adequate data link communication/surveillance capability to support the proposed implementation. Outcomes should be recorded in a formal Service Level Agreement (SLA) between implementing States and CSPs, jointly or severally, to ensure that capabilities are available to properly support RCP 240/D specifications contained in Appendices B and C to the GOLD on an ongoing basis.	Notify States	ICAO APAC Office	State Letter	Jan 2010	COMPLETED State Letter dated 7 January 2010 issued	Noted
C 20/34	Technical Limitations in Satellite Data Link Communications Capability	That, recognizing current technical limitations in satellite data communications capability that impacts PBN based separation applications particularly for RNAV10 and RNP 4 in the remote and oceanic areas, ICAO be invited to address this issue at global level.	Prepare Issue Form	ICAO APAC Office ICAO HQ ANB/CNS ATB	Issue Form sent HQ Global monitoring	Dec 2009 On going	COMPLETED	Noted Noted and that ICAO will undertake a case study on

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Conclusion/ Decision No --- Strategic Objective*	Title of Conclusion/Decision	Text of Conclusion/Decision	Follow-up Action	To be initiated by	Deliverable	Target date	Status as of 31 May 2010	ANC action
								<p>the ownership and control of the air navigation services infrastructure, including the development of a draft service level agreement for use by air navigation service providers. Furthermore, usage of two or more autonomous networks by States and international organizations will provide much better availability. The Secretariat to monitor further developments.</p>

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C 20/35	Asia-Pacific Flight Procedure Programme	That, States be encouraged to participate in the Asia-Pacific Flight Procedure Programme in order to build or improve their instrument flight procedure capabilities, meet the PBN implementation goals of Assembly Resolution A36-23 and enhance flight safety, efficiency and environmental protection.	Notify States	ICAO APAC Office ICAO HQ ANB/ATM	State Letter	July 2009 2011	COMPLETED State Letter T6/13.11.2-AP089/09 issued on 29 July 09 & follow-up letters had been issued	Noted Welcomed the imitative and requested the Secretariat to follow it up for with a similar approach for AFI region.
C 20/36	Preparation for PBN Implementation	That, States that have not done so, are urged to develop their State PBN Implementation Plans, and take action in accordance with those plans to implement WGS-84 and Electronic Terrain and Obstacle Data in their States.	Notify States	ICAO APAC Office	State Letter	Nov 2009	COMPLETED State Letter dated 4 November 2009 issued	Noted

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Conclusion/ Decision No --- Strategic Objective*	Title of Conclusion/Decision	Text of Conclusion/Decision	Follow-up Action	To be initiated by	Deliverable	Target date	Status as of 31 May 2010	ANC action
C 20/37	Guidance material for PBN Implementation	<p>That, ICAO be invited to develop guidance materials on:</p> <p>establishing common implementation rules and technical standards for GNSS reporting and prediction requirements;</p> <p>assigning PBN capability to GPS IFR aircraft in the first instance without the need for recertification; and</p> <p>PBN-specific aspects of en-route safety assessment.</p>	Prepare Issue Form	<p>ICAO APAC Office</p> <p>ICAO HQ/ ANB/ATM</p> <p>ICAO HQ/ ANB/ATM</p>	<p>Issue Form sent HQ</p> <p>Guidance material for PBN implementation</p> <p>Status report</p>	<p>Dec 2009</p> <p>2011</p> <p>June 2010</p>	COMPLETED	<p>Noted</p> <p>To address these PBN issues through appropriate ANC Panel and Study Groups.</p> <p>Requested the Secretariat to provide a status report on global implementation of PBN.</p>
D 20/38	Regional RAIM prediction System	That, PBNTF be tasked to examine the feasibility of establishing a regional RAIM prediction system.	Notify PBNTF	ICAO APAC Office	PBNTF informed and paper prepared	Feb 2010	COMPLETED PBN TF/6 notified about the task through WP/8	

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Conclusion/ Decision No --- Strategic Objective*	Title of Conclusion/Decision	Text of Conclusion/Decision	Follow-up Action	To be initiated by	Deliverable	Target date	Status as of 31 May 2010	ANC action
C 20/39	RNAV Human Factors	That, RNAV safety message provided in Appendix J to the Report on Agenda Item 3.4 be distributed to the States for further distribution to all operators involved in RNAV operations in order to apply the lessons learnt.	Notify States	ICAO APAC Office	State Letter	Nov 2009	COMPLETED State Letter dated 3 November 2009 issued	
C 20/40	PBN Implementation Progress Report Template	That, States be urged to use the PBN Implementation Progress Report Template provided in Appendix K to the Report on Agenda Item 3.4 for all future reporting of their status of PBN implementation. The Report should be submitted at each of the future PBN Task Force Meeting.	Notify States	ICAO APAC Office	State Letter	Jan 2010	COMPLETED A SL had been sent to States on 4 Aug 09) urging States to provide progress report using the template. Reminder sent.	
C 20/41	Asia/Pacific Regional PBN Implementation Plan	That, the Asia/Pacific Regional PBN Implementation Plan provided in Appendix L to the Report on Agenda Item 3.4 be adopted as Version 1.0.	Notify States	ICAO APAC Office	State Letter	Nov 2009	COMPLETED State Letter dated 4 November 2009 issued	Noted

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Conclusion/ Decision No --- Strategic Objective*	Title of Conclusion/Decision	Text of Conclusion/Decision	Follow-up Action	To be initiated by	Deliverable	Target date	Status as of 31 May 2010	ANC action
C 20/42	PBN Safety Assessment Training	That, ICAO be requested to assist in addressing the PBN safety assessment training needs in the region.	Prepare Issue Form	ICAO APAC Office ICAO HQ ANB/ATM	Issue Form sent HQ PBN safety assessment training needs	Dec 2009 2012	COMPLETED	Noted To address this performance based navigation issue through appropriate ANC Panels and Study Groups.
C 20/43	RNP AR Approach Implementation	That, States be urged to give detailed considerations to the operational need, safety and cost benefits prior to deciding on RNP AR Approach implementation.	Notify States	ICAO APAC Office	State Letter	Nov 2009	COMPLETED State Letter dated 4 November 2009.	
D 20/44	PBN Task Force Activities	That, the PBN Task Force continues with the current TORs for two additional meetings in 2010.	Notify PBNTF	ICAO APAC Office	PBNTF informed and paper prepared	Feb 2010	COMPLETED PBN TF/6 informed about APANPIRG Conclusion through WP	

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C 20/45	Sharing Information on ICAO Panels/SGs	That, ICAO be requested to consider sharing information on ICAO Panels and Study Groups activities/outcome regularly with regional planning/implementation groups.	Prepare Issue Form	ICAO APAC Office ICAO HQ	Issue Form sent HQ	Dec 2009	COMPLETED	
C 20/46	Revision of the Strategy for the Provision of Navigation Services in the Asia/Pacific Region	That, the updated Strategy for the provision of navigation services provided in Appendix M to the Report on Agenda Item 3.4 be adopted and published.	Notify States	ICAO APAC Office	State Letter Updated Strategy posted on website	Nov 2009	COMPLETED State Letter dated 5 November 2009	
D 20/47	Guidance material for flight inspection/validation of ADS-B ground stations	That, ADS-B SITF be tasked to study the need for developing guidance material for flight inspection/validation of ADS-B ground stations.	Notify ADS-B SITF	ICAO APAC Office	ADS-B SITF informed and paper prepared	May 2010	ADS-B SITF/9 will be notified. The meeting has been postponed to Mid Aug.10	

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C 20/48	Flight Inspections and Validation of Flight Procedures	That, ICAO be invited to: a) carry out a study for use of DGPS as a positioning reference system for flight inspection; b) provide guidelines for selecting GP reference point for flight inspection; c) review areas of possible misinterpretations in ICAO Doc 8071 such as the ones shown in Appendix N to the Report on Agenda Item 3.4 and provide necessary guidance on the interpretation of the ICAO requirements in order to avoid inconsistency of interpretations and to harmonize application of ICAO Standards and Recommended Practices; d) review information on flight validation as contained in ICAO Doc 8071 Volume II consequent to new Doc 9906 Volume V becoming applicable; and e) develop templates for flight validation reports for PBN IFPs including RNP APCH procedure. A sample template developed by Aerothai for RNP APCH is provided in Appendix O to the Report on agenda item 3.4.	Prepare Issue Form	ICAO APAC Office ICAO HQ/ ANB/ATM	Issue Form sent HQ Flight Inspections and Validation of Flight Procedures	Dec 2009 2011	COMPLETED	Noted To address this performance based navigation issue through appropriate ANC Panels and Study Groups.

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Conclusion/ Decision No --- Strategic Objective*	Title of Conclusion/Decision	Text of Conclusion/Decision	Follow-up Action	To be initiated by	Deliverable	Target date	Status as of 31 May 2010	ANC action
C 20/49	Update of procedures and infrastructure	<p>That, the States be</p> <p style="padding-left: 40px;">reminded of the contents of State Letter AN 7/5-01/52 dated 11 May 2001 on ILS maintenance procedures;</p> <p style="padding-left: 40px;">reminded to provide updates to information as contained in the eighth edition of the flight inspection catalogue; and</p> <p style="padding-left: 40px;">urged to consider upgrading their FIS to include the flight inspection requirements of GNSS, Interference, ADS-B, Multi-lateration etc. as necessary.</p>	Notify States	ICAO APAC Office	State Letter	Nov 2009	COMPLETED State Letter dated 5 November 2009.	
D 20/50	Subject/Tasks List of ADS-B Study and Implementation Task Force	That, the Subject/Tasks List for ADS-B Study and Implementation Task Force provided in Appendix P to the Report on Agenda Item 3.4 be adopted.	Notify ADS-B SITF	ICAO APAC Office	ADS-B SITF informed and paper prepared	April 2010	ADS-B SITF/9 will be Informed. The meeting has been postponed to Mid Aug.10	
C 20/51	Workshop on ADS-B OUT equipage requirement	That, ICAO be invited to organize a workshop on ADS-B OUT equipage requirement before May 2010 with the assistance from Australia and USA.	Organize the workshop	ICAO APAC Office, Australia and USA	The workshop conducted	April 2010	The workshop has been further postponed to Mid Aug.10	

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Conclusion/ Decision No --- Strategic Objective*	Title of Conclusion/Decision	Text of Conclusion/Decision	Follow-up Action	To be initiated by	Deliverable	Target date	Status as of 31 May 2010	ANC action
C 20/52	Table CNS 4A and Table CNS 4B	That, the FASID Table CNS 4A and Table CNS 4B be replaced with updated Tables provided in Appendix Q and Appendix R to the Report on Agenda Item 3.4 in accordance with the established procedure.	Prepare amendment proposal	ICAO APAC Office	Amendment proposal to HQ	March 2010	COMPLETED SL issued on 29 March 2010	
C 20/53	Revised Guidelines for Development of ADS-B Implementation Plan by States	That, the revised guidelines for Development of ADS-B Implementation Plan by States provided in Appendix S to the Report on Agenda Item 3.4 be adopted.	Notify States	ICAO APAC Office	State Letter Updated Strategy posted on website	Nov 2009	COMPLETED State Letter dated 4 November 2009 issued	
C 20/54	Regional ADS-B Equipage Requirement	That, States be urged to issue ADS-B authorizations for the interim period 2010-2020 (or until requirements can be harmonized globally) in Non-Radar Areas (NRA) airspace based on: - AMC20-24 certification or - Approval by CASA Australia or The requirements of the CASA Civil Aviation Order 20.18 Amendment (No. 1) 2009 and Advisory Circular AC21-45 <i>Note: States that have not yet published regulations should implement necessary regulations that recognize that any one of the above requirements is acceptable and not specify an individual requirement.</i>	Notify States	ICAO APAC Office	State Letter	Dec 2009	COMPLETED State Letter dated 18 December 2009 issued	

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C 20/55	Forward Fitment Requirements for SA Aware and FDE functionality	That, ICAO recommends States concerned to adopt forward fitment requirements which include SA aware and FDE functionality as soon as reasonable.	Notify States	ICAO APAC Office	State Letter	Dec 2009	COMPLETED State Letter dated 18 December 2009	
C 20/56	Coordination for SSR MODE S II Codes	That, a) the Table on SSR Mode S Interrogator Identifier Codes as provided in Appendix T on Agenda Item 3.4 to the Report be adopted; and b) States be advised to provide the required information as specified in the Table on SSR Mode S Interrogator Identifier Codes to the ICAO Asia/Pacific Office for coordination and registration.	Notify States	ICAO APAC Office	State Letter	Jan 2010	COMPLETED State Letter dated 27 October 2009 issued	
C 20/57	Planning Criteria for SSR Mode S II Code Assignment	That, the Planning criteria for SSR Mode S II code coordination and assignment as provided in Appendix U to the Report on Agenda Item 3.4 be adopted as a provisional guidance material for use in the Asia/Pacific Region.	Notify States	ICAO APAC Office	State Letter	Jan 2010	COMPLETED State Letter dated 27 October 2009.	Noted

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Conclusion/ Decision No --- Strategic Objective*	Title of Conclusion/Decision	Text of Conclusion/Decision	Follow-up Action	To be initiated by	Deliverable	Target date	Status as of 31 May 2010	ANC action
C 20/58	ICAO Position for the World Radio Communication Conference – 2011 (WRC-11) Agenda Items	<p>That, States be urged to:</p> <p style="padding-left: 40px;">integrate ICAO Position on WRC-11 Agenda Items into their State Position presented to the regional telecommunication forum (APG) involved in the preparation of joint regional position on the Agenda Items;</p> <p style="padding-left: 40px;">include ICAO Position on WRC-11 Agenda Items into the State Position to the extent possible;</p> <p style="padding-left: 40px;">undertake to provide experts from their civil aviation authorities to participate in the development of State and regional positions; and</p> <p style="padding-left: 40px;">ensure to the extent possible, State delegation to regional conferences, ITU Study Groups and WRC should include experts from Civil Aviation authorities.</p>	Notify States	<p>ICAO APAC Office</p> <p>States</p>	<p>State Letter</p> <p>Support to ICAO position on WRC agenda through participation in WRC 2011 now postponed January 2012</p>	<p>October 2009</p> <p>Jan 2010</p>	<p>COMPLETED</p> <p>State Letter dated 12 October 2009</p>	<p>Appreciated the ongoing contribution of APANPIRG in addressing this issue in a number of forums and requested the Secretary General to urge States to continue to participate at various levels in different forums to provide support to the ICAO position.</p>

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Conclusion/ Decision No --- Strategic Objective*	Title of Conclusion/Decision	Text of Conclusion/Decision	Follow-up Action	To be initiated by	Deliverable	Target date	Status as of 31 May 2010	ANC action
D 20/59	Use of the public Internet to access OPMET data and WAFS forecasts	<p>That, OPMET data and WAFS forecasts currently distributed through the ISCS, if only used for flight planning, can be considered non-time critical and therefore, can be accessed through the public Internet.</p> <p><i>Note: Relevant ICAO guidance will be updated accordingly, subject to consideration of a similar decision by the WAFSOPSG/5 Meeting and subsequent endorsement by ANC.</i></p>	(with regards to the note) – ANC consideration	ICAO HQ	Updated guidance material if clarity is needed	Nov 2010	COMPLETED Issue form submitted to HQ Oct2009	Noted Requested the Secretariat to update the guidance in Doc 8896
C 20/60	Extension of the ISCS-G2 and the implementation of the WAFS Internet file server (WIFS)	<p>That, WAFS Washington Provider State advise the ISCS user States about its intentions to:</p> <p>a) continue to work on extending the current ISCS-G2 service through 30 June 2012 to allow users sufficient time for transition to replacement services; and</p> <p>b) provide an operational WAFS Internet File Server (WIFS) by March 2010.</p>	<p>Inform States of ISCS-G2 cessation date</p> <p>Develop WAFS Internet File Server (WIFS)</p>	<p>WAFS Washington Provider State/ APAC Office</p> <p>WAFS Washington Provider State</p>	<p>ISCS website update/ State Letter</p> <p>WAFS products available by Internet</p>	<p>Dec 2009</p> <p>Mar 2010</p>	COMPLETED SL dated 10 May 2010	

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Conclusion/ Decision No --- Strategic Objective*	Title of Conclusion/Decision	Text of Conclusion/Decision	Follow-up Action	To be initiated by	Deliverable	Target date	Status as of 31 May 2010	ANC action
		<p><i>Note 3: the ISCS Provider State is expected to indicate its future plans concerning ISCS-G3 and the WIFS</i></p> <p>c) the WAFSOPSG be invited to consider preparing an amendment to all ICAO regional procedures in the ANP/FASID to render WIFS and SADIS FTP Service as an alternative to the respective satellite broadcasts as the primary means of obtaining WAFS forecasts and OPMET data for flight planning purposes.</p> <p><i>Note 4: WAFS user States are responsible for the procurement of the necessary tools to access WAFS forecasts and OPMET data provided by the WAFCs.</i></p> <p><i>Note 5: The adoption of this Conclusion reinstates the APANPIRG Conclusion 19/45, Transition to ISCS 3rd Generation.</i></p>	<p>Update ANP/FASID</p>	<p>ICAO HQ (through WAFSOP SG)</p>	<p>Amendment Proposal to ANP/FASID (if deemed necessary by WAFSOPS G/5)</p>	<p>Jan 2010</p>	<p>COMPLETED FASID approved 22 Jan 2010 {APAC 09/23 – MET:AP016/10 (MET)} ANP approved 18 Mar 2010 {APAC 09/22 – MET:AP047/10 (MET)}</p>	

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Conclusion/ Decision No --- Strategic Objective*	Title of Conclusion/Decision	Text of Conclusion/Decision	Follow-up Action	To be initiated by	Deliverable	Target date	Status as of 31 May 2010	ANC action
C 20/62	Harmonization of procedures for OPMET data issuance	<p>That, ICAO Regional Office be invited to</p> <p>a) Include examples of correct methods of issuing OPMET data for inclusion in the ROBEX Handbook;</p> <p>b) After completion of a) above request States in the Asia/Pacific Region to implement these methods as a matter of priority; and</p> <p>c) Consult the RODBs to monitor the progress of OPMET data issuance in compliance with the Regional Air Navigation Plan for reporting at the OPMET/M TF/8 Meeting.</p>	<p>Update ROBEX Handbook</p> <p>Inform States</p> <p>RODB monitoring of OPMET compiling/filing times</p>	<p>ICAO APAC Office</p> <p>ICAO APAC Office</p> <p>RODBs / ICAO APAC Office</p>	<p>Updated ROBEX Handbook</p> <p>State Letter</p> <p>Inclusion of monitoring results in OPMET/M TF/8 Report</p>	<p>Oct 2009</p> <p>Oct 2009</p> <p>Apr 2010</p>	<p>COMPLETED</p> <p>COMPLETED</p> <p>IN-PROGRESS RODBs can not easily measure reception of OPMET data issuance at SADIS IATA expected to submit paper at CNS/MET SG/14</p>	

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Conclusion/ Decision No --- Strategic Objective*	Title of Conclusion/Decision	Text of Conclusion/Decision	Follow-up Action	To be initiated by	Deliverable	Target date	Status as of 31 May 2010	ANC action
C 20/63	Improvement of OPMET data availability for AOP aerodromes	<p>That, after the next round of harmonization of OPMET data between SADIS and ISCS Provider States,</p> <p>a) IATA be invited to monitor the availability of OPMET data for AOP aerodromes; and</p> <p>b) ICAO Regional Office, based on the results of the monitoring in a) above, remind States concerned of unavailability of OPMET data.</p> <p><i>Note: the aim will be an availability of 95% of all OPMET data (METAR and TAF) from AOP aerodromes on SADIS and ISCS.</i></p>	<p>SADIS/ISCS harmonization</p> <p>IATA OPMET monitoring</p> <p>Inform States</p>	<p>ISCS and SADIS Provider States/ ICAO APAC Office</p> <p>IATA</p> <p>ICAO APAC Office</p>	<p>ISCS/SADIS OPMET harmonizati on Table of AOP aerodromes not available on SADIS</p> <p>State Letter</p>	<p>Oct 2009</p> <p>Dec 2009</p> <p>Jan 2010</p>	<p>IN- PROGRESS ISCS has provided Changes for SADIS Necessary for harmonization</p>	

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Conclusion/ Decision No --- Strategic Objective*	Title of Conclusion/Decision	Text of Conclusion/Decision	Follow-up Action	To be initiated by	Deliverable	Target date	Status as of 31 May 2010	ANC action
C 20/64	Improvement of OPMET data availability for non- AOP aerodromes	<p>That, after the next round of harmonization of OPMET data between SADIS and ISCS Provider States,</p> <p>a) IATA be invited to monitor the availability of OPMET data for non-AOP aerodromes; and</p> <p>b) ICAO Regional Office, based on the results of the monitoring in a) above, approach States concerned to confirm their agreement to continue providing OPMET data</p> <p><i>Note: the aim will be an availability of 90% of all OPMET data (METAR and TAF) from non-AOP aerodromes on SADIS and ISCS.</i></p>	<p>SADIS/ISCS harmonization</p> <p>IATA OPMET monitoring</p> <p>Inform States</p>	<p>ISCS and SADIS Provider States/ ICAO APAC Office</p> <p>IATA</p> <p>ICAO APAC office</p>	<p>ISCS/SADIS OPMET harmonization</p> <p>Table of AOP aerodromes not available on SADIS</p> <p>State Letter</p>	<p>Oct 2009</p> <p>Dec 2009</p> <p>Jan 2010</p>	<p>IN-PROGRESS ISCS has provided Changes for SADIS Necessary for harmonization</p>	

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Conclusion/ Decision No --- Strategic Objective*	Title of Conclusion/Decision	Text of Conclusion/Decision	Follow-up Action	To be initiated by	Deliverable	Target date	Status as of 31 May 2010	ANC action
C 20/65	Replace FASID Tables MET 4A and 4B by the ROBEX Handbook	That, the FASID Tables MET 4A and 4B be replaced with the ROBEX Handbook when referencing the ROBEX Scheme in the Basic ANP and FASID in accordance to Appendices V and W to the APANPIRG/20 Report on Agenda Item 3.4. Subsequently, FASID Tables MET 4A and 4B will be removed from the FASID.	Update ANP/FASID	ICAO APAC Office	Amendment Proposal to ANP/FASID	Dec 2009	COMPLETED FASID approved 22 Jan 2010 {APAC 09/23 – MET:AP016/10 (MET)} ANP approved 18 Mar 2010 {APAC 09/22 – MET:AP047/10 (MET)}	
C 20/66	Replace FASID Table MET 4C by the Asia/Pacific regional OPMET data banks interface control document	That, the FASID Tables MET 4C be replaced with the Asia/Pacific regional OPMET data banks interface control document when referencing the responsibilities of the ASIA/PAC OPMET data banks for collection and dissemination of OPMET bulletins to support the ROBEX Scheme in the Basic ANP and FASID in accordance to Appendices V and W to the APANPIRG/20 Report on Agenda Item 3.4. Subsequently, FASID Table MET 4C will be removed from the FASID.	Update ANP/FASID	ICAO APAC Office	Amendment Proposal to ANP/FASID	Dec 2009	COMPLETED FASID approved 22 Jan 2010 {APAC 09/23 – MET:AP016/10 (MET)} ANP approved 18 Mar 2010 {APAC 09/22 – MET:AP047/10 (MET)}	

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Conclusion/ Decision No --- Strategic Objective*	Title of Conclusion/Decision	Text of Conclusion/Decision	Follow-up Action	To be initiated by	Deliverable	Target date	Status as of 31 May 2010	ANC action
C 20/67	Cost Recovery by Volcano Observatories	That, the ICAO CNS/MET Sub-group VA/TC Implementation Task Force, in coordination with the VAAC Provider States and the ICAO Secretariat, be invited to investigate examples of agreements between State volcanic observatories and the civil aviation authorities that may be used by other States in considering the recovery of the cost in accordance with ICAO provisions.	Investigate cost recovery examples by volcanic observatories	VA/TC I TF/ VAACs/ ICAO HQ (IAVWOP SG)/ ICAO APAC Office	State Letter	June 2010	COMPLETED (SL-T4/9.1.1: AP058/10 (MET) sent 29Mar2010	
C 20/68	Expanded WV SIGMET Test Development	That, a) Japan be invited to further develop an expanded WV SIGMET Test utilizing automated templates in consultation with the Darwin VAAC; and b) upon completion of a) above, Japan conducts the expanded WV SIGMET Test and produce an analysis to the OPMET/M TF/8 meeting for further review and subsequent reporting to the CNS/MET SG/14 meeting to determine the next phase of the test.	Develop WV expansion SIGMET test Conduct and report on trial test	Japan/ VAAC Darwin Japan	Updated WV expansion SIGMET Test Test results included in OPMET/M TF/8 and CNS/MET SG/14 reports	Apr 2010 Apr 2010/ Jul 2010		

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Conclusion/ Decision No --- Strategic Objective*	Title of Conclusion/Decision	Text of Conclusion/Decision	Follow-up Action	To be initiated by	Deliverable	Target date	Status as of 31 May 2010	ANC action
C 20/69	Implementation of SIGMET on Radioactive Clouds and Aerodrome Warnings on Tsunami	<p>That, in view of clarifying existing Annex 3 provisions,</p> <p>a) the IAVWOPSG consider developing Annex 3 provisions and guidance material, as necessary, related to the issuance of SIGMET on radioactive clouds; and</p> <p>b) ICAO considers developing Annex 3 provisions and guidance material as necessary related to the issuance of aerodrome warnings on Tsunami.</p>	Proposals to develop provisions and guidance material on radioactive cloud SIGMET and Tsunami aerodrome warnings	<p>ICAO HQ</p> <p>ICAO HQ ANB/MET /AIM</p>	<p>Amendment criteria to be included in Am. 76 or 77 to Annex 3, as necessary; guidance</p> <p>Annex 3 provisions and guidance material as necessary related to the issuance of aerodrome warnings on tsunami.</p>	2013 or 2016	<p>COMPLETED</p> <p>ISSUE Form submitted to HQ</p>	<p>Noted</p> <p>Invited the IAVWOPSG to consider the need for developing additional ICAO provisions related to SIGMET on radioactive clouds and requested the Secretariat, with the assistance of the METWSG, to consider the need for developing additional ICAO provisions related to aerodrome warnings on tsunami</p>

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Conclusion/ Decision No --- Strategic Objective*	Title of Conclusion/Decision	Text of Conclusion/Decision	Follow-up Action	To be initiated by	Deliverable	Target date	Status as of 31 May 2010	ANC action
C 20/70	Training on QMS	That, WMO, in coordination with ICAO, be invited to organize a seminar/workshop on QMS related to aeronautical meteorological services during the first half of 2010.	Conduct QMS Seminar/ Workshop	WMO/ ICAO HQ/APAC Office ICAO HQ ANB/MET /AIM	Seminar/ Workshop Harmonized QMS	June 2010 TBD	In Progress	Requested the Secretariat to invite WMO to conduct, in coordination with ICAO, a seminar/ Workshop on QMS. Requested the Secretariat to harmonize QMS methodology for all fields of air navigation systems.
D 20/71	Updated Terms of Reference and Subject/Tasks List of the CNS/MET Sub-group	That, the revised Terms of Reference and Subject/Tasks List of the CNS/MET Sub-group provided in Appendices Y and Z to the Report be adopted.	Notify CNS/MET SG	ICAO APAC Office	CNS/MET SG informed and paper prepared	July 2010		

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Conclusion/ Decision No --- Strategic Objective*	Title of Conclusion/Decision	Text of Conclusion/Decision	Follow-up Action	To be initiated by	Deliverable	Target date	Status as of 31 May 2010	ANC action
C 20/72	Ionospheric Data Collection – Focal Point of Contact	<p>That, the States be urged to:</p> <p>a) cooperate with each other to collect data and characterize ionosphere model in the APAC region that will lead to smooth introduction of GNSS in ASIA/PAC Region; and</p> <p>b) provide the name and contact details of the Focal Point of Contact to ICAO Regional Office for coordinating collection and exchange of ionospheric data with the ultimate objective of establishing a standard ionospheric model for the region.</p>	Notify States	ICAO APAC Office	State Letter	January 2010	COMPLETED	

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Conclusion/ Decision No --- Strategic Objective*	Title of Conclusion/Decision	Text of Conclusion/Decision	Follow-up Action	To be initiated by	Deliverable	Target date	Status as of 31 May 2010	ANC action
C 20/73	Adopt GOLD to replace FOM	That, upon release of the Global Operational Data Link Document (GOLD) by the Ad-Hoc GOLD Working Group in first quarter 2010, the FANS-1/A Operations Manual (FOM) be withdrawn and replaced by the GOLD as Asia/Pacific regional guidance material for use by States and airspace users as the basis for operating Automatic Dependent Surveillance – Contract (ADS-C) and Controller Pilot Data Link Communications (CPDLC), in conjunction with <i>Annex 10 – Aeronautical Telecommunications Volume II – Communications Procedures including those with PANS status and the Procedures for Air Navigation Services – Air Traffic Management (PANS-ATM Doc 4444)</i> .	Notify States	ICAO APAC Office	Upon release of the GOLD by the AD-Hoc GOLD Working Group, transmit State Letter	First quarter 2010		Noted
C 20/74	Removal of the APANPIRG Air Navigation Deficiency AP-MET-15	That, the air navigation deficiency AP-MET-15 be removed from the APANPIRG air navigation deficiencies list.	Update list of APANPIRG air navigation deficiencies	ICAO APAC Office	Updated list of APANPIRG air navigation deficiencies	Dec 2009	COMPLETED	

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Conclusion/ Decision No --- Strategic Objective*	Title of Conclusion/Decision	Text of Conclusion/Decision	Follow-up Action	To be initiated by	Deliverable	Target date	Status as of 31 May 2010	ANC action
C 20/75	MET deficiencies to be added to the APANPIRG list of Air Navigation Deficiencies	That, the list of proposed air navigation deficiencies in Appendix F to the APANPIRG/20 Report on Agenda item 4, obtained by the ICAO TCB CAEMSA-SP reports be added to the list of APANPIRG air navigation deficiencies list tagged with the U status.	Update list of APANPIRG air navigation deficiencies	APAC Office	Updated list of APANPIRG air navigation deficiencies	Dec 2009	COMPLETED	
C 20/76	Continuation of CAEMSA-SP	That, the DGCA/46 conference considers funding and resources be allotted by donor States, WMO, and ICAO for the continuation of the CAEMSA-SP in order to meet international requirements in the provision of meteorological services which would achieve the necessary safety and efficiency levels for airlines operating in the South Pacific.	Provide necessary means for the continuation of CAEMSA-SP	DGCA Conference	Continuation of CAEMSA-SP	Oct 2009	COMPLETED	Noted and requested the Secretary General to urge States to develop and implement an action plan for each deficiency and to provide information to the Bangkok Regional Office.

* **Note:** ICAO has established the following Strategic Objectives for the period 2005-2010:

A: Safety - Enhance global civil aviation safety; **B: Security** - Enhance global civil aviation security; **C: Environmental Protection** - Minimize the adverse effect of global civil aviation on the environment; **D: Efficiency** - Enhance the efficiency of aviation operations; **E: Continuity** - Maintain the continuity of aviation operations; **F: Rule of Law** - Strengthen law governing international civil aviation.

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**Implementation of Selected Conclusions/Decisions of APANPIRG/20 Meeting
— Action Plan —**

Concl/Dec No. --- Strategic Objective*	Title of Conclusion	Text of Conclusion	Responsibility	Deliverable	Action agreed by ANC 21 January 2010 (ANC 183-4	Reporting/ Completion date
C 20/2 D	Asia Pacific Regional Performance Objectives	That, the Asia Pacific Regional Performance Objectives and associated Performance Framework Forms (PFFs) as contained in Appendix A to the APANPIRG/20 Report on Agenda Item 3.0 be adopted.	ICAO APAC Office	Regional Performance Objectives (PFFs). Available on website	Noted Welcomed the approach and confirmed the need for the States to derive national performance objectives based on the regional objectives.	Completed
			ICAO Headquarters/ ANB	Brief to ANC	Requested the Secretariat to provide a brief to ANC on performance framework and its rollout plan	January 2010
			ICAO Headquarters/ ANB	Convene ALLPIRG/6 Meeting	Requested to convene ALLPIRG meeting for harmonizing the implementation of performance framework	2011

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Concl/Dec No. --- Strategic Objective*	Title of Conclusion	Text of Conclusion	Responsibility	Deliverable	Action agreed by ANC 21 January 2010 (ANC 183-4	Reporting/ Completion date
C 20/3 D	Align Regional & National Performance Objectives	That, the Regional Office encourage use by States of the PFF template adopted for the regional PFFs and circulate MS Word soft copy versions of the regional PFFs adopted by APANPIRG to enable States to derive national performance objectives based on the regional objectives.	ICAO APAC Office	State letter	Noted	Ongoing

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Concl/Dec No. --- Strategic Objective*	Title of Conclusion	Text of Conclusion	Responsibility	Deliverable	Action agreed by ANC 21 January 2010 (ANC 183-4	Reporting/ Completion date
C 20/4 D	Asia/Pacific Performance Metrics	<p>That the following metrics be adopted as a part of Asia/Pacific regional performance monitoring and measurement:</p> <p>APAC Metric 1 Percentage of RMA sub-regions achieving the regional Target Level of Safety (TLS) for RVSM operations, referenced as of April each year.</p> <p>APAC Metric 2 Percentage of instrument runway ends with an approach procedure with vertical guidance.</p> <p>APAC Metric 3 Percentage of en-route and terminal PBN routes implemented on a sub-regional basis in accordance with the regional PBN plan.</p> <p>APAC Metric 4 Average delays for departures at State's primary international airports for the busiest hour on a weekly basis.</p>	<p>ICAO APAC Office</p> <p>ICAO Headquarters ANB</p>	<p>Asia/Pacific regional performance metrics. Available on website</p> <p>A common set of performance metrics</p>	<p>Noted</p> <p>Requested the Secretariat to develop a common set of performance metrics for all the regions so as to facilitate comparative analysis of regional developments</p>	<p>Completed</p> <p>2011</p>

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Concl/Dec No. --- Strategic Objective*	Title of Conclusion	Text of Conclusion	Responsibility	Deliverable	Action agreed by ANC 21 January 2010 (ANC 183-4	Reporting/ Completion date
C 20/5 D	Data Collection for Regional Metrics	That States, organizations and stakeholders collect and process data to support the regional metrics adopted by APANPIRG, leveraging to the extent possible all existing data and ongoing efforts, and provide a progress report to APANPIRG/21.	ICAO APAC Office APAC States	State letter Data to be provided to regional meetings and APANPIRG to support metrics	Noted	Completed Ongoing
C 20/7 D	Adopt Interim Strategy for Implementation of New Flight Plan Format	That the ' <i>Interim Strategy for the Implementation of new ICAO Flight Plan Format and Supporting ATS Messages</i> ' provided in Appendix A to the APANPIRG/20 Report on Agenda Item 3.2 be adopted and published as the interim edition, and States and users be urged to commence implementation planning based on the interim strategy.	ICAO APAC Office	Interim Strategy for Implementation of New Flight Plan Format	Noted	Completed
C 20/12 D	Adopt ATFM Communications Manual	That the <i>Air Traffic Flow Management (ATFM) Communications Handbook for the Asia/Pacific Region</i> , as shown in Appendix B to the APANPIRG/20 Report on Agenda Item 3.2, be adopted and circulated as regional guidance material.	ICAO APAC Office ICAO Headquarters ANB/ATM	Regional ATFM Communications Handbook Global guidance	Noted Noted that the Secretariat is in the process of developing globally- applicable ATFM guidance material	Completed 2011

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Concl/Dec No. --- Strategic Objective*	Title of Conclusion	Text of Conclusion	Responsibility	Deliverable	Action agreed by ANC 21 January 2010 (ANC 183-4	Reporting/ Completion date
D 20/14 D	Support for Global ICD for AFTN AIDC	That recognizing the benefits to be gained from globally-harmonized interface arrangements for AIDC, APANPIRG supports the work being undertaken by the United States to coordinate a global Interface Control Document for AFTN AIDC and invites the Asia/Pacific Regional Office to act as the regional point of contact for this work.	ICAO APAC Office/ United States	Global Interface Control Document for AFTN AIDC	Noted	February 2010
C 20/20 A & D	Adopt RVSM Minimum Monitoring Requirements	That the RVSM Minimum Monitoring Requirements (MMRs) shown in Appendix B to the APANPIRG/20 Report on Agenda Item 3.3 be adopted as the MMRs applicable for the Asia/Pacific Region.	ICAO APAC Office	RVSM Minimum Monitoring Requirements. Available on website	Noted	Completed
C 20/23 A & D	Adopt RVSM Monitoring Impact Statement	That the <i>Asia/Pacific Regional Impact Statement – RVSM Global Long Term Height Monitoring Requirements effective from November 2010</i> , as shown in Appendix C to the APANPIRG/20 report on Agenda Item 3.3, be adopted and circulated as Asia/Pacific regional guidance material.	ICAO APAC Office	Asia/Pacific Regional Impact Statement – RVSM Global Long Term Height Monitoring Requirements. Available on website	Noted and welcomed the initiative of APANPIRG in preparing an impact statement for RVSM long-term height monitoring requirements.	Completed

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Concl/Dec No. --- Strategic Objective*	Title of Conclusion	Text of Conclusion	Responsibility	Deliverable	Action agreed by ANC 21 January 2010 (ANC 183-4	Reporting/ Completion date
D 20/24 A & D	En-route Monitoring Agency (EMA)	That the term En-route Monitoring Agency (EMA) be used to describe an organization providing airspace safety assessment, monitoring and implementation services for international airspace in the Asia/Pacific Region to support implementation and operation of reduced horizontal (lateral and longitudinal) separation.	ICAO APAC Office	Adoption of new name: En-route Monitoring Agency (EMA)	Noted	Completed
C 20/25 A & D	Adopt En-route Monitoring Agency (EMA) Handbook	That the <i>Asia/Pacific En-route Monitoring Agency (EMA) Handbook</i> , as shown in Appendix D to the APANPIRG/20 report on Agenda Item 3.3, be adopted and circulated as Asia/Pacific regional guidance material.	ICAO APAC Office	En-route Monitoring Agency (EMA) Handbook. Available on website	Noted	Completed

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Concl/Dec No. --- Strategic Objective*	Title of Conclusion	Text of Conclusion	Responsibility	Deliverable	Action agreed by ANC 21 January 2010 (ANC 183-4	Reporting/ Completion date
C 20/33 D	Coordinate Implementation of Reduced Horizontal Separations with CSPs	That, recognizing the technical limitations in satellite data link communications capability for the provision of ADS-C and CPDLC, States intending to implement reduced horizontal separations based on RNAV 10 and RNP 4 PBN specifications in oceanic and remote area commence early coordination with Communication Service Providers (CSPs) in order to ascertain adequate data link communication/surveillance capability to support the proposed implementation. Outcomes should be recorded in a formal Service Level Agreement (SLA) between implementing States and CSPs, jointly or severally, to ensure that capabilities are available to properly support RCP 240/D specifications contained in Appendices B and C to the GOLD on an ongoing basis.	ICAO APAC Office States	State letter Service Level Agreement (SLA) between implementing States and CSPs, jointly or severally.	Noted	Completed Ongoing

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Concl/Dec No. --- Strategic Objective*	Title of Conclusion	Text of Conclusion	Responsibility	Deliverable	Action agreed by ANC 21 January 2010 (ANC 183-4)	Reporting/ Completion date
C 20/34 D	Technical Limitations in Satellite Data Link Communications Capability	That, recognizing current technical limitations in satellite data communications capability that impacts PBN based separation applications particularly for RNAV10 and RNP 4 in the remote and oceanic areas, ICAO be invited to address this issue at global level.	ICAO APAC Office ICAO HQ ANB/CNS ATB	Issue form to be sent to HQ Global monitoring	Noted Noted and that ICAO will undertake a case study on the ownership and control of the air navigation services infrastructure, including the development of a draft service level agreement for use by air navigation service providers. Furthermore, usage of two or more autonomous networks by States and international organizations will provide much better availability. The Secretariat to monitor further developments.	Completed Ongoing

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Concl/Dec No. --- Strategic Objective*	Title of Conclusion	Text of Conclusion	Responsibility	Deliverable	Action agreed by ANC 21 January 2010 (ANC 183-4	Reporting/ Completion date
C 20/35 D	Asia-Pacific Flight Procedure Programme	That, States be encouraged to participate in the Asia-Pacific Flight Procedure Programme in order to build or improve their instrument flight procedure capabilities, meet the PBN implementation goals of Assembly Resolution A36-23 and enhance flight safety, efficiency and environmental protection.	ICAO APAC Office States ICAO HQ ANB/ATM	State letter Participation of States in the Asia-Pacific Flight Procedure Programme	Noted Noted Welcomed the imitative and requested the Secretariat to follow it up for with a similar approach for AFI region.	Completed 2010 2011
C 20/36 D	Preparation for PBN Implementation	That, States that have not done so, are urged to develop their State PBN Implementation Plans, and take action in accordance with those plans to implement WGS-84 and Electronic Terrain and Obstacle Data in their States.	ICAO APAC Office States	State letter PBN Implementation Plans	Noted	November 2009 January 2010

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Concl/Dec No. --- Strategic Objective*	Title of Conclusion	Text of Conclusion	Responsibility	Deliverable	Action agreed by ANC 21 January 2010 (ANC 183-4)	Reporting/ Completion date
C 20/37 D	Guidance material for PBN Implementation	That, ICAO be invited to develop guidance materials on: a) establishing common implementation rules and technical standards for GNSS reporting and prediction requirements; b) assigning PBN capability to GPS IFR aircraft in the first instance without the need for recertification; and c) PBN-specific aspects of en-route safety assessment.	ICAO APAC Office ICAO Headquarters/ ANB/ATM ICAO Headquarters/ ANB/ATM	Submission of Issue form to HQ Guidance material for PBN implementation Status report	Noted To address these PBN issues through appropriate ANC Panel and Study Groups. Requested the Secretariat to provide a status report on global implementation of PBN.	Completed 2011 June 2010
C 20/41 D	Asia/Pacific Regional PBN Implementation Plan	That, the Asia/Pacific Regional PBN Implementation Plan provided in Appendix L to the Report on Agenda Item 3.4 be adopted as Version 1.0.	ICAO APAC Office	Asia/Pacific Regional PBN Implementation Plan	Noted	Completed
C 20/42 A & D	PBN Safety Assessment Training	That, ICAO be requested to assist in addressing the PBN safety assessment training needs in the region.	ICAO APAC Office ICAO Headquarters ANB/ATM	Submission of issue form to HQ PBN safety assessment training needs	Noted To address this performance based navigation issue through appropriate ANC Panels and Study Groups.	Completed 2012

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Appendix C to the Report on Agenda Item 2

Concl/Dec No. --- Strategic Objective*	Title of Conclusion	Text of Conclusion	Responsibility	Deliverable	Action agreed by ANC 21 January 2010 (ANC 183-4	Reporting/ Completion date
		sample template developed by Aerothai for RNP APCH is provided in Appendix O to the Report on agenda item 3.4.				
C 20/57 D	Planning Criteria for SSR Mode S II Code Assignment	That, the Planning criteria for SSR Mode S II code coordination and assignment as provided in Appendix U to the Report on Agenda Item 3.4 be adopted as a provisional guidance material for use in the Asia/Pacific Region.	ICAO APAC Office	Planning Criteria for SSR Mode S II Code Assignment and available in website	Noted	Completed

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Appendix C to the Report on Agenda Item 2

Concl/Dec No. --- Strategic Objective*	Title of Conclusion	Text of Conclusion	Responsibility	Deliverable	Action agreed by ANC 21 January 2010 (ANC 183-4	Reporting/ Completion date
C 20/58 D	ICAO Position for the Eleventh World Radio Communication Conference – 2011 (WRC-11) Agenda Items	<p>That, States be urged to:</p> <ul style="list-style-type: none"> a) integrate ICAO Position on WRC-11 Agenda Items into their State Position presented to the regional telecommunication forum (APG) involved in the preparation of joint regional position on the Agenda Items; b) include ICAO Position on WRC-11 Agenda Items into the State Position to the extent possible; c) undertake to provide experts from their civil aviation authorities to participate in the development of State and regional positions; and d) ensure to the extent possible, State delegation to regional conferences, ITU Study Groups and WRC should include experts from Civil Aviation authorities. 	<p>ICAO APAC Office</p> <p>States</p>	<p>State letter</p> <p>Support to ICAO position on WRC agenda through participation in WRC 2011 now postponed January 2012</p>	<p>Appreciated the ongoing contribution of APANPIRG in addressing this issue in a number of forums and requested the Secretary General to urge States to continue to participate at various levels in different forums to provide support to the ICAO position.</p>	<p>Completed</p> <p>January 2012</p>

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Appendix C to the Report on Agenda Item 2

Concl/Dec No. --- Strategic Objective*	Title of Conclusion	Text of Conclusion	Responsibility	Deliverable	Action agreed by ANC 21 January 2010 (ANC 183-4)	Reporting/ Completion date
D 20/59 D	Use of the public Internet to access OPMET data and WAFS forecasts	<p>That, OPMET data and WAFS forecasts currently distributed through the ISCS, if only used for flight planning, can be considered non-time critical and therefore, can be accessed through the public Internet.</p> <p><i>Note: Relevant ICAO guidance will be updated accordingly, subject to consideration of a similar decision by the WAFSOPSG/5 Meeting and subsequent endorsement by ANC.</i></p>	<p>ICAO APAC Office</p> <p>ICAO Headquarters/ ANB/MET/AIM</p>	<p>Submission of issue form to Headquarters</p> <p>Updated guidance material</p>	<p>Noted</p> <p>Requested the Secretariat to update the guidance in Doc 8896.</p>	<p>Completed</p> <p>2010</p>
C 20/69 D	Implementation of SIGMET on Radioactive Clouds and Aerodrome Warnings on Tsunami	<p>That, in view of clarifying existing Annex 3 provisions,</p> <p>a) the IAVWOPSG consider developing Annex 3 provisions and guidance material, as necessary, related to the issuance of SIGMET on radioactive clouds; and</p> <p>b) ICAO consider developing Annex 3 provisions and guidance material as necessary related to the issuance of aerodrome warnings on tsunami.</p>	<p>ICAO APAC Office</p> <p>ICAO Headquarters ANB/MET/AIM</p>	<p>Submission of issue form to Headquarters</p> <p>Annex 3 provisions and guidance material as necessary related to the issuance of aerodrome warnings on tsunami.</p>	<p>Noted</p> <p>Invited the IAVWOPSG to consider the need for developing additional ICAO provisions related to SIGMET on radioactive clouds and requested the Secretariat, with the assistance of the METWSG, to consider the need for developing additional ICAO provisions related to aerodrome warnings on Tsunami.</p>	<p>Completed</p> <p>November 2013</p>

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Concl/Dec No. --- Strategic Objective*	Title of Conclusion	Text of Conclusion	Responsibility	Deliverable	Action agreed by ANC 21 January 2010 (ANC 183-4	Reporting/ Completion date
C 20/70 D	Training on QMS	That, WMO, in coordination with ICAO, be invited to organize a seminar/workshop on QMS related to aeronautical meteorological services during the first half of 2010.	ICAO Headquarters ANB/MET/AIM and WMO ICAO Headquarters ANB/MET/AIM	QMS seminar/ Workshop Harmonized QMS	Requested the Secretariat to invite WMO to conduct, in coordination with ICAO, a seminar/workshop on QMS. Requested the Secretariat to harmonize QMS methodology for all fields of air navigation systems.	June 2010 TBD
Paragraph 3.6.10	Language proficiency implementation initiatives in Nepal	Nepal's plan to test the controllers and pilots for English proficiency by the end of 2009	ICAO Headquarters	Global implementation plan for language proficiency requirements	Secretariat to provide a report to ANC on the status of region wide implementation of language proficiency requirements.	March 2010

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Appendix C to the Report on Agenda Item 2

Concl/Dec No. --- Strategic Objective*	Title of Conclusion	Text of Conclusion	Responsibility	Deliverable	Action agreed by ANC 21 January 2010 (ANC 183-4	Reporting/ Completion date
C 20/73 D	Adopt GOLD to replace FOM	That, upon release of the Global Operational Data Link Document (GOLD) by the Ad-Hoc GOLD Working Group in first quarter 2010, the FANS-1/A Operations Manual (FOM) be withdrawn and replaced by the GOLD as Asia/Pacific regional guidance material for use by States and airspace users as the basis for operating Automatic Dependent Surveillance – Contract (ADS-C) and Controller Pilot Data Link Communications (CPDLC), in conjunction with Annex 10 – <i>Aeronautical Telecommunications Volume II – Communications Procedures</i> including those with PANS status and the <i>Procedures for Air Navigation Services – Air Traffic Management</i> (PANS–ATM, Doc 4444).	ICAO APAC Office	Upon release of the GOLD by the ad hoc GOLD WG, transmit State letter	Noted	First quarter 2010
C20/76 A	MET deficiencies to be added to the APANPIRG list of air navigation deficiencies	That, the list of proposed air navigation deficiencies in Appendix F to the APANPIRG/20 Report on agenda item 4 obtained by the ICAO TCB CAEMSA-SP reports be added to the list of APANPIRG air navigation deficiencies list tagged with the U status	ICAO APAC Office	State letter	Noted and requested the Secretary General to urge States to develop and implement an action plan for each deficiency and to provide information to the Bangkok Regional Office.	March 2010

* **Note:** ICAO has established the following Strategic Objectives for the period 2005-2010:

A: Safety - *Enhance global civil aviation safety;*

B: Security - *Enhance global civil aviation security;*

C: Environmental Protection - *Minimize the adverse effect of global civil aviation on the environment;*

D: Efficiency - *Enhance the efficiency of aviation operations;*

E: Continuity - *Maintain the continuity of aviation operations;*

F: Rule of Law - *Strengthen law governing international civil aviation.*

— END —

**AGENDA ITEM 3: REGIONAL PERFORMANCE
FRAMEWORK AND METRICS**

Agenda Item 3: Regional Performance Framework and Metrics

Global Performance-Based Approach and Measurement

3.1 The meeting noted that ICAO Global ATM Operational Concept provides a clear statement of the expectations of the ATM community. Eleven of these expectations have been identified in the Operational Concept and are referred to as Key Performance Areas (KPAs). To support this approach, the *Manual on Global Performance of the Air Navigation System* (Doc 9883) was developed. The Manual provides a step-by-step approach to performance-based planning on the basis of the KPAs identified in the Operational Concept.

3.2 Recognising that tasks require a globally coordinated effort, the aviation community is encouraged to follow a common approach towards development and implementation of a performance-based approach to safety of aviation, and air navigation planning and implementation. It was recognized that data collection, processing, storage and reporting were fundamental to the performance-based approach. The data reporting chain generally starts at the “grass-roots level”. Setting up of its entire chain and managing it are an integral part of the approach. The establishment of a data reporting chain usually involves participation from key players as well as a number of active members of ATM community.

Regional Performance Framework and Metrics

3.3 It was recalled that APANPIRG/19 (September 2008, Bangkok) in its Conclusion 19/1 adopted the Regional Performance Framework in order to assist States to achieve a performance-based global ATM system through the implementation of air navigation systems and procedures in a progressive, cost-effective and cooperative manner. One of the key aspects of the performance-based approach was the development of the Regional Performance Objectives with measurable outcomes and metrics. The meeting reviewed the seven Regional Performance Objectives in the ATM, AIS and SAR fields, and associated Performance Framework Forms (PFFs), based on the current regional work programme which was adopted by APANPIRG/20 in its Conclusion 20/2.

3.4 APANPIRG/20 also adopted Conclusion 20/3 to encourage States to use the similar template format from the regional objectives as the basis for their national objectives to align with Regional & National Performance Objectives.

3.5 In order to ensure that appropriate data are available to enable the measurement of suitable regional metrics, APANPIRG/20 adopted metrics as a part of Asia/Pacific regional performance monitoring and measurement. States are expected to collect and process data to support the regional metrics and report to APANPIRG/21.

3.6 To support the expeditious transition to the performance objectives and metrics, APANPIRG/20 had urged States to develop national performance objectives and complete national performance framework forms and provide the required data to the Regional Office to support the Regional Metric.

3.7 The meeting noted that the seven PFFs were required to align with the global performance-based approach and measurements. In addition, States were required to provide a large number of data making it more difficult to report such information. IATA stated that, to progress PBN implementation States would be to a great extent linked to move forward in preparing metrics. It was recognized that since the PBN/TF reports to the CNS/MET Sub-Group, the outcome of PBN/TF/6 might not have been raised at this meeting. IATA, however, expressed their concerns to not seeing the report of PBN/TF/6.

3.8 The meeting reviewed the PFFs presented to the meeting.

3.9 The Secretariat drew to the attention of the meeting that it was difficult to collect the data for one of the metrics i.e. APAC Metric 4, and that the meeting could review the practicability of the metric. The meeting was of view that data on metrics should be readily available and guidance would be needed on the methodology. It was recognized that a common set of performance metrics for all the regions should be available and States would carry on following the existing four APAC Metrics. In the meantime, the meeting formulated the following Draft Conclusion:

Draft Conclusion SG 20/1 – Common Set of Performance Metrics for All the ICAO Regions

That, ICAO be invited to:

- a) develop a common set of performance metrics for all the ICAO regions so as to facilitate comparative analysis; and
- b) establish the globally harmonised guidance on methodology of how to collect the data in order to achieve commonality.

3.10 The meeting noted that APANPIRG/20 agreed that as the ATM, CNS and MET related aspects of the APANPIRG *List of Key Priorities for the CNS/ATM Implementation in the Asia/Pacific Region* had been adequately incorporated into the PFFs, the Key Priorities List would be discontinued with immediate effect.

3.11 The PFFs reviewed by the meeting and updated on APAC Objective 6 under Agenda Item 4 is provided in **Appendix A** to the Report on Agenda Item 3.

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**PERFORMANCE FRAMEWORK FORM
(REGIONAL)**

(amended 11 September 2009)

REGIONAL PERFORMANCE OBJECTIVE: <u>APAC Objective 1</u>				
AIRSPACE SAFETY MONITORING TO ACHIEVE REGIONAL TLS				
Benefits				
Safety	<ul style="list-style-type: none"> • Improved safety management, • Compliance with regional Target Level of Safety (TLS) 			
<i>Strategy</i>				
Short term/medium term (2009-2015)				
ATM OC COMPONENTS	TASKS	TIME FRAME	RESPONSIBILITY	STATUS
AOM <i>(Airspace Organization and Management)</i>	<ul style="list-style-type: none"> • Facilitate cooperative arrangements between States to undertake airspace safety assessments • Review airspace safety monitoring that supports reduction in vertical and horizontal aircraft separation standards 	2009-2015	RASMAG	In progress
	<ul style="list-style-type: none"> • Assist States to achieve established regional Target Levels of Safety (TLS) • Provide advice to States to establish aspects of ATS safety management systems that support compliance with the regional TLS 	2009-2015	RASMAG SEA RR/TF BOB RHS/TF PBN/TF	In progress
GPIs	GPI/2 Reduced vertical separation minima, GPI/5 Performance based navigation, GPI/7 Dynamic and Flexible ATS route management			
References	<ul style="list-style-type: none"> • <i>Asia/Pacific Guidance Material for ADS/CPDLC/AIDC Ground Systems Procurement and Implementation;</i> • <i>Guidance Material for End-to-End Safety and Performance Monitoring of Air Traffic Service (ATS) Data Link Systems in the Asia/Pacific Region</i> • <i>Asia/Pacific En-route Monitoring Agency (EMA) Handbook</i> • <i>Regional Monitoring Agency (RMA) Manual</i> • <i>Global Operational Data Link Document (GOLD).</i> 			

ASIA/PACIFIC REGION

**PERFORMANCE FRAMEWORK FORM
(REGIONAL)**

(amended 11 September 2009)

REGIONAL PERFORMANCE OBJECTIVE: <u>APAC Objective 2</u>				
OPTIMISE TRAFFIC FLOWS				
Benefits				
Environment	<ul style="list-style-type: none"> • reductions in fuel consumption 			
Efficiency	<ul style="list-style-type: none"> • reduction in weather and traffic induced holding • improved and smoother traffic flows • improved predictability • optimized demand and capacity balancing through the efficient exchange of information 			
<i>Strategy</i>				
Short term (2009-2010)				
Medium term (2011–2015)				
ATM OC COMPONENTS	TASKS	TIME FRAME	RESPONSIBILITY	STATUS
DCB <i>(Demand and capacity management)</i>	Bay of Bengal <ul style="list-style-type: none"> • Enhance and facilitate the orderly flow of traffic across the Bay of Bengal and south Asia 	2009-2010	Air Traffic Flow Management Task Force (ATFM/TF)	Implemented and reviewed regularly by the Bay of Bengal ATFM/TF ATM/AIS/SAR/SG/19 drafted Conclusion to establish regional ATFM steering group
DCB <i>(Demand and capacity management)</i>	South China Sea <ul style="list-style-type: none"> • Enhance and facilitate the orderly flow of traffic in the South China Sea area 	2011-2015	SEACG	ATM/AIS/SAR/SG/19 drafted Conclusion to establish regional ATFM steering group
DCB <i>(Demand and capacity management)</i>	Northeast Asia/Southeast Asia <ul style="list-style-type: none"> • Enhance and facilitate the orderly flow between Northeast Asia and Southeast Asia, as well as within and between the North and the South Pacific regions 	2009/2015	IPACG, ISPACG, EATMCG SEA RR/TF (ATS routes)	ATM/AIS/SAR/SG/19 drafted Conclusion to establish regional ATFM steering group
GPIs	GPI/6 air traffic flow management, GPI/7 Dynamic and Flexible ATS route management, GPI/8 Collaborative airspace design and development, GPI/16 Decision support and alerting system			
References	<ul style="list-style-type: none"> • <i>Draft Air Traffic Flow Management Communications Handbook for the Asia/Pacific Region APANPIRG Conclusions 20/10, 20/11, 20/12 and 20/13</i> 			

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**PERFORMANCE FRAMEWORK FORM
(REGIONAL)**

(amended 11 September 2009, change proposed 9 July 2010)

REGIONAL PERFORMANCE OBJECTIVE: <u>APAC Objective 3</u>				
OPTIMISE ROUTE STRUCTURE IN ENROUTE AIRSPACE				
Benefits				
Environment	<ul style="list-style-type: none"> • reductions in fuel consumption 			
Efficiency	<ul style="list-style-type: none"> • increase airspace capacity • ability of aircraft to conduct flights more closely to preferred trajectories • facilitate utilization of advanced technologies thereby increasing efficiency • optimized demand and capacity balancing through the efficient exchange of information 			
Safety	<ul style="list-style-type: none"> • enhance safety by use of modern capabilities onboard aircraft 			
<i>Strategy</i>				
Short term (2010)				
Medium term (2011 - 2015)				
ATM OC COMPONENTS	TASKS	TIME FRAME	RESPONSIBILITY	STATUS
AOM <i>(Airspace Organization and Management)</i>	<ul style="list-style-type: none"> • Implement ATS route enhancements in the Asia Pacific Region, in collaboration with stakeholders, based on new technologies and procedures and in accordance with APANPIRG PBN Regional Plan, to improve en-route airspace efficiency. • Identify ATS and aeronautical communications problems in the Asia Pacific Region including Indian Ocean and the Arabian Sea, and prepare coordinated plans for actions for their resolution. 	2009 -2015	<u>Bay of Bengal and Arabian Sea</u> BBACG, FIT-BOB, Bay of Bengal Reduced Horizontal Separation Implementation Task Force (BOB-RHS/TF) (Informal Arabian Sea/Indian Ocean ATS Coordination Group - ASIOACG)	Target for 50 NM longitudinal separation in Bay of Bengal is 2010 2011
		2009-2015	<u>Southeast Asia AR9 Flow</u> SEACG, FIT-SEA Southeast Asia Route Review Task Force (SEA RR/TF)	ATM/AIS/SAR/SG/19 (2009) established the SEA Route Review Task Force (SEA RR/TF)

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		2009-2015	<p>Pacific Area No APANPIRG regional working group established</p> <p>(Informal</p> <ul style="list-style-type: none"> • South Pacific ATS Coordination Group – ISPACG, • Pacific ATS Coordinating Group – IPACG, and • East Asia ATM Coordination Group EATMG) 	<p>50 NM longitudinal implemented North Pacific in 2008</p> <p>30/30 NM (RNP4) implemented Honiara, Nauru, Brisbane, Nadia Auckland Oceanic FIRs in January 2005</p> <p>30/30 NM Operational trial Oakland FIR commenced 2007, Fukuoka FIR from August 2008, Anchorage FIR estimated 2011</p>
AOM <i>(Airspace Organization and Management)</i>	Cross-Polar routes <ul style="list-style-type: none"> • Improve alignment and use of cross polar routes at their south (Asian) ends. 	2010-2015	<p>Special ATS coordination meeting – China, Mongolia, Russian Federation, IATA (CMRI)</p> <p>Informal Cross Polar Working Group (CPWG)</p>	In progress
GPIs	GPI/5 Performance based navigation, GPI/8 Collaborative airspace design and management			
References	<ul style="list-style-type: none"> • <i>Asia/Pacific Regional Performance Based Navigation Implementation Plan</i> • <i>ICAO Performance Based Navigation Manual (Doc 9613)</i> • <i>Terms of Reference of the ATM Coordination Groups and Task Forces implementing PBN based route structures and reduced horizontal separation minima.</i> 			

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**PERFORMANCE FRAMEWORK FORM
(REGIONAL)**

(amended 11 September 2009)

REGIONAL PERFORMANCE OBJECTIVE: <u>APAC Objective 4</u>				
OPTIMISE ROUTE STRUCTURE IN TERMINAL AIRSPACE				
Benefits				
Environment	<ul style="list-style-type: none"> • reductions in fuel consumption 			
Efficiency	<ul style="list-style-type: none"> • increase airspace capacity • ability of aircraft to conduct flights more closely to preferred trajectories • facilitate utilization of advanced technologies thereby increasing efficiency • optimized demand and capacity balancing through the efficient exchange of information 			
Safety	<ul style="list-style-type: none"> • enhance safety by use of modern capabilities onboard aircraft 			
<i>Strategy</i>				
Short term (2010)				
Medium term (2011 - 2015)				
ATM OC COMPONENTS	TASKS	TIME FRAME	RESPONSIBILITY	STATUS
AOM <i>(Airspace Organization and Management)</i> AUO <i>(Airspace Users Operations)</i>	Implement ICAO Performance Based Navigation (PBN) provisions for terminal area operations in collaboration with stakeholders based on the Regional PBN Implementation Plan agreed by APANPIRG, to improve terminal area efficiency by use of advanced navigation specifications for SIDs, STARs and instrument approach procedures.	In accordance with PBN Regional Plan	Performance Based Navigation Task Force (PBN/TF)	PBN/TF prepared Regional PBN Plan adopted by APANPIRG/19
GPIs	GPI/5 Performance based navigation, GPI/8 Collaborative airspace design and management. GPI/10 Terminal area design and management, GPI/11 GPI-11 RNP and RNAV Standard Instrument Departures (SIDs) and Standard Terminal Arrivals (STARs), GPI-12 Flight Management System (FMS) – based arrival procedures			
References	<ul style="list-style-type: none"> • <i>Asia/Pacific Regional Performance Based Navigation Implementation Plan</i> • <i>ICAO Performance Based Navigation Manual (Doc 9613)</i> 			

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**PERFORMANCE FRAMEWORK FORM
(REGIONAL)**

(amended 11 September 2009)

REGIONAL PERFORMANCE OBJECTIVE: <u>APAC Objective 5</u>				
IMPLEMENTATION OF NEW ICAO FLIGHT PLAN PROVISIONS				
Benefits				
Environment	<ul style="list-style-type: none"> • reductions in fuel consumption and gaseous emissions as a result of efficiency gains. 			
Safety	<ul style="list-style-type: none"> • enhance safety by use of modern capabilities onboard aircraft 			
Continuity	<ul style="list-style-type: none"> • maintains continuity of aviation operations across the region 			
Efficiency	<ul style="list-style-type: none"> • ability of air navigation service providers to make maximum use of aircraft capabilities, • ability of aircraft to conduct flights more closely to their preferred trajectories, • facilitate utilization of advanced technologies thereby increasing efficiency, and • optimized demand and capacity balancing through the efficient exchange of information. 			
Strategy				
Short/Medium Term (2009-2012)				
ATM OC COMPONENTS	TASKS	TIME FRAME	RESPONSIBILITY	STATUS
SDM <i>(ATM Service Delivery Management)</i>	<ul style="list-style-type: none"> • Implement the provisions of Amendment 1 to the Fifteenth Edition of the PANS ATM (Doc 4444), comprising amended PANS ATM Chapter 4, Chapter 11, Appendix 2 and Appendix 3 provisions relating to the ICAO Flight Plan and associated ATS Message formats, with applicability date 15 November 2012. 	2009-2012	ICAO Flight Plan and ATS Messages Task Force (FPL&AM/TF)	APANPIRG/20 adopted the <i>Interim Strategy for the Implementation of New ICAO Flight Plan Format and supporting ATS Messages 1</i>
GPIs	GPI/5: Performance based navigation, GPI/9: Situational awareness, GPI/11: RNP and RNAV SIDs & STARs, GPI/17: Implementation of data link applications and GPI/18: Aeronautical Information			
References	<ul style="list-style-type: none"> • <i>Amendment 1 to 15th Edition of PANS-ATM (Doc 4444, ICAO State Letter Ref: AN13/2.1-08/50, dated 25 June 2008)</i> • <i>ICAO Guidance Material for Implementation (ICAO State Letter Ref: AN 13/2/1-09/9, dated 6 February 2009)</i> • <i>Asia/Pacific Region – Interim strategy for the implementation of new ICAO flight plan format and supporting ATS messages</i> • <i>APANPIRG Decision 19/6, Conclusions 20/7 and 20/8</i> 			

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**PERFORMANCE FRAMEWORK FORM
(REGIONAL)**

(amended 11 September 2009, change proposed 9 July 2011)

REGIONAL PERFORMANCE OBJECTIVE: <u>APAC Objective 6</u>				
ENHANCED PROVISION OF AIS/AIM				
Benefits				
Efficiency	<ul style="list-style-type: none"> • enhanced collaboration between flight crew and the ATM system, • improved collaborative decision making, • improved predictability, and • reduction of workload for aircrew and ATC. 			
<i>Strategy</i>				
Short to Medium term (2009 – 2012)				
ATM OC COMPONENTS	TASKS	TIME FRAME	RESPONSIBILITY	STATUS
SDM <i>(ATM Service Delivery Management)</i>	<ul style="list-style-type: none"> • Implement the enhanced provisions for AIM becoming available through the work of the Aeronautical Information Services Aeronautical Information Management Study Group (AIS-AIMSG); • Monitor implementation progress 	2009-2016	AAITF	In progress
SDM <i>(ATM Service Delivery Management)</i>	<ul style="list-style-type: none"> • Implement the enhanced provisions for AIM becoming available through the work of the Aeronautical Information Services-Aeronautical Information Management Study Group (AIS-AIMSG); • Monitor implementation progress 	2009-2016	AAITF	In progress TF will develop detailed monitoring framework to track States implementation of AIM (AAITF Task List – Action Item 6 refers)
	<u>Consolidation:</u> (Refer AIM Roadmap) 1. <u>Monitoring of Annex differences</u> 2. <u>AIRAC adherence monitoring</u> 3. <u>Quality</u> 4. <u>WGS-84 implementation</u>	<u>2009 - 2013</u>	<u>AAITF</u>	<u>As above</u>

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	<p><u>Going Digital:</u> (Refer AIM Roadmap)</p> <ol style="list-style-type: none"> 1. <u>Data integrity monitoring</u> 2. <u>Data quality monitoring</u> 3. <u>Aerodrome mapping</u> 4. <u>Electronic AIP</u> 5. <u>Obstacles</u> 6. <u>Terrain</u> 7. <u>Integrated aeronautical information database</u> 8. <u>Unique identifiers</u> 9. <u>Aeronautical information conceptual model</u> 	<u>2009 - 2014</u>	<u>AAITF</u>	<u>As above</u>
	<p><u>Information Management:</u> (Refer AIM Roadmap)</p> <ol style="list-style-type: none"> 1. <u>Aeronautical data exchange</u> 2. <u>Digital NOTAM</u> 3. <u>Communication networks</u> 4. <u>Aeronautical information briefing</u> 5. <u>Training Interoperability with meteorological products</u> 7. <u>Electronic aeronautical charts</u> 8. <u>Agreements with data originators</u> 	<u>2013 - 2016</u>	<u>AAITF</u>	<u>As above</u>
GPIs	GPI/18: Aeronautical Information			
References	<ul style="list-style-type: none"> • <i>Annex 4 – Aeronautical Charts</i> • <i>Annex 15 – Aeronautical Information Services</i> • <i>AIS Manual (Doc 8126)</i> • <i>Aeronautical Chart Manual (Doc 8697)</i> • <i>EUROCONTROL Operating Procedures for AIS Dynamic Data (OPADD)</i> • <i>APANPIRG Conclusion 20/16</i> 			

ASIA/PACIFIC REGION

**PERFORMANCE FRAMEWORK FORM
(REGIONAL)**

(amended 11 September 2009)

REGIONAL PERFORMANCE OBJECTIVE: <u>APAC Objective 7</u>				
ENHANCED SEARCH AND RESCUE CAPABILITY				
Benefits				
Safety & Efficiency	<ul style="list-style-type: none"> • cost-efficient use of RCC accommodation and equipment on a shared basis, • development of a pool of experienced SAR mission coordinators skilled across both aviation and maritime domains thus reducing coordination and fragmentation, • proficient services provided near and within States with limited resources, • harmonization of aviation / maritime procedures, and • inter-operability of life-saving equipment 			
<i>Strategy</i>				
Short to Medium term (2009 – 2015)				
ATM OC COMPONENTS	TASKS	TIME FRAME	RESPONSIBILITY	STATUS
IM <i>(Information Management)</i>	Implementation of Annex 12 Standards and Recommended Practices and related APANPIRG Conclusions to ensure appropriate SAR capabilities for the Asia/Pacific regions.			
	<ul style="list-style-type: none"> • Periodic review of SAR facilities, services and procedures in the region; 	2009-2015	States, ATM/AIS/SAR Sub Group	In progress
	<ul style="list-style-type: none"> • Encourage States to delegate or negotiate SAR services in accordance with Annex 12 provisions; 	2009-2015	States, ATM/AIS/SAR Sub Group	In progress
	<ul style="list-style-type: none"> • APANPIRG Asia/Pacific “SAR Capability Matrix” and “Register of SAR Agreements” be kept up to date and distributed to States for information and action; 	2009 - 2015	States, ATM/AIS/SAR Sub Group	In progress
	<ul style="list-style-type: none"> • States designate an agency for registering ELT Beacons, coded with the country code of the State and unique code of that beacon in a database as required by Annex 10. 	2010	States	In progress
GPIs	None applicable			
References	<ul style="list-style-type: none"> • <i>Annex 12 – Search and Rescue</i> • <i>International Aeronautical and Maritime Search and Rescue Manual (IAMSAR Manual, Doc 9731)</i> • <i>APANPIRG Conclusions 18/19, 18/20, 20/17 and 20/18</i> 			

**AGENDA ITEM 4: REVIEW AND PROGRESS THE
TASKS ASSIGNED TO THE
ATM/AIS/SAR/SG BY APANPIRG**

Agenda Item 4: Review and Progress the Tasks assigned to the ATM/AIS/SAR/SG by APANPIRG

ATM/AIS/SAR SG Task List

4.1 The meeting reviewed the Subject Task List of the ATM/AIS/SAR SG with a view to have a good understanding of the tasks to be addressed by the Group.

Second Meeting of ICAO Flight Plan and ATS Messages Implementation Task Force

4.2 It was noted that the Second Meeting of Asia/Pacific Flight Plan & ATS Messages Implementation Task Force (FPL&AM/TF/2) and a seminar was held at ICAO Asia and Pacific Office, Bangkok, Thailand from 17 to 20 November 2009. Full report of FPL&AM/TF/2 is available at the ICAO Asia and Pacific Office website at http://www.icao.or.th/meetings/2009/fpl_amtf2/index.html.

Matters for Clarification Arising from FPL&AM/TF/1

4.3 FPL&AM TF/1 (March 2009, Bangkok) identified a number of items in respect to the Amendment 1 of the *Procedures for Air Navigation Services – Air Traffic Management* (PANS-ATM, Doc 4444) that warranted assistance/guidance from ICAO Headquarters. The meeting discussed the clarifications provided by ICAO Headquarters to the queries raised during FPL&AM TF/1 for better understanding on issues relating to the FPL field sizes, RPL equipment notification, ATS messages & Field 18 DOF, etc.

Development of Asia/Pacific Regional Guidance Material

4.4 FPL&AM/TF/2 had prepared the draft document titled *Asia/Pacific Guidance Material for the Implementation of Amendment 1 to Procedures for Air Navigation Service – Air Traffic Management, (PANS-ATM, DOC 4444), 15th Edition*, as shown in **Appendix A** to the Report on Agenda Item 4.

4.5 The meeting reviewed the document and adopted the draft Conclusion as follows:

Draft Conclusion SG 20/2 – Regional Guidance Material for the Implementation of Amendment 1 to PANS-ATM

That, in order for States to clearly understand what is intended in Amendment 1, the ‘*Asia/Pacific Guidance Material for the Implementation of Amendment 1 to the 15th Edition of the Procedures for Air Navigation Services – Air Traffic Management (PANS-ATM, Doc 4444)*’ provided in **Appendix A** to the Report on Agenda Item 4 be adopted and published as regional guidance material.

Flight Plan Implementation Tracking System

4.6 FPL&AM/TF/2 noted a demonstration of the ICAO Flight Plan Implementation Tracking System (FITS) website (<http://www2.icao.int/en/FITS/Pages/home.aspx>) conducted by the Secretariat. The meeting reviewed comments/suggestions made by the Task Force in this regard.

Aspects of Implementation in Asia/Pacific Region

4.7 FPL&AM/TF/2 noted views expressed by Australia, India, Japan, Thailand, United States and IATA.

IATA's Concerns

4.8 IATA noted that nearly 18 months has passed and while Asia/Pacific Region was now conducting FPL&AM TF/2, IATA was concerned that the corresponding effort in other regions was not as apparent. As such IATA believed it was vital for the implementation of the amended FPL provisions to be very carefully managed on a global basis. While coordination could be undertaken on a regional basis, the necessary guidance, controls, coordination and motivation must be controlled on a global basis. IATA noted that the meeting had already discussed the effects on flight safety arising from ATC automation failures.

4.9 From IATA's perspective, unfortunately there had already been enormous variations in preparation and approach to the FPL amendment, with some States already identifying that they have no intention of meeting the effective date. At the first meeting of the European FPL Task Force in September 2009, NATS United Kingdom and AENA Spain announced they would not be capable of accepting the NEW format in 2012 with NATS expecting late 2013/early 2014 and AENA indicating early 2013. In African/Indian Ocean (AFI) Region, no specific group had been established with little progress expected before APIRG in mid-2010. The Middle East (MID) Region ATM/AIS/SAR group established a study group only in November 2009, but it had no plan to conduct its first meeting until February 2010.

Lack of Robustness in Global Coordination

4.10 The meeting noted the lack of robustness in global coordination for implementation of the New FPL format. The Secretariat informed the meeting that recently the workforce for the implementation of the NEW FPL format had been strengthened, and hoped that the global coordination and harmonization would be maintained.

Regional Strategy for Implementation*IATA – Implementation Strategy*

4.11 The meeting expressed strong concern at the prospect that a large number of operators would cutover to the NEW format on a single day, creating significant potential risks in implementation. IATA acknowledged these concerns and agreed that the situation was much less than ideal. However, users are entirely reliant on the State's ability to accept NEW format FPL and so users cannot switch to NEW until after the States are ready. Unfortunately with some States in regions outside the Asia/Pacific reportedly targeting implementation by all ANSPS and users on 15 November 2012, there was little else that could be planned by users at present

4.12 FPL&AM/TF/2 recalled discussions during FPL&AM TF/1 in relation to airspace users targeting a fixed transition date of 15 November 2012 globally. FPL&AM/TF/2 expressed concern that such an approach would not allow adequate testing of the interfaces between airline and ground systems and would represent a critical risk to transition.

4.13 FPL&AM/TF/2 had adopted an Asia/Pacific approach using a phased transition, where air navigation service providers (ANSPs) would implement NEW, followed by users. A transition period was declared, commencing 1 January 2012 and ending 15 November 2012. The transition period was sub-divided as follows:

- **Phase 1** - ANSPs software delivery and internal testing
1 January to 31 March 2012,
- **Phase 2** – ANSPs external testing and implementation
1 April to 30 June 2012, and
- **Phase 3** – Airspace users testing and implementation.
1 July to 15 November 2012

4.14 The meeting noted the phased implementation and thanked FPL&AM/TF for the work. It was particularly noted that both the PRESENT and the NEW FPL formats would be accepted during the Phase 3 from 1 July to 15 November 2012 by ANSPs, and users could file either format. In view of the above, the meeting adopted the following Decision:

Decision SG 20/3 – Phased Approach to Implement the NEW Flight Plan Format

That, in order to implement the NEW flight plan format in a progressive and orderly manner, the phased implementation developed by the Flight Plan & ATS Message Task Force be adopted.

Date of Flight (DOF) – Five Day (120 Hour) Issues

4.15 The meeting recalled that FPL&AM TF/1 had expressed strong reservations about the NEW provision under which flight plans could be lodged up to five days (120 hours) in advance of EOBT. Present experience in the Asia/Pacific region with plans submitted well in advance of EOBT (within the present 24 hour window) is that this practice precipitates a large number of CHG messages as operators changed aircraft type, or tail number on a same type but with different equipage, or change the expected departure time, or a variety of other modifications to what had originally been filed. Changes in meteorological conditions after the FPL has been filed, route changes and altitude changes also manifest that require modification messages as well. The extension of the filing period from 24 hours to 120 hours is expected to compound these effects, particularly in respect of meteorological factors as changes to the flight plan become necessary on the basis of updated weather reports received within the 5 day period before departure.

4.16 It was noted that the Task Force did not support a compulsion on all States to meet the 120 hour lodgment provision by 15 November 2012 and strengthened the position previously adopted by FPL&AM TF/1 in the regional implementation strategy from “...consider a constraint...” to “...adopt a regional approach that does not require processing of flight plans more the 24 hours prior to EOBT during the declared transition period...” This is expected to mitigate the transition issues associated with DOF matters, and reduce transmission of superfluous modification messages and corresponding load on messaging systems. In the meantime, the DOF complexities would be further addressed by States and the Task Force after the November 2012 implementation, and would be incorporated into new systems as they were specified, procured and commissioned.

4.17 On the basis of the updated and firm information, and the regional approaches agreed by the Task Force, the regional implementation strategy for implementation was reviewed by the meeting as shown in **Appendix B** to the Report on Agenda Item 4 and the meeting adopted the following Draft Conclusion.

Draft Conclusion SG 20/4 – Strategy for Implementation of New Flight Plan Format

That the ‘*Strategy for the Implementation of new ICAO Flight Plan Format and Supporting ATS Messages*’ provided in **Appendix B** to the Report on Agenda Item 4 be adopted and published as the interim edition. States and users are urged to continue implementation planning based on the strategy.

Review by the Meeting

4.18 The Chairman expressed the view that implementation of the NEW FPL format would be a problem if it is not implemented in a uniform manner globally. He further stated that there would be huge problems if no fall back arrangement was to put in place. It was therefore considered important for States to review urgently the status and readiness for implementation. It was recognized that despite the action taken two years ago by establishing the Task Force, there were still a number of concerns on its implementation. Concern was raised that some States might not be able to meet the target date of implementation. IATA stated that it was not just FPL but also expected huge problems associated with the changes in numerous ATS message formats. It was recognized that it was high time that States came up with strategies and timelines for implementation of transition plan. In view of the above, the Task Force was expected to make a firm decision in a timely manner. IFACTA also endorsed the concerns expressed by IATA. It was emphasized that global harmonized implementation could only be achieved through timely coordination work carried out by ICAO Headquarters.

4.19 IATA stated that the United Kingdom was not ready to accept and they were not going to have the software ready to implement the NEW FPL format. This would cause problems to all international airlines operating to and from the United Kingdom and have a wide impact. It was further stated that ICAO would be required to take a decision on the implementation date of November 2012 as it remains unrealistic. The Secretariat informed that meeting that a representative from ICAO Headquarter was expected to attend the next Task Force meeting to provide necessary advice.

4.20 The Secretariat informed that only Australia, Hong Kong China and Japan had so far informed the Regional Office of scheduled date and implementation methodology for transition in accordance with Conclusion 20/8 of APANPIRG. With a relatively short timeframe remaining before the NEW FPL effective date, it was vital that this information was available and necessary for planning purposes at the forthcoming FPL&AM/TF/3 to be held on 23 and 24 August 2010. States were **urgently** requested to provide this information to the Regional Office as required by Conclusion 20/8 to ensure the information is available prior to FPL&AM/TF/3.

Flight Plan Implementation Tracking System (FITS)

4.20 Further, the Secretariat presented a State letter Ref.: AN 13/2-2010/31 dated 29 March 2010 regarding FITS. The NEW flight plan form and new flight planning procedures described in Amendment 1 to the *Procedures for Air Navigation Services – Air Traffic Management*, Fifteenth Edition (PANS-ATM, Doc 4444) will be applicable on 15 November 2012.

4.21 It was noted that ICAO Flight Plan Implementation Tracking System (FITS) provides information regarding the implementation status of the NEW FPL format in each State along with guidance and harmonized solutions to any difficulties encountered in the implementation process. It can be accessed at <http://www2.icao.int/en/FITS/Pages/home.aspx>. The State letter was issued by ICAO Headquarters requesting States to inform the respective ICAO Regional Office accredited to States of actions completed toward implementation of the PANS-ATM provisions regarding the NEW ICAO flight plan content which will ensure current status of FITS in each State. This issue was discussed and some updates were provided. In view of this, the meeting formulated the following draft conclusion.

Draft Conclusion SG 20/5 – Notification of State Transition Date to the NEW Flight Plan Format

That, in order to keep the ICAO Flight Plan Implementation Tracking System (FITS) website updated, States which have not yet provided data inform the Regional Office of the initial set of data required in the FITS website, such as scheduled date and contact person, by 22 October 2010, and subsequently update the data as required.

Report on Southeast Asia Route Review Task Force (SEA-RR/TF)

4.22 It was noted that ATM/AIS/SAR/SG/19 (June 2009, Bangkok) agreed to create a specific ICAO focus group to review and modernise the ATM arrangements in the South China Sea area reflecting the modern technological capabilities becoming available.

4.23 Two meetings of SEA-RR/TF had been held. The first meeting was held on 8-11 December 2009 and the second task force meeting on 22-26 March 2010. The area to be considered was defined as the South China Sea (SCS) including the Hong Kong flight information region (FIR) to the North and Jakarta FIR to the South, as well as the Manila FIR within the SCS Eastwards and airspace which includes ATS routes from Bangkok, Thailand northwards through the Sanya FIR.

Proposed Realignment of L642 and M771

4.24 A proposal to realign the 2 parallel routes L642 and M771 slightly to the west was submitted to the meeting. This would have the benefits of both routes being within radar and VHF coverage north of the Singapore/Ho Chi Minh FIR boundary which would allow 50NM longitudinal spacing between all aircraft using these routes as well as the possibility of using RNAV 5 procedures whereby the pair of RNAV routes could be decreased in both lateral and longitudinal spacing under radar/VHF conditions. The task force meeting considered that further work was required on this initiative at future task force meetings.

4.25 The classification of enroute airspace above could be “continental” airspace with respect to both routes north of the Ho Chi Minh/Singapore FIR boundary.

Statistical Aircraft Data Collection and Analysis

4.26 To ensure that the route review is based on up-to-date data in regards to present and forecast traffic operating in the area, the task force considered that a thorough analysis was required to capture:

- a) Seasonal figures;
- b) Identifying high volume traffic periods; and,
- c) FANS equipped aircraft operating in the area.

4.27 Singapore and Thailand jointly agreed to carry out collation and analysis of this proposed new data.

Proposals for Improvements to South China Sea Airspace Operations

4.28 Singapore presented the Task Force with the background to the methodology used in the implementation of 50 NM lateral and longitudinal separations on RNAV routes L642 and M771 on 2 July 2008 after the required safety assessment.

4.29 The Task Force was advised that, although those routes were laterally 60 NM apart, from a tactical basis ATC use 50NM to allow the divergence of aircraft up to 10NM for weather deviations without affecting the operation of an aircraft on the other parallel route. This initiative plus others supplied by Singapore are mentioned as Recommendations below:

Recommendation 1: That South China Sea ANSPs adopt 50NM as the lateral separation standard for the six RNAV routes, with controllers using this 50NM value on a tactical basis when required, and that, as the Task Force proceeds with its work of route realignment, this reduced lateral separation minimum value be kept in mind;

Recommendation 2: That the Task Force adopts a phased approach to introducing horizontal-plane separation minima based on advanced CNS requirements.

Recommendation 3: That the Task Force confirm that the air traffic procedures and automation systems of those ANSPs who will provide data link services for operations in South China Sea airspace are capable of providing 50NM and 30NM longitudinal separation minima safely, based on the recommendation by the FANS Implementation Team, Southeast Asia, and that the navigational and data link performance of aircraft in the airspace will support safe introduction of such minima.

Recommendation 4: That the Task Force establish operational-trial use of 50NM longitudinal separation standard between suitably equipped pairs of aircraft on N892, L625, N884 and M767 in those South China Sea FIRs with current capability for managing data-link communications and surveillance, with the first phase of the trial limited to application of the 50NM longitudinal standard as a means of facilitating climbs and descents.

4.30 The task force had extensive discussion on Recommendation 5 & 6 below and it was felt that more in-depth study would be required.

Recommendation 5: That the Task Force, assuming a satisfactory outcome of the use of 50NM longitudinal separation on N892, L625, N884 and M767, adopt as the next phase of its incremental plan the application of a 30NM longitudinal separation on those routes; and,

Recommendation 6: That the Task Force examine, in light of the current and projected data link capability of South China Sea ANSPs and of relevant traffic characteristics, the feasibility of applying a 30NM longitudinal separation standard on a tactical basis to operations on L642 and M771.

Unidirectional Routes Replacing A1 and A202

4.31 A proposal identified two high profile routes, A1 and A202, which link Bangkok and Hong Kong through the Pearl River Delta. It was suggested to the Task Force that a parallel pair of routes could be designed for both the present A1 and also the present A202. These four routes should also be unidirectional which would double the amount of flight levels compared to the present structure. This in turn would improve operational efficiency and safety for the airlines as well as ease the workload and complexity on air traffic controllers.

4.32 The Task Force considered that this proposal would need further discussion especially with regard to civil/military matters.

Proposal to Implement Unidirectional Parallel Tracks Crossing the Major Traffic Flow

4.33 There were four main routes crossing the primary northeast/southwest traffic flows as below:

- a) M768 Brunei to Ho Chi Minh;
- b) L628 Manila to Bangkok;
- c) A461 Manila to Hong Kong; and
- d) B462/ B348 Manila to Taipei.

4.34 The Task Force recognized that these crossing aircraft needed to be accommodated with economically efficient levels. The crossing routes are presently bidirectional and are mostly of a shorter distance than the major traffic flows however, by duplicating each of these routes with a spacing of 60 NM and introducing unidirectional procedures on all of these crossing routes, fewer levels would be required for these aircraft and as a consequence, additional levels could be transferred to the more densely populated NE/SW primary traffic flows.

4.35 In summary, the following proposals were put to the Task Force:

- a) unidirectional parallel routes replacing present bi-directional crossing routes;
- b) distance between these unidirectional routes of 60 NM;
- c) fewer levels required for crossing routes - less aircraft;
- d) possibility of some levels being used by primary traffic flow; and
- e) divergence and convergence of routes under radar coverage.

4.36 The Task Force considered that the overall proposal had merit, however, further discussions were needed to fully clarify the benefits to the airlines as well as ATC.

Global Operational Data Link Document (GOLD)

4.37 United States informed the meeting that the GOLD was intended primarily for those who are involved in planning and implementation of data link services and day-to-day operations, and would harmonize oceanic and continental (domestic) data link operations worldwide.

4.38 The GOLD has effectively replaced the Guidance Material for ATS Data Link Services in North Atlantic Airspace (NAT Data Link GM) and the FANS-1/A Operations Manual (FOM) for Asia/Pacific (APAC), South American (SAM) and African/Indian Ocean (AFI) Regions. The GOLD also includes provisions for the aeronautical telecommunication network (ATN) implementation in the European Region.

4.39 The APANPIRG/20 concluded that, upon release of the GOLD by the Ad-Hoc GOLD Working Group in 2010, the FANS-1/A Operations Manual (FOM) be withdrawn and replaced by the GOLD as Asia/Pacific regional guidance material.

4.40 By the end of June 2010, the NAT SPG/46 expects to conclude that the GOLD, Edition 1.0 will replace the Guidance Material for ATS Data Link Services in North Atlantic Airspace.

4.41 The GOLD Ad-Hoc Working Group completed the first edition, which was published on 14 June 2010. The Regional Office issued a State letter Ref. T 3/10.0 – AP108/10 (ATM) on 28 June 2010 to notify States and international organizations of the publication.

4.42 The First Edition of GOLD is available for download on the following public websites:

FAA:

http://www.faa.gov/about/office_org/headquarters_offices/ato/service_units/enroute/ocenic/data_link/;

Airways New Zealand:

<http://www.ispacg-cra.com>; and

ICAO Asia and Pacific Office:

<http://www.bangkok.icao.int/edocs/index.html>.

4.43 This document is maintained as a regional document in coordination with all ICAO planning and implementation regional groups (PIRGs) providing data link services within their region. Each participating PIRG establishes a mechanism for submitting and administering change proposals.

4.44 It was noted that Change proposals (CPs) could be submitted by any stakeholder participating in data link operations. The stakeholder should submit a CP to any ICAO regional office concerned. The ICAO regional office would coordinate the CP within its own region, and with other regions and ICAO Headquarters to determine the acceptability of the CP. Regions concerned would need to accept the CP before the GOLD could be amended by any region. Once the ICAO regional office has completed coordination and the PIRGs concerned accept the change proposal, the change would be concluded by each of the PIRGs.

4.45 United States advised that GOLD Appendices E and F contain factual information that is specific to the regions/States and operators/aircraft, and hence they would not be required to follow the same change process as other parts of the GOLD. Therefore, Appendices E & F are not subject to the GOLD amendment process described above, and will be maintained by the GOLD Ad Hoc Working Group on an as needed basis.

4.46 For the remainder of the GOLD, a global configuration management process will need to be put in place by ICAO whereby the document would be maintained in coordination between the concerned PIRGs and the ICAO Secretariat. In the initial period, the GOLD Ad-Hoc Working Group will assist the Secretariat in the global coordination of future amendments to the GOLD.

4.47 APANPIRG in its Conclusion 20/74 had adopted the GOLD upon its release. It was released on 14 June 2010. Since this date the FOM has been replaced by GOLD. States were advised of the publication of Gold on 28 June and also published in the ICAO website.

Conclusion 20/74 – Adopt GOLD to replace FOM

That, upon release of the Global Operational Data Link Document (GOLD) by the Ad-Hoc GOLD Working Group in first quarter 2010, the FANS-1/A Operations Manual (FOM) be withdrawn and replaced by the GOLD as Asia/Pacific regional guidance material for use by States and airspace users as the basis for operating Automatic Dependent Surveillance – Contract (ADS-C) and Controller Pilot Data Link Communications (CPDLC), in conjunction with Annex 10 – Aeronautical Telecommunications Volume II – Communications Procedures including those with PANS status and the Procedures for Air Navigation Services – Air Traffic Management (PANS-ATM Doc 4444).

Second Meeting of ICAO AIS-AIM Study Group

4.48 It was noted that the Second Meeting of the Aeronautical Information Services-Aeronautical Information Management Study Group (AIS-AIMSG/2) was held at ICAO in Montréal from 10 to 13 November 2009. The main outcome of the Study Group is highlighted in the following paragraphs.

Global Strategy/Roadmap

4.49 A summary of the amendments to the *Roadmap for the Transition from AIS to AIM* was provided which were made since AIS-AIMSG/1 (December 2008, Montreal) based on the consultative process undertaken with members, States and ICAO Regional Offices. It was noted that the Roadmap had been published on the ICAO website as a first edition and would be further amended as necessary.

4.50 The group recognized that there was a need to consider strengthening Annex 15 – *Aeronautical Information Services* provisions related to legal and institutional issues, and to add guidance to the *Aeronautical Information Services Manual* (Doc 8126) to provide a framework on which decisions on legal and institutional issues could be based. It was also suggested that an overview of what States may need to consider when addressing legal and institutional issues be included in the Roadmap.

4.51 Concerning the CANSO AIM Working Group activities, the group agreed that the development of a Glossary which would aim to achieve a common terminology and definitions with respect to AIM should re-use existing material including the result of the international Aeronautical Information Harmonization Working Group (AIHWG). It was agreed that a careful consideration should be undertaken of definitions, both broad and highly technical, being developed by the various groups.

Digital Data Exchange Model

4.52 It was recognized that the planning for implementation of aeronautical data exchange system should be Aeronautical Information Exchange Model Version 5 (AIXM 5). However, it was agreed that States who have not upgraded to AIXM 5 could continue to use AIXM 4.5.

Including AIM in Annex 15

4.53 The group noted that the MET/AIM Divisional Meeting planned for 2014 would be present a restructured Annex 15 – *Aeronautical Information Services*.

World Geodetic System — 1984 (WGS-84) Manual (Doc 9674)

4.54 The group reviewed a proposed amendment to the *World Geodetic System — 1984 (WGS-84) Manual* (Doc 9674) with respect to transformation of coordinates, processing coordinates in decimal values and the rounding of calculated values, and the height reference system.

AIM Quality Management System

4.55 It was also noted that while the quality manual would be based on ISO 9000:2008, State quality management system (QMS) used as examples may be based on ISO 9000:2000. The group determined that this was acceptable for the first edition of the quality manual, since there were few differences between ISO 9000:2000 and ISO 9000:2008.

4.56 Japan informed the meeting that the draft Quality Management Manual was provided to ICAO Headquarters via the AIM Study Group as contribution from Japan.

Electronic Terrain and Obstacle Data (eTOD)

4.57 With regard to eTOD, the group reviewed the progress made on proposals for amendment of Chapter 10 of Annex 15 and noted that the result of ICAO consultation with States and international organizations were presented for consideration by the ANC in mid-November 2009. The group also noted that EUROCONTROL was developing eTOD guidance material which would be made available to ICAO in the second half of 2010.

AIM Staff Training Guidance

4.58 The group agreed to develop an AIS training manual that would include AIM elements at a later stage.

Legal and Institutional Issues Related to AIM

4.59 The group agreed that the issues identified by the ad-hoc group should be developed into guidance material, in coordination with the CANSO AIM Working Group, for inclusion in the *Roadmap for the Transition from AIS to AIM*. It was further agreed that examples of State policies on legal and institutional issues would assist the ad-hoc group in carrying out this task.

Information on NextGen and SESAR

4.60 The meeting took note of SESAR information management. In view of the numerous data domains to be modeled and possible spill over into AIXM, concern was expressed that AIXM should not be allowed to expand to an unmanageable extent.

Flight and Flow Information for a Collaborative Environment (FF-ICE)

4.61 The group concluded that there was little overlap between the FF-ICE concept and the work of the AIS-AIMSG at the current level of conceptual development expressed in the draft FF-ICE concept document. However, once FF-ICE would be progressed into systems development, there could be a considerable impact, and that the systems envisioned by FF-ICE would need to be aware and interoperable with AIM systems and information management principles.

4.62 The group considered that the next meeting should be convened in Montreal from 9 to 12 November 2010.

Fifth Meeting of the AIS-AIM Implementation Task Force

4.63 The meeting noted that the Fifth Meeting of ICAO AIS-AIM Implementation Task Force (AAITF/5) was held at Beijing International Convention Centre in Beijing, China on 25 and 26 June 2010.

Review of AAITF Terms of Reference

4.64 AAITF/5 reviewed their terms of reference (TOR), and a suggestion was made that consideration, implementation and reporting on the regional performance framework performance objectives contained in the PFF for APAC Objective 6 should be reflected in the TOR.

4.65 The meeting reviewed the proposal from AAITF and adopted the TOR. Accordingly, the meeting adopted the following Decision:

Decision SG 20/6 – Terms of Reference of the AIS-AIM Implementation Task Force

That the Terms of Reference of the AIS-AIM Implementation Task Force contained in **Appendix C** to the Report on Agenda Item 4 be adopted.

Review Outcome of APANPIRG/20

4.66 The meeting noted the outcomes of APANPIRG/20 and ATM/AIS/SAR/SG/19 (June 2009, Bangkok). The PFF adopted by APANPIRG/20 was reviewed and subsequently undertaken to update by the AAITF chairman.

Report on AIS-AIMSG/2

4.67 China reported the outcomes of the Second Meeting of AIS-AIMSG (AIS-AIMSG/2, November 2009) which was held at the ICAO headquarters in Montréal, Canada. AAITF/5 noted, *inter alia*, that in view of the numerous data domains to be modeled and possible spill over into AIXM, concern had been expressed that AIXM should not be allowed to expand to an unmanageable extent. AIS-AIMSG/2 recognized that it should monitor developments concerning NextGen and SESAR, and members were requested to share information in this regard with the group at the next meeting.

4.68 Australia advised the meeting that the information on the progress made by AIS-AIM was valuable and the activities of the Group should be followed by AAITF to suitably reflect the progress in the work programme of the Task Force. In this regard, the meeting adopted the following Decision:

Decision SG 20/7 – Monitor the Progress at the AIS-AIM Study Group

That the activities of the AIS-AIM Study Group be monitored by the AIS-AIM Implementation Task Force and the progress made by the Group be suitably reflected in the work programme of the Task Force.

Review of Air Navigation Deficiencies in the AIS Field & Proposed Action

4.69 AAITF/5 reviewed the List of Deficiencies updated by APANPIRG/20 and noted that Cook Islands, Kiribati, Nauru and Papua New Guinea were the listed States in regard to AIP Format. New Zealand informed AAITF/5 that they were assisting the first three States in that list and expected to complete the work by the end of 2011. The list would be updated after the AIPs have been published.

AIS Regulation in Australia

4.70 Australia informed AAITF/5 that the Civil Aviation Safety Authority (CASA) of Australia was currently creating a new Civil Aviation Safety Regulation (CASR) Part 175 – Aeronautical Information Services.

Adoption of Eurocontrol Operating Procedures for AIS Dynamic Data Edition 3.0

4.71 It was noted that Japan informed AAITF/5 that Eurocontrol had published the Eurocontrol OPADD Edition 3.0. To ensure global harmonization, the Asia/Pacific procedures now required updating.

4.72 AAITF/5 thanked Japan for their continuous work to undertake the updating work and agreed to review the draft Chapter 3. States were required to review the new draft Chapter 3 and contact Japan if there are comments. Unless there are comments sent to Japan by the time of APANPIRG/21 in September, the Eurocontrol OPADD Edition 3.0 (except for Chapter 6, 6.2 Procedures using an Item x) would be adopted for Chapter 3 of the *Guidance Manual for Aeronautical Information Services (AIS) in the Asia/Pacific Region* (Edition 3.0). Subsequently, the Secretariat would upload the regional guidance Manual on the Regional Office's website after incorporating the OPADD Edition 3.0 in Chapter 3.

Issue of Difference of AIRAC Effective Time between Japan and the Republic of Korea

4.73 Japan had advised that there was the issue of the 24 hour difference of AIRAC effective time between Japan and the Republic of Korea. For the purpose of regional harmonization, the Republic of Korea expressed its intention to move their AIRAC effective time a day earlier from 15:00 UTC to 16:00 UTC in the near future. The meeting thanked Japan and the Republic of Korea for the information.

Structure of Sub-Group

4.74 The meeting noted that Australia proposed a discussion where AIS and MET could be matched together in a single Sub-Group of APANPIRG. New Zealand advised the meeting that APANPIRG/20 had considered a similar working paper. Following discussion, a Draft Decision emerged for consideration by the Sub-Groups with a proposal for establishment of AIS and MET as a new Sub-Group of APANPIRG or MET function to transferred under ATM/AIS/SAR Sub-Group.

4.75 During the discussion on this issue, IATA recalled that APANPIRG had in the past conducted the CNS/MET and the ATM/AIS/SAR Sub-Group meetings concurrently on two occasions at the same venue to foster better coordination. However, due to high workload in the respective fields, the desired result had not been achieved. The meeting was of view that AIS being closely associated with the ATM function, it should not be detached from ATM/AIS/SAR Sub-Group. In the absence of strong justification in supporting of the draft conclusion formulated by the Task Force, the meeting did not support the Draft Decision proposed by the Task Force.

Adoption of Amendment 36 to Annex 15 and Amendment 56 to Annex 4

4.76 It was noted that Amendment 36 to Annex 15 and Amendment 56 to Annex 4 were adopted by the Council in February 2010 with the applicability date of 18 November 2010. States were notified of the changes in April 2010 by State letters. States were required to notify any differences which will exist between their national regulations or practices and the provisions of the whole of Annexes 15 and 4 by 18 October 2010. With respect to Annex 15 paragraphs 10.1.4 and 10.1.5 and Annex 4 paragraph 5.2.1 are to become applicable on 12 November 2015 and any differences which will exist are to be notified by 12 October 2015.

4.77 The main changes were as follows;

Annex 15

- new provisions relating to the operational use of the public Internet;
- the reporting of volcanic ash deposition;
- quality management systems;
- the use of automation enabling digital data exchange;
- electronic aeronautical information publications;
- the NOTAM Format; and
- an extended applicability date and reduced requirements for electronic terrain and obstacle data.

Annex 4

- definitions and new provisions relating to cyclic redundancy check (CRC); and
- an extended applicability date for the Aerodrome Terrain and Obstacle Chart — ICAO (Electronic).

AIS to AIM Activities in Mongolia

4.78 The meeting was informed that Mongolia had implemented eAIS and eAIP systems since 2007, and automated its pre-flight information bulletin, ATS message, NOTAM and AIP services. These systems comply with AIXM 3.3 data exchange model. The new issue of AIP produced automatically from the eAIP system would be effective on 29 July 2010 replacing previous AIP Mongolia. The electronic version is also available through AIS website with user name and password. The strategic plan is to extend the eAIS and eAIP with eMAP, eTOD, Internet self briefing and automatically created 2D and 3D NOTAMs.

Provision of Electronic AIP (eAIP) in Japan

4.79 The meeting was informed that Aeronautical Information Service Center (AISC) of Japan started providing electronic AIP (eAIP) on their website at <https://aisjapan.mlit.go.jp> and also in DVD since 27 August 2009. The eAIP is available in the form of HTML and PDF, and allows printing. The eAIP is step one in Phase 2 of ICAO Roadmap for transition from AIS to AIM. The eAIP is generated from a part of static data (SD) Aeronautical Information Exchange Model (AIXM 4.5).

4.80 The eAIP contains the same information as hard copy AIP, AIP amendment, AIP supplement and AIC, and enables users to refer the past, current, future editions of AIP both in Japanese and English depending on their needs. AIS Japan website provides NOTAMs as well. Using

HTML technology, NOTAMs which refer to AIP or AIP Supplement have system links to the relevant page in eAIP. This helps users to read the NOTAMs information faster, reducing their workload of AIP or AIP Supplement consultation.

4.81 The eAIP was accessed via website which indicated 30% increase per day on average compared to the time before publication of eAIP. User registration is required to access the website. The registration is free of charge. Recommended software environment for the website is Web Browser: Microsoft Internet Explorer 6.0 or later and PDF Viewer: Adobe Reader Version 6.0 or later.

Status of the AIM Digital NOTAM Programme

4.82 United States informed the meeting that the Federal Aviation Administration (FAA) would be making incremental changes to the formatting of international NOTAMs published by the United States.

4.83 United States planed to implement ICAO-compatible policy in 2012. United States will implement the ICAO-compatible policy in two phases. Phase 1 is short term changes that begin to transition the United States to the ICAO-compatible policy and Phase 2 is the United States ICAO-compatible policy. The United States expected to complete the Phase 1 changes in 2010 or early 2011. The administration will provide an AFTN message alerting NOTAM offices to the upcoming changes at least 60 days prior to implementation. It was also informed that the New NOTAM policy and formatting guidelines would be published at the following website:
http://www.faa.gov/regulations_policies/orders_notices/.
Any inquires to the United States NOTAM modernization team can be made via e-mail to fns@faa.gov.

Proposed Changes to the Operational Letter of Agreement between States for the Monitoring of Aircraft Navigation Errors in the South China Sea Area

4.84 The meeting was informed by Singapore that at ATM/AIS/SAR/SG/18 (June 2008, Bangkok) a revised Operational Letter of Agreement (LOA) for the Monitoring of Aircraft Navigation Errors in the South China Sea Area was signed. Based on the Operational LOA signed in June 2008, Civil Aviation Authority of Singapore (CAAS) is designated as the Monitoring Authority and was responsible for collating relevant data concerning flight operations along RNAV routes, L625, L642, M767, M771, N884 and N892, including the Gross Navigational Errors (GNE) reports from Hong Kong China, The Philippines and Singapore.

4.85 In September 2007, CAAS informed ICAO that the South East Asia Safety Monitoring Agency (SEASMA) will be set up as an En-route Monitoring Agency (EMA) to provide airspace safety assessment and monitoring services to support the introduction and continued safe use of horizontal-plane separation minima in the South China Sea area. SEASMA also took over the responsibility for collating relevant data concerning flight operations along RNAV routes in the South China Sea area. SEASMA was endorsed by the Regional Airspace Safety Monitoring Advisory Group (RASMAG) to perform the role of an En-route Monitoring Agency (EMA) with effect from 1 July 2008. In view of above, the need to revise the current LOA was identified to reflect the change in the name of monitoring authority from CAAS to SEASMA. The meeting noted the changes proposed to the draft LOA. The meeting requested States representatives to take this LOA back to their States, provide comments to Singapore and finalize comments. It was agreed that the LOA among States concerned should be signed during APANPIRG/21 to be held in September 2010 in Bangkok.

Traffic Movements and GNE Reports June 2009 to May 2010 on the Six Designated Monitored Areas in the South China Sea

4.86 Singapore informed the meeting that in assessing the navigation errors on the six RNAV routes, there were six appropriate areas at which the required monitoring were undertaken. Singapore is the monitoring authority and is responsible for collating relevant data concerning flight operations along these routes, including the Gross Navigational Errors (GNE) from Hong Kong, China, the Philippines and Singapore. The total traffic movements and GNE reports for the six designated areas from June 2009 to May 2010 were noted.

4.87 In the month of April 2010, Singapore Area Control Centre (ACC) reported one large lateral deviation 20NM to the left of N892 which was observed on ADS/CPDLC. A lack of coordination between ATC-unit to ATC-unit transfers of control responsibility was the contributing factor towards this large lateral deviation. No further lateral and longitudinal errors were reported in the monitoring area during the period under review.

Volcanic Ash Developments

4.88 The meeting noted that in response to the disruptions to commercial air traffic in Europe and beyond caused by the eruption of Iceland's Eyjafjallajökull volcano on 14 April 2010, ICAO had established International Volcanic Ash Task Force (IVATF) to develop a global safety risk management framework that would make it possible to determine the safe levels of operation in airspace contaminated by volcanic ash. This would be a multi-disciplinary global group and a focal point and coordinating body of all work related to volcanic ash being carried out by ICAO.

4.89 It would address issues related to ATM, airworthiness, aeronautical meteorology (MET) and atmospheric sciences. It was tasked to identify work that needs to be undertaken, together with plans on how to progress them relying, to the extent possible, on existing bodies, such as the International Airways Volcano Watch Operations Group (IAVWOPSG) and the EUR/NAT Volcanic Ash Task Force. It is expected that the work of the Task Force can be completed within a year although some complex issues will have to be pursued by appropriate ICAO bodies beyond 2011.

Federal Aviation Administration Volcanic Ash Response

4.90 United States informed the meeting that the presence of volcanic ash was a recognized hazard in aviation, and in the 1980s and 1990s, several incidents around the globe involved commercial jetliners that encountered volcanic ash and resulted in emergency responses due to volcanic ash exposure.

4.91 ICAO established the International Airways Volcano Watch Operations Group, which consists of nine Volcanic Ash Advisory Centers (VAAC) that cover the majority of the globe. A VAAC provides Volcanic Ash Advisory (VAA) and Volcanic Ash Graphics (VAG) to Meteorological Watch Offices and Airline Operations Centers. In the U.S., the Washington VAAC provides coverage for: the Continental United States; Pacific Ocean abutting Japan, Australia, and New Zealand; Central America, South America, and the Caribbean. The Anchorage VAAC provides coverage for the Alaska Region.

4.92 Similar to the current Eyjafjallajökull eruption, Alaska area volcanic eruptions have sent plumes and drifting ash clouds airborne causing disruption to flight operations. These eruptions have allowed VAACs, aircraft operators and FAA air traffic facilities to gain familiarity with ash cloud impacts and develop mitigation procedures. For example, the Anchorage VAAC was able to identify enhanced capabilities that the Washington VAAC had with regard to their ability to detect

and track VA. This resulted in the Anchorage VAAC collaborating with the Washington VAAC to obtain advanced satellite imagery, allowing enhanced detection and tracking abilities as well.

4.93 The *National Volcanic Ash Operations Plan for Aviation* identifies four U.S. entities. The U.S. Geological Survey (USGS) provides seismic monitoring for early detection, and passes early warnings when an eruption is imminent, or has occurred. NOAA uses satellite monitoring as a core element in detection, tracking, and monitoring eruptions, and the resultant ash plume. The FAA disseminates pilot reports (PIREPS), along with Notices to Airman (NOTAM) and Significant Meteorological Information (SIGMETs). The Air Force Weather Agency (AFWA) is the DoD center for volcanic-ash advisories and forecasts for U.S. Forces worldwide.

4.94 FAA actions taken during volcanic ash episodes include soliciting and disseminating PIREPs, NOTAMs, SIGMETs and METARs. In the U.S., volcanic ash management is largely based on making pilots aware of areas where they might encounter volcanic ash and in relaying pilot reporting of real time conditions. The FAA model is that the decision to operate rests with the pilots and the aircraft operators.

4.95 United States was advised to present this paper at the CNS/MET/SG meeting to be held in Jakarta during the second week of July 2010.

Action for an Effective ATM Contingency Plan for the Region

4.96 Singapore informed the meeting that the development of State contingency plans would necessitate a consultative process between the adjacent FIR authorities. APANPIRG/19 agreed that it would be more efficient if States concerned in this region could take full advantage of ICAO's periodic ATS Coordination Group meetings to hold side meetings to plan/formalise State contingency plans amongst themselves. At SEACG/17 (May 2010, Singapore) Singapore highlighted the need for States to harmonise their State contingency plans. This was to cater for an event where two or more contiguous FIRs need to activate their contingency plans at the same time. With the current situation where each State develops its own contingency plan without a regional coordinated effort, it could lead to a situation of disjointed contingency routes and mismatched flight level assignments when two or more States activated their contingency plans.

4.97 The general methodology and considerations for States to undertake in developing their contingency plan were identified as follows;

- (a) identifying the major international traffic flows to ensure minimal disruption when contingency plan is activated;
- (b) determining the flight levels assignments on the contingency routes to ensure vertical separation and ease of managing the air traffic flows; and
- (c) demarcating the segment of the contingency routes for apportioning to the adjacent air traffic service providers taking into account the air-ground, ground-ground communication as well as some form of surveillance capabilities.

4.98 These measures, taken in both the regional front and by the individual States could lead towards an effective and robust ATM Contingency Plan that would serve the region well in various contingency scenarios. The success of this relies on not just the actions of individual States but through a collaborative effort at a regional level involving all the stakeholders.

4.99 The meeting noted the need, based on Annex 11, for all the States to develop and implement State contingency plans. The general methodology and considerations in developing an effective contingency plan, particularly the need to harmonize the contingency routes/procedures across FIRs was also highlighted. The associated requirements of AIP supplement, Letter of Agreement and local procedures manual to ensure completeness in introducing the contingency plan.

4.100 During the discussion a way forward in developing ATM Contingency plan to serve both as an effective plan and meeting the ICAO Annex 11 requirements for States, Singapore proposed that consideration could be given for the establishment of a Task Force by the Sub-Group. There was a considerable support for this proposal. It was however recognized that due to staff constraint in the ATM field at the Regional Office it may not be feasible to establish a Task Force immediately. It could, however be considered next year when staffing situation would be improved and the Task Force can be served by a Secretary. Meanwhile it was agreed that states should continue to develop their plans coordinating with the adjacent centres. IATA stated that it was a very important work and emphasized the need to harmonize plans as much as possible to ensure that movement of air traffic is not affected due to unforeseen situation. It was further stated that communication between States during the contingency situation was most important aspect as any breakdown in communication could have adverse effect.

Status of the Development and Implementation of Aeronautical Information Management Digital NOTAM Programme

4.101 United States informed the meeting of its recent success regarding the implementation of digital capture and transmission of NOTAMs in order to increase safety and efficiency in the National Airspace System. This first step was necessary as the FAA moved towards the United States NOTAM System (USNS) becoming ICAO compliant and meeting future needs of digital aeronautical information exchange. This transition to digital data represents one of the foundation elements of the Next Generation Air Traffic Service plan (NextGen) and improved shared situational awareness by air traffic controllers and pilots.

4.102 Furthermore, the current format of NOTAMs was hard to integrate into maps or other graphical aids used by pilots and controllers to achieve situational awareness. Lastly, there was no ability to sort, filter, alert or combine NOTAM data with other datasets so a pilot or dispatcher has to review many pages of NOTAMs before every flight.

4.103 The next step to improve the system was to optimize and automate the processes for creating and publishing NOTAMs. First, the United States developed an Internet-based software program for automating NOTAM origination. The software automates the processes describing in NOTAM SARPS by using business rules and AIXM to allow originators of the NOTAMs to create the NOTAM digitally. The originator creates digital NOTAMs by selecting from menus with templates that describe all of the various scenarios used to create a NOTAM. Second, since the NOTAM is created nearly error-free (it cannot correct user mistakes such as closing runway 34R when the user meant 34L), it is sent directly into the US NOTAM System (USNS) and then immediately published.

4.104 Since the NOTAM is created digitally, the format is always consistent. This eliminates third party review that can cause up to 30 minutes of publishing delay and also cause non-standard language and typographical mistakes. Third, since the NOTAM is computer-generated it can be displayed in multiple formats including ICAO, plain language and the old legacy format.

4.105 On 20 April 2010, the Operations Manager at Atlantic City International Airport securely logged into the FAA's new system for creating Digital NOTAMs, and used the software menus and templates to create a NOTAM according to the legacy format. Detail of this new initiative is available on the FAA website at <http://notams.aim.faa.gov>.

Search and Rescue Matters

SAR Agreements and SAR Matrix

4.106 APANPIRG/20 reviewed the APANPIRG list of SAR Agreements and the SAR Capability matrix. Japan and Australia updated the list and the matrix, respectively, as shown in **Appendix D** and **E** to the Report on Agenda Item 4.

4.107 APANPIRG/20 also reviewed and updated the APANPIRG list of SAR Agreements and the SAR Capability matrix. It was noted that details of the June 2009 Arrangement for Coordination of SAR services between New Zealand and Chile were included in the List of SAR Agreements. Viet Nam had also provided information about their agreements with Cambodia and Lao PDR which took effect from March 2009. It was further noted that the SAR Matrix had been updated as required by APANPIRG Conclusion 19/11. Detail guidance had also been made available to States for completion of the Matrix.

4.108 The meeting reviewed the State SAR Agreements table and the SAR Capability matrix which were updated on 11 September 2009. The meeting was informed by Japan that Japan and Philippines had concluded an agreement on 17th March 2010. Australia reported that the agreement between Australia and New Zealand was updated in April 2009. There was no other update provided at the meeting, so the meeting requested the participants to report further update, if any, to the Regional Office as soon as possible in writing to keep the Table and Matrix up-to-date.

Lessons Learned Regarding Termination of Satellite Detection of 121.5 MHz Signals from Distress Beacons

4.109 Since the termination from 1 February 2009 of the COSPAS SARSAT satellite capability to detect 121.5 MHz signals from distress beacons, SAR authorities no longer had satellites providing the approximate location of 121.5 MHz distress beacons. It was noted that the United States had presented information describing how their SAR services had to adjust to this change. In re-training and educating people in the United States, many facts and lessons learned were brought to the attention of the meeting, including:

- a) 121.5 MHz VHF AM is still the international aeronautical voice distress frequency.
- b) 121.5 MHz is still a low-power homing signal on the 406 MHz ELT and EPIRB.
- c) International carriage requirements under ICAO and the International Maritime Organization (IMO) are for the 406 MHz distress beacon, and no longer the 121.5 MHz version but, national regulations may allow domestic use of 121.5 MHz distress beacons.
- d) There are many 121.5 MHz ELTs and EPIRBs still in use.

- e) Aircraft, including many without direction finding equipment will hear the audible 121.5 MHz alert from these distress beacons and report them to air traffic control centres.
- f) The higher the altitude of the aircraft hearing the 121.5 MHz signal, the larger the search area becomes in which the distress beacon may be located.
- g) Personal Locator Beacon (PLB) 406 MHz distress alert signal may cause confusion for national authorities as to which agency has responsibility to register the beacon, or to receive the alert, or to respond to the alert.
- h) There is a need to determine the location of audible 121.5 MHz distress beacon alerts.

4.110 United States made available recently developed guidance of the *Search Planning for Audible 121.5 MHz Distress Beacon Alerts* for review by APANPIRG/20. The following Conclusions were adopted in this respect:

Conclusion 20/17 – SAR Guidance on 121.5 MHz Search Planning

Recognizing that large populations of aircraft would continue to use 121.5MHz distress beacons after the February 2009 cessation of COSPAS SARSAT Satellite tracking capability, States consider the guidance material “Search Planning for Audible 121.5 Distress Beacon Alerts” contained in Appendix G to the APANPIRG/20 Report on Agenda Item 3.2 when developing SAR procedures and training documentation.

Conclusion 20/18 – Provide SAR 121.5 MHz Guidance to ICAO/IMO JWG

That the Regional Office seek the assistance of the United States in providing a copy of the guidance material “Search Planning for Audible 121.5 Distress Beacon Alerts” contained in Appendix G to the APANPIRG/20 Report on Agenda Item 3.2 to the ICAO/IMO Joint Working group on SAR for consideration as an amendment to the International Aeronautical and Maritime SAR (IAMSAR) Manual

4.111 The Secretariat informed the meeting that the United States was requested to provide a copy of the Guidance Material as required by the above Conclusion. Hong Kong, China suggested to make the Annual Report of the ICAO/WMO available to the Sub Group for information.

**INTERNATIONAL CIVIL AVIATION ORGANIZATION
ASIA AND PACIFIC OFFICE**



DRAFT

**Asia/Pacific Guidance Material for the
Implementation of Amendment 1 to the 15th Edition of the
Procedures for Air Navigation Services – Air Traffic Management
(PANS-ATM, Doc 4444)**

Draft Version 0.1 – 19 November 2009

Issued by the ICAO Asia/Pacific Regional Office, Bangkok

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**ASIA/PACIFIC GUIDANCE MATERIAL FOR THE
IMPLEMENTATION OF AMENDMENT 1 TO THE 15th EDITION OF
PROCEDURES FOR AIR NAVIGATION SERVICES – AIR TRAFFIC MANAGEMENT
(PANS-ATM, Doc 4444)**

1. Background

1.1 In order to ensure a harmonised implementation of the provisions contained in Amendment 1 to the 15th Edition of PANS-ATM relating to comprehensive changes to the ICAO Flight Plan and associated ATS Messages formats, this Asia/Pacific regional guidance material has been developed by APANPIRG's Asia/Pacific ICAO Flight Plan and ATS Messages Task Force (FPL&AM/TF). The material will be further developed during 2010 and presented to APANPIRG/21 in September 2010 for formal adoption.

1.2 Asia/Pacific (APAC) States and Air Navigation Service Providers (ANSPs) are encouraged to use this material as general implementation guidance for the new flight plan and ATS messages formats required by Amendment 1 to PANS-ATM for applicability date 15th November 2012. The material is expected to be of specific assistance when coding software changes in automation systems needed to support the changes to flight plan and ATS message formats

1.3 The FPL&AM/TF considers that it is of critical importance to conduct validity checking of Filed Flight Plans (FPL) and Air Traffic Service (ATS) Messages filed with and between all Asia/Pacific States and ANSPs, and to ensure that Current Flight Plans (CPL) and other messages exchanged between States and ANSPs are likewise formatted and handled in a similar fashion. In this manner, users/filers are assured that FPLs and associated messages are checked with the same level of scrutiny independent of where the flight originates. Additionally, they are assured that critical flight data information is passed intact by each Asia/Pacific State and ANSP along the route of flight.

2. Terminology

2.1 In accordance with International Civil Aviation Organization (ICAO) transition guidance documents, the following terminology is used throughout this guidance material:

- **PRESENT** format is defined as ICAO flight planning and ATS message formats currently in use as specified in DOC 4444, 15th Edition.
- **NEW** format is defined as ICAO flight planning and ATS message formats specified in Amendment 1 to DOC 4444, 15th Edition.
- **Applicability Date** is the 15 November 2012 effective date of Amendment 1 to PANS-ATM (Doc 4444).

3. Transition Period & Phased Implementation

3.1 The FPL&AM/TF considers that applying an implementation strategy whereby all user switchovers to NEW format occur on the same day (i.e. on Applicability Date) would result on an unmanageable impact on ANSPs systems with a very real risk of automation system crashes. As such, the pre-implementation ANSP safety case analyses are expected to indentify this implementation scenario as a safety hazard that requires effective mitigation.

3.2 Under the phased arrangements agreed by the FPL&AM/TF for application in the Asia/Pacific Region, ANSP implementation of NEW format (whilst simultaneously retaining PRESENT capability) would take place first, followed by a staggered user switchover to NEW capability.

3.3 The transition period is defined as the declared Asia/Pacific transition period from 1 January 2012 until 15 November 2012, as outlined in the updated Asia/Pacific Region *Strategy for the Implementation of NEW ICAO Flight Plan Format and Supporting ATS Messages* proposed by FPL&AM/TF/2 (November 2009), comprising the following phases:

- **Phase 1** - ANSPs software delivery and internal testing
 - 1 January to 31 March 2012,
- **Phase 2**– ANSPs external testing and implementation
 - 1 April to 30 June 2012, and
- **Phase 3**– Airspace users testing and implementation.
 - 1 July to 15 November 2012

3.4 Under the phased approach, States will not implement NEW capability before the commencement of the ANSPs external testing and implementation period on 1 April 2012 and, insofar as possible, would complete implementation of NEW capability by the end of the ANSPs external testing and implementation period on 30 June 2012. Following this, airspace users would be invited by AIC or NOTAM to commence testing with ANSPs from 1 July 2012. Importantly, ANSPs and users would be encouraged to coordinate appropriate implementation methodologies in order to ensure a staggered migration of airspace users to NEW during the airspace users testing and implementation period (i.e. 1 July – 15 November 2012).

4. DOF/ - Five Day (120 hour) Advance FPL Lodgement

4.1 The Amendment 1 provisions enable flight plans to be lodged up to 5 days (120 hours) prior to the Estimated Off Blocks Time (EOBT) for the flight, a significant change from the 24 hour requirement in the existing provisions.

4.2 Present experience in the Asia/Pacific region with FPLs submitted well in advance of EOBT (within the present 24 hour window) is that this practice precipitates a large number of CHG messages as operators change aircraft type, or tail number on a same type but with different equipage, or vary the ETD, or a variety of other modifications to what has originally been filed. As meteorological conditions change after the FPL has been filed, route changes and altitude changes also manifest, requiring modification messages as well. Overall, the existing 24 hour window generates a significant amount of message traffic that does not add apparent value to the aircraft operator and increases complexity for the many ATS units along the path of flight that have to process the extra modification messages. To address this existing problem, in one instance an Asia/Pacific State has already published a constraint in AIP under which flight plans are not accepted more than 8 hours prior to EOBT.

4.3 The extension of the filing period from 24 hours to 120 hours is expected to compound these effects, particularly in respect to meteorology factors as changes to the flight plan become necessary on the basis of updated weather reports received within the 5 day period before departure.

4.4 Investigations by the FPL&AM/TF have been unable to identify required operational circumstances in the Asia/Pacific Region where FPL lodgement earlier than 24 hours was necessary to meet the medium term needs of States. A similar situation is reported by IATA in respect to Asia/Pacific operators.

4.5 Discussions during the FPL&AM/TF/2 meeting highlighted the difficulties being experienced by many States in terms of civil aviation funding. In the case of the 120 hour lodgement provision, it was difficult for States to justify a business case for changes to what was often a number of legacy systems within a State when there was no clear operational requirement driving the change. Such changes would, of course, be included by States in the specification for new system procurement but, in the absence of a clear operational need, the business case for retrofit by Asia/Pacific States does not appear sound.

4.6 Notwithstanding, some States already have some capacity for DOF, albeit disabled in their systems at the moment. In these cases, where financial impacts were much less, it was logical for such ANSPs to proceed with 120 hour lodgement capability. It is also possible that some States will prefer to proceed with a DOF retrofit to legacy systems in time for the November 2012 implementation. However, the potential impacts of the implementation of an 'island' airspace which was accepting 120 hour lodgement should be considered in terms of the impact of neighbouring airspaces not accepting 120 hour lodgements, particularly in relation to AIDC configuration.

4.8 In light of the issues presently associated with the 5 day (120 hour) lodgement provision, including business case difficulties, the FPL&AM/TF does not support a compulsion on all Asia/Pacific States to meet the 120 hour lodgement provision by 15 November 2012. Accordingly the position adopted in the Asia/Pacific interim regional implementation strategy (Appendix A refers) has been proposed to APANPIRG for strengthening from the current *"..consider a constraint..."* to *"...adopt a regional approach that does not require processing of flight plans more the 24 hours prior to EOBT during the declared transition period..."*.

4.9 This is expected to mitigate the transition issues associated with DOF/ matters and reduce transmission of superfluous modification messages and the associated loading on messaging systems. DOF/ complexities will be further considered by States after the November 2012 implementation and, in any case, would be incorporated into new systems as they were specified, procured and commissioned.

5. Software Coding Considerations

Date of Flight (DOF) and Early Filing

5.1 In Amendment 1, use of a DOF/ indicator in Item 18 is accompanied by the ability to file NEW format up to 120 hours in advance. As it is likely that not all ANSPs will implement the 120 hour requirement by the Applicability Date, the following guidelines regard use of DOF/:

- a) An ANSP that does not implement the 120 hour requirement should handle such messages in accordance with normal ANSP error message handling procedures if that message has a DOF/ that is beyond their implemented time frame (i.e. more than *nnn* hours in advance, often limited to 24 hours). This ensures such messages are processed for the intended day of flight.

- b) At a defined time before Estimated Off Blocks Time (EOBT), normally within 24 hours, DOF/ can be removed from stored FPLs. In any case, DOF/ should not be transmitted in AIDC messages since flight data is first coordinated by AIDC much less than 24 hours before departure (and in fact, in most cases, is first coordinated after departure).

Use of P1-P9 in Field 10a

5.2 In relation to the use of P1-P9 in Field 10a (Radio communication, navigation and approach aid equipment and capabilities), Amendment 1 identifies alphanumeric entries P1-P9 in Field 10a as “Reserved for RCP.” The following guidelines regard filing and processing P1-P9 in Item 18:

- a) Even though there is no need for this information now, ANSPs should accept P1-P9 if filed in an FPL and pass the information in AIDC messages, but with no interpretation or processing required. This will avoid transition issues and minimize necessary coordination when these items begin to be used in the future.

Changed definition of “S” in Field 10a

5.3 Amendment 1 changes the definition of standard equipment in Field 10a (“S”) so that it no longer includes ADF. An FPL may have elements that uniquely identify it as being in either PRESENT or NEW format. However, it is also possible for an FPL to have no unique elements, and thus be valid as both PRESENT and NEW format. In such an FPL, use of “S” in Field 10a is ambiguous.

5.4 Therefore, it is essential to know whether an FPL is in NEW or PRESENT format before interpreting an “S” filed in Field 10a. The following guidelines regard filing and processing of “S” during Phases 2 and 3 of the transition period, respectively (i.e. 1 April to 30 June & 1 July to 15 November 2012).

- a) In conjunction with the beginning of Phase 2 of the transition period (i.e. 1 April 2012), ANSPs should not assume ADF capability when an “S” is filed, regardless of the perceived format of the filed FPL (NEW or PRESENT format). All FPLs received on or after 1 April 2012 with an “S” filed in Field 10a will be processed and/or interpreted as if “V O L” (VHF RTF, VOR and ILS) were filed; and
- b) States and ANSPs must provide instructions to their users to file an “F” for ADF in addition to filing of “S” in PRESENT format FPLs, beginning 1 April 2012.

Consistency between Field 10a and PBN/ in Item 18

5.5 The PBN/ indicator introduced by Amendment 1 conveys not only navigational capability with respect to accuracy, but also information regarding what type of navigational equipment is used to achieve it. This introduces a relationship between PBN/ in Item 18 and Field 10a, and it is possible to file inconsistent data (i.e., capabilities in PBN/ that are not supported by data in Field 10a). Consequently, a consistency check should be coded to evaluate NEW FPLs per the following guidelines:

- If B1, B2, C1, C2, D1, D2, O1 or O2 are filed, then a “G” must be included in Field 10a;
- If B1, B3, C1, C3, D1, D3, O1 or O3 are filed, then a “D” must be included in Field 10a;

- If B1 or B4 is filed, then an “O” or “S” and a “D” must be included in Field 10a (i.e., “SO” or “SD” must appear in 10a);
- If B1, B5, C1 or C5 are filed, then an “I” must be included in Field 10a; and
- If C1, C4, D1, D4, O1 or O4 are filed, then a “D” and an “I” must be included in Field 10a (i.e., “D I” must appear in 10a).

Validity Checking & Processing of Item 18 Indicators

5.6 Amendment 1 indicates that only the specified indicators should be included in Item 18. Furthermore, it makes the order of the indicators mandatory as opposed to preferred. Finally, the rules for some items are quite explicit and could readily be subject to validity checking by automation systems. The following guidelines regard use of Item 18:

- a) Systems should not accept indicators in Item 18 which are not defined in the PANS-ATM. If internal requirements create the need to use a ‘local’ non-standard indicator, measures must be taken to ensure that airspace users filing with multiple FIRs are not impacted, and AIDC coordination does not contain any such indicators.
- b) Airspace users should file indicators in the required order to ensure that systems applying truncation do not eliminate more important data. ANSPs should either enforce the required order, or ensure that AIDC messages contain the items in the required order regardless of the order filed.
- c) Airspace users should only file a single instance of each indicator, though, when prescribed, multiple entries may follow that indicator, separated by a space (blank). ANSPs should either enforce the filing of a single instance of indicators, or ensure that AIDC messages concatenate (i.e. link together) multiple instances into a single instance followed by multiple entries (each separated by a space).

5.7 ANSPs should, at a minimum, perform a validity check of Item 18 indicator contents that are used for processing, and they are encouraged to check all items not listed as “free text field” in the Table 5-1, Item 18 Indicator Validity Check, below.

Indicator	Contents
STS/	One or more of the approved specified entries, separated by spaces
PBN/	A single string containing up to 8 of the approved alphanumeric descriptors No embedded spaces
NAV/	Free text field
COM/	Free text field
DAT/	Free text field
SUR/	Free text field
DEP/	Free text field

Indicator	Contents
DEST/	Free text field
DOF/	A single string in the specified date format (YYMMDD). No embedded spaces
REG/	A single string. No embedded spaces
EET/	<p>One or more strings. Each string is:</p> <p style="padding-left: 40px;">2-5 alphanumeric characters</p> <p style="padding-left: 40px;">–or–</p> <p style="padding-left: 40px;">a LAT/LONG followed by a 4-digit elapsed time, from 0000 to 9959 (i.e., 0-99 hours followed by 0-59 minutes)</p>
SEL/	A single string of four letters
TYP/	<p>Free text</p> <p><i>Note: Although the entry is structured when used for formation flights, it is also used when no designator is assigned and, therefore, may be any text description.</i></p>
CODE/	A single string of 6 hexadecimal characters
DLE/	<p>One or more strings</p> <p>Each string consists of a valid Significant Point followed by a 4-digit elapsed time</p>
OPR/	Free text field
ORGN/	Free text field
PER/	<p>A single letter</p> <p>The letter must be one of those specified in PANS-OPS (Doc 8168), as below:</p> <ul style="list-style-type: none"> • <i>Category A:</i> less than 169 km/h (91 kt) indicated airspeed (IAS) • <i>Category B:</i> 169 km/h (91 kt) or more but less than 224 km/h (121 kt) IAS • <i>Category C:</i> 224 km/h (121 kt) or more but less than 261 km/h (141 kt) IAS • <i>Category D:</i> 261 km/h (141 kt) or more but less than 307 km/h (166 kt) IAS • <i>Category E:</i> 307 km/h (166 kt) or more but less than 391 km/h (211 kt) IAS • <i>Category H:</i> Specific procedures for Helicopters.
ALTN/	Free text field
RALT/	Free text field
TALT/	Free text field
RIF/	Route information consistent with the format of a valid Field 15c
RMK/	Free text field

Table 5-1: Item 18 Indicator Validity Check

Processing location information in the DEP/, DEST/, ALTN/, RALT/ and TALT/ indicators in Item 18.

5.8 Amendment 1 specifies that Item 18 entries for DEP/, DEST/, ALTN/, RALT/ and TALT/ should contain the name and location of the aerodrome. It also requires that “...For aerodromes not listed in the relevant Aeronautical Information Publication [AIP], indicate location as follows ...”. The following guidelines will promote common interpretation and filing practices:

- a) If the aerodrome identifier is not in ICAO DOC 7910, *Location Identifiers*, but is an approved identifier per the AIP for the State where the aerodrome is located, the name of the aerodrome should be the identifier and no additional location information is needed.
- b) If the aerodrome is neither in DOC 7910 nor in a relevant AIP, the name of the airport should be included followed by a location as specified in the amendment. ANSPs should expect to be able to process the last text string provided as a location (Lat/Long, or bearing and distance from significant point, or fix name) to be usable in their flight plan route calculations.

Use of the DLE/ indicator in Item 18.

5.9 Amendment 1 defines a new DLE/ indicator for Item 18, after which a significant point and delay time at the significant point can be filed. The following guidelines regard filing and processing of this indicator:

- a) The significant point in the DLE/ indicator should be required to match a significant point in Field 15c (i.e. not an implied point along an ATS route). An FPL designating an unknown point in a DLE/ indicator should be handled in accordance with normal ANSP error message handling procedures.

6. Conversion from NEW format to PRESENT format

6.1 As described in the ICAO material in the attachment to State letter AN 13/2/1-09/9, conversion from NEW to PRESENT format will be required during the transition period and will affect Field 10a, Field 10b, and Field 18. It is extremely important that such conversions from NEW format to PRESENT format are consistently applied by Asia/Pacific ANSPs and, preferably, throughout all ICAO regions. The guidelines contained in the Conversion Tables for respective fields included below record regionally agreed conversions from NEW to PRESENT format for consistent application by ANSPs.

Conversion of Field 10a

6.2 Table 6-1: *Conversion of Field 10a*, as shown below, is to be used for conversion of NEW Field 10a to PRESENT Field 10a. In using the Table, ensure a check is made for the presence of the information in both the “Field 10a” and “Field 18” NEW columns and convert it to the information in both the “Field 10a” and “Item 18” in PRESENT columns.

'NEW' Data Content		Conversion to 'PRESENT' Data Content	
Field 10a	Item 18	Field 10a	Item 18
N		N	
S		V O L	
S F		S	
A		Z	NAV/GBAS
B		Z	NAV/LPV
C		C	
D		D	
E1		Z	COM/FMC WPR ACARS
E2		Z	COM/DFIS ACARS
E3		Z	COM/PDC ACARS
F		F	
G		G	
H		H	
I		I	
J1		J	DAT/V
J2		J	DAT/H
J3		J	DAT/V
J4		J	DAT/V
J5		J	DAT/S
J6		J	DAT/S
J7		J	DAT/S
K		K	
L		L	
M1		Z	COM/INMARSAT

'NEW' Data Content		Conversion to 'PRESENT' Data Content	
Field 10a	Item 18	Field 10a	Item 18
M2		Z	COM/MTSAT
M3		Z	COM/IRIDIUM
O		O	
P1-P9		<i>Reserved- should not be present. Remove items if present (i.e. do not make information part of the PRESENT format plan).</i>	
R	PBN/A1	R Z	NAV/RNP10
R	PBN/B1	R	
R	PBN/B2	R	
R	PBN/B3	R	
R	PBN/B4	R	
R	PBN/B5	R	
R	PBN/B6	R	
R	PBN/C1	R Z	NAV/RNAV2
R	PBN/C2	R Z	NAV/RNAV2
R	PBN/C3	R Z	NAV/RNAV2
R	PBN/C4	R Z	NAV/RNAV2
R	PBN/D1	P R	
R	PBN/D2	P R	
R	PBN/D3	P R	
R	PBN/D4	P R	
R	PBN/L1	R Z	NAV/RNP4
R	PBN/O1	P R	NAV/RNP1
R	PBN/O2	P R	NAV/RNP1
R	PBN/O3	P R	NAV/RNP1
R	PBN/O4	P R	NAV/RNP1

'NEW' Data Content		Conversion to 'PRESENT' Data Content	
Field 10a	Item 18	Field 10a	Item 18
R	PBN/S1	R Z	NAV/RNP APCH
R	PBN/S2	R Z	NAV/RNP APCH BARO VNAV
R	PBN/T1	R Z	NAV/AR APCH RF
R	PBN/T2	R Z	NAV/AR APCH
T		T	
U		U	
V		V	
W		W	
X		X	
Y		Y	
Z	COM/ nnnn	Z	COM/ nnnn
Z	NAV/ nnnn	Z	NAV/ nnnn
Z	DAT/ nnnn	Z	COM/ nnnn

Table 6-1: Conversion of Field 10a

Conversion of Field 10b

6.3 Table 6-2: *Conversion of Field 10b*, as shown below, is to be used for conversion of NEW Field 10b to PRESENT Field 10b. Ensure a check is made for the presence of the information in both the “Field 10b” and “Item 18” NEW columns and convert it to the information in both the “Field 10b” and “Item 18” in PRESENT columns.

'NEW' Data Content		Conversion to 'PRESENT' Data Content	
Field 10b	Item 18	Field 10b	Item 18
N		N	
A		A	
C		C	
E		S	
H		S	
I		I	

'NEW' Data Content		Conversion to 'PRESENT' Data Content	
Field 10b	Item 18	Field 10b	Item 18
L		S D	
P		P	
S		S	
X		X	
B1			COM/B1
B2			COM/B2
U1			COM/U1
U2			COM/U2
V1			COM/V1
V2			COM/V2
D1		D	
G1		D	

Table 6-2: Conversion of Field 10b

Conversion of Item 18

6.4 Table 6-3: *Conversion of Item 18*, as shown below, is to be used for Conversion of NEW Item 18 to PRESENT Item 18.

'NEW' Data Content	Conversion to 'PRESENT' Data Content
Item 18	Item 18
STS/	STS/ copy text over <ul style="list-style-type: none"> • Except change "ATFMX" to "ATFMEXEMPTAPPROVED"
SUR/	RMK/ SUR <text after SUR/>
DOF/	Maintain data in DOF/ if possible, otherwise remove. While not a documented PRESENT indicator, it is currently in wide use.
DAT/	COM/
DLE/	RMK/ DLE <text after DLE/>

'NEW' Data Content	Conversion to 'PRESENT' Data Content
Item 18	Item 18
ORGN/	RMK/ ORGN
TALT/	RMK/ TALT <text after TALT/>
PBN/	See Table 5-1 above
All other indicators copy over directly, with additions to NAV/, COM/, and DAT/ as specified in Tables 6-1 and 6-2 above.	

Table 6-3: Conversion of Item 18

7. Differentiating between NEW format and PRESENT format

7.1 Although in most cases it will be evident when a FPL is in either the PRESENT or NEW format, situations can arise whereby the presentation of a particular FPL fully meets the parameters of both the PRESENT and NEW formats i.e. the same FPL is able to be interpreted using either of the PRESENT or NEW parameters. However, decoding the FPL using the PRESENT parameters could reach a different outcome than decoding the same FPL using the NEW format. For example, the letter "S" is used for standard equipment in Item 10 of both FPL formats, meaning V, F, O & L (i.e. VHF RTF, ADF, VOR and ILS) in PRESENT format but only V, O & L in NEW format (i.e. no ADF).

7.2 Accordingly, from the commencement of Phase 3 (1 July to 15 November 2012 - Airspace users testing and implementation) of the phased implementation strategy the following criteria should be used to determine if the filed FPL is in PRESENT or NEW format:

- a) If the FPL is filed prior to an ANSP accepting NEW, assume the Flight Plan is PRESENT.

7.3 Once an ANSP has announced it can accept NEW format, if any of the following is filed assume the filed Flight Plan is in PRESENT format:

- a) In Field 10a if the Qualifier J, M or D is filed.
- b) In Item 18 an entry used for STS/ is not in the allowed list for NEW.
- c) In Item 18 an entry used for PER/ is not a single letter in the allowed list.

7.4 Once an ANSP has announced it can accept NEW format, if any of the following is filed assume the filed Flight Plan is in NEW format:

- a) In Field 10a if any of the following qualifiers are filed: E1, E2 , E3 , J1, J2 , J3 , J4 , J5, J6, J7 , M1 , M2 , M3, P1, P2 , P3 , P4 , P5 , P6 , P7.

- b) In Field 10b if any of the following qualifiers are filed: E , H , L , B1 , B2 , U1 , U2 , V1 , V2 , O1 or G1.
- c) In Item 18 if PBN/ is filed.
- d) In Item 18 if SUR/ is filed.
- e) In Item 18 if DLE/ is filed.
- f) In Item 18 if TALT/ is filed.

7.5 If there are qualifiers from the PRESENT list and the NEW list in the same FPL, this indicates that the FPL is inconsistent and therefore should be rejected by automation to 'error queue' enable closer study. After November 15, 2012 all FPLs will be assumed to be in NEW format.

8. ATS Messages

Item 18 DOF

8.1 The FPL&AM/TF considers that ambiguity exists in relation to Item 18 and DOF which has implications on the composition of ATS messages as published in Amendment 1. The clarification provided for the requirement to include Item Type 18 in CHG, CNL, DLA, DEP and RQS messages states "*Field Type 18 with DOF specified is meant to uniquely identify the flight when the FPL is presented more than 24 hours in advance and there is no need to include all other Item 18 information*".

8.2 The clarification also offers an interpretation of the Field Type 16 Previous Field/Next Field Table. This clearly states that only the DOF indicator is included in these messages and only if filed with the original message. If DOF is not filed in the original message then Item 18 is omitted. However, this interpretation contradicts the composition and examples for the CHG, CNL, DLA, DEP, RQP and RQS messages detailed in the Amendment which refer to Item 18 "*Other information (using more than one line if necessary)*".

8.3 Accordingly, the following interpretation is applicable as an Asia/Pacific regional approach:

- a) Insert DOF/YMMMDD in Item 18 if that indicator has been previously specified;
- b) If the DOF/ indicator has not been previously specified insert zero (0) in Item 18

8.4 Example ATS messages based on this interpretation are shown below:

Modification (CHG) Messages

- (CHG-ABC123-NZAA2300-VTBS-DOF/091120-16/VTBD1151 VTBD)
- (CHG-ABC123-NZAA2300-VTBS-0-16/VTBD1151 VTBD)
- (CHG-ABC123-NZAA2300-VTBS-DOF/091120-13/NZAA0045-18/DOF/091121) *
* **Note:** if changing DOF insert the complete content of Item 18 in Item 22

Flight Plan Cancellation (CNL) Messages

- (CNL-ABC123-NZAA2300-VTBS-DOF/091120)
- (CNL-ABC123-NZAA2300-VTBS-0)

Delay (DLA) Messages

- (DLA-ABC123-NZAA2345-VTBS-DOF/091120)
- (DLA-ABC123-NZAA2345-VTBS-0)

Departure (DEP) Messages

- (DEP-ABC123/A0254-NZAA2347-VTBS-DOF/091120)
- (DEP-ABC123/A0254-NZAA2347-VTBS-0)

Request Flight Plan (RQP) Messages

- (RQP-ABC123-NZAA2345-VTBS-DOF/091120)
- (RQP-ABC123-NZAA2345-VTBS-0)
- (RQP-ABC123-NZAA-VTBS-DOF/091120)
- (RQP-ABC123-NZAA-VTBS-0)

Request Supplementary Flight Plan (RQS) Messages

- (RQS-ABC123/A0254-NZAA2345-VTBS-DOF/091120)
- (RQS-ABC123/A0254-NZAA2345-VTBS-0)

Arrival (ARR) Messages

- (ARR-ABC123-NZAA-VTBS1315)
- (ARR-ABC123-NZAA0145-VTBS1315) **
** **Note:** include EOBT (Field Type 13b) if known

– END –

Appendix A

Adopted by Conclusion 20/7 of APANPIRG/20 (September 2009)

ASIA/PACIFIC REGION INTERIM STRATEGY FOR THE IMPLEMENTATION OF NEW ICAO FLIGHT PLAN FORMAT AND SUPPORTING ATS MESSAGES

Recognizing that:

- 1) Dynamic information management will assemble the best possible integrated picture of the historical, real-time and planned or foreseen future state of the ATM situation and provide the basis for improved decision making by all ATM community members;
- 2) The *Global Air Traffic Management Operational Concept* (Doc 9854) requires information management arrangements that provide accredited, quality-assured and timely information to be used to support ATM operations;
- 3) ATM Requirement 87 in the *Manual of Air Traffic Management System Requirements* (Doc 9882) provides that 4-D trajectories be used for traffic synchronization applications to meet ATM system performance targets, explaining that automation in the air and on the ground will be used fully in order to create an efficient and safe flow of traffic for all phases of flight;
- 4) The amended ICAO Flight Plan and associated ATS Message formats contained in Amendment 1 to the Fifteenth Edition of the PANS ATM (Doc 4444, applicable 15 November 2012) have been formulated to meet the needs of aircraft with advanced capabilities and the evolving requirements of automated air traffic management systems; and
- 5) The complexities inherent in automated computer systems preclude the adoption of a single regional transition date and transitions to the new flight plan provisions will therefore occur throughout the declared transition period. Accordingly, pursuit/adoption of a single 'global' implementation date is also not viable.

The Asia/Pacific implementation of Amendment 1 to the PANS-ATM shall:

- 1) Ensure that all States and airspace users implement the full provisions of Amendment 1 from 15 November 2012, not just selected aspects of the Amendment;
- 2) Acknowledge that States not implementing the full provisions of Amendment 1 from 15 November 2012 are obligated to publish the non compliance in State AIP as a 'significant difference' well in advance of the 15 November 2012 applicability date and will be included on the APANPIRG List of Deficiencies in the ATM/AIS/SAR Fields; and

- 3) Ensure that, from 15 November 2012, all States and airspace users accept and disseminate 'NEW' flight plan and associated ATS message formats only and capabilities for 'PRESENT' flight plan provisions are discontinued.

(Note: In the context of the implementation, 'PRESENT' refers to the existing flight planning and ATS message formats as defined in the current version of the PANS-ATM and 'NEW' refers to the amended provisions as contained in Amendment 1 to the PANS-ATM.)

The Asia/Pacific transition to the PANS-ATM Amendment 1 provisions shall:

- 1) Comply with the regional guidance provided by APANPIRG's Asia/Pacific Flight Plan and ATS Messages Task Force (FPL&AM/TF);
- 2) Preserve global consistency in implementation by basing implementation activities, to the extent possible, on Guidelines 1 to 6 described in the ICAO guidance material in State Letter AN 13/2.1-09/9, dated 6 February 2009;
- 3) Ensure that the FPL&AM/TF undertakes coordination to facilitate harmonization with implementations in neighbouring regions;
- 4) Eliminate or minimize State specific constraints and, if constraints are identified as necessary, implement such constraints on a regional or sub regional basis in preference to an individual State basis;
- 5) Declare a transition period from 1 July 2011 until 15 November 2012, and encourage States to implement 'NEW' capability between 1 July 2011 and 1 July 2012;
- 6) Not implement 'NEW' capability by States or users before the commencement of the transition period (i.e. no 'NEW' before 1 July 2011);
- 7) Encourage States to immediately commence preparations to implement Amendment 1 provisions and report progress to the FPL&AM/TF periodic meetings;
- 8) Require States to inform the Regional Office of scheduled transition date by 1 July 2010 for relay to the FPL&AM/TF;
- 9) Consider a regional constraint on requiring acceptance of flight plans more than 24 hours prior to Estimated Off Blocks Time (EOBT) during the transition period, to mitigate Date Of Flight (DOF) complexities;

- 10) Require that States retain capability to simultaneously support 'PRESENT' and 'NEW' provisions (flight plan and ATS message format) from the activation of their 'NEW' capabilities until the end of the transition period;
- 11) Encourage users to implement capability to simultaneously support 'PRESENT' and 'NEW' provisions from activation of their 'NEW' capabilities until the end of the transition period;
- 12) Recognize that until a number of adjacent States are providing 'NEW' capability, advantages do not accrue to users. Accordingly, users may not commence transition until the latter part of the transition period; and
- 13) Avail of States with expertise in automated ATM ground systems to support the conduct of a Regional Office Seminar during November 2009.

(last amended FPL&AM/TF/1, March 2009)

Appendix B

Amendment proposed by FPL&AM/TF/2 (November 2009)
for consideration by APANPIRG/21 (September 2010)

ASIA/PACIFIC REGION
STRATEGY FOR THE IMPLEMENTATION OF
NEW ICAO FLIGHT PLAN FORMAT AND SUPPORTING ATS MESSAGES

Recognizing that:

- 1) The *Global Air Traffic Management Operational Concept* (Doc 9854) requires information management arrangements that provide accredited, quality-assured and timely information to be used to support ATM operations;
- 2) ATM Requirement 87 in the *Manual of Air Traffic Management System Requirements* (Doc 9882) provides that 4-D trajectories be used for traffic synchronization applications to meet ATM system performance targets, explaining that automation in the air and on the ground will be used fully in order to create an efficient and safe flow of traffic for all phases of flight;
- 3) The amended ICAO Flight Plan and associated ATS Message formats contained in Amendment 1 to the Fifteenth Edition of the PANS ATM (Doc 4444, applicable 15 November 2012) have been formulated to meet the needs of aircraft with advanced capabilities and the evolving requirements of automated air traffic management systems;
- 4) The implementation of the amended ICAO Flight Plan and ATS Message formats has been adopted by APANPIRG/20 as Regional Performance Objective 5, and
- 5) The complexities inherent in automated computer systems preclude the adoption of a single regional implementation date and transitions to the new flight plan provisions will therefore occur in accordance with the declared transition period described in this document.

The Asia/Pacific implementation of Amendment 1 to the PANS-ATM shall:

- 1) Ensure that all States and airspace users implement the provisions of Amendment 1 from 15 November 2012, not just selected aspects of the Amendment;
- 2) Acknowledge that States not implementing Amendment 1 from 15 November 2012 are obligated by ICAO provisions to publish, preferably by 12 January 2012, the non compliance in State AIP as a 'significant difference' and will be included on the APANPIRG List of Deficiencies in the ATM/AIS/SAR Fields; and

- 3) Ensure that, from 15 November 2012, all States and airspace users accept and disseminate 'NEW' flight plan and associated ATS message formats only and capabilities for 'PRESENT' flight plan provisions are discontinued.

(Note: In the context of the implementation, 'PRESENT' refers to the existing flight planning and ATS message formats as defined in the current version of the PANS-ATM and 'NEW' refers to the amended provisions as contained in Amendment 1 to the PANS-ATM.)

The Asia/Pacific transition to the PANS-ATM Amendment 1 provisions shall:

- 1) Comply with the regional guidance provided by APANPIRG's Asia/Pacific Flight Plan and ATS Messages Task Force (FPL&AM/TF);
- 2) Preserve global consistency in implementation by basing implementation activities, to the extent possible, on Guidelines 1 to 6 described in the ICAO guidance material in State Letter AN 13/2.1-09/9, dated 6 February 2009;
- 3) Ensure that the FPL&AM/TF undertakes coordination to facilitate harmonization with implementations in neighbouring regions;
- 4) Minimize State specific constraints and, if constraints are identified as necessary, implement such constraints on a regional or sub regional basis in preference to an individual State basis;
- 5) Declare a transition period from 1 January 2012 until 15 November 2012, comprising;
 - 1 January to 31 March 2012 - ANSPs software delivery and internal testing,
 - 1 April to 30 June 2012 – ANSPs external testing and implementation, and
 - 1 July to 15 November 2012 – airspace users testing and implementation.
- 6) Not implement 'NEW' capability by States before the commencement of the ANSPs external testing and implementation period (i.e. no ANSP 'NEW' before 1 April 2012) and, insofar as possible, complete ANSP implementation of 'NEW' capability by the end of the ANSPs external testing and implementation period (i.e. complete ANSP 'NEW' before 30 June 2012);
- 7) Recognizing the risk to automated systems of having all users simultaneously commencing 'NEW' on the common implementation date (15 November 2012), encourage users to take full advantage of the airspace users testing and implementation period to ensure operational readiness of flight planning systems;
- 8) Encourage ANSPs and airspace users to coordinate appropriate implementation methodologies in order to ensure a staggered migration of airspace users to 'NEW' during the airspace users testing and implementation period (i.e. 1 July – 15 November 2012);

- 9) Encourage States and users to immediately commence preparations to implement Amendment 1 provisions in accordance with the declared transition period and report progress to the FPL&AM/TF periodic meetings;
- 10) Require States to inform the Regional Office of scheduled transition date by 1 July 2010 in accordance with APANPIRG Conclusion 20/8, for relay to the FPL&AM/TF;
- 11) To mitigate Date Of Flight (DOF) complexities, adopt a regional approach that does not require processing of flight plans more than 24 hours prior to Estimated Off Blocks Time (EOBT) during the declared transition period;
- 12) Require that States retain capability to simultaneously support 'PRESENT' and 'NEW' provisions (flight plan and ATS message format) from the activation of their 'NEW' capabilities until the end of the transition period (i.e. until 15 November 2012), at which point 'PRESENT' capability shall be discontinued;

(last amended FPL&AM/TF/2, November 2009)

ASIA/PACIFIC REGION

STRATEGY FOR THE IMPLEMENTATION OF NEW ICAO FLIGHT PLAN FORMAT AND SUPPORTING ATS MESSAGES

Recognizing that:

- 1) The *Global Air Traffic Management Operational Concept* (Doc 9854) requires information management arrangements that provide accredited, quality-assured and timely information to be used to support ATM operations;
- 2) ATM Requirement 87 in the *Manual of Air Traffic Management System Requirements* (Doc 9882) provides that 4-D trajectories be used for traffic synchronization applications to meet ATM system performance targets, explaining that automation in the air and on the ground will be used fully in order to create an efficient and safe flow of traffic for all phases of flight;
- 3) The amended ICAO Flight Plan and associated ATS Message formats contained in Amendment 1 to the Fifteenth Edition of the PANS ATM (Doc 4444, applicable 15 November 2012) have been formulated to meet the needs of aircraft with advanced capabilities and the evolving requirements of automated air traffic management systems;
- 4) The implementation of the amended ICAO Flight Plan and ATS Message formats has been adopted by APANPIRG/20 as Regional Performance Objective 5, and
- 5) The complexities inherent in automated computer systems preclude the adoption of a single regional implementation date and transitions to the new flight plan provisions will therefore occur in accordance with the declared transition period described in this document.

The Asia/Pacific implementation of Amendment 1 to the PANS-ATM shall:

- 1) Ensure that all States and airspace users implement the provisions of Amendment 1 from 15 November 2012, not just selected aspects of the Amendment;
- 2) Acknowledge that States not implementing Amendment 1 from 15 November 2012 are obligated by ICAO provisions to publish, preferably by 12 January 2012, the non compliance in State AIP as a 'significant difference' and will be included on the APANPIRG List of Deficiencies in the ATM/AIS/SAR Fields; and
- 3) Ensure that, from 15 November 2012, all States and airspace users accept and disseminate 'NEW' flight plan and associated ATS message formats only and capabilities for 'PRESENT' flight plan provisions are discontinued.

(Note: In the context of the implementation, 'PRESENT' refers to the existing flight planning and ATS message formats as defined in the current version of the PANS-ATM and 'NEW' refers to the amended provisions as contained in Amendment 1 to the PANS-ATM.)

The Asia/Pacific transition to the PANS-ATM Amendment 1 provisions shall:

- 1) Comply with the regional guidance provided by APANPIRG's Asia/Pacific Flight Plan and ATS Messages Task Force (FPL&AM/TF);
- 2) Preserve global consistency in implementation by basing implementation activities, to the extent possible, on Guidelines 1 to 6 described in the ICAO guidance material in State Letter AN 13/2.1-09/9, dated 6 February 2009;
- 3) Ensure that the FPL&AM/TF undertakes coordination to facilitate harmonization with implementations in neighbouring regions;
- 4) Minimize State specific constraints and, if constraints are identified as necessary, implement such constraints on a regional or sub regional basis in preference to an individual State basis;
- 5) Declare a transition period from 1 January 2012 until 15 November 2012, comprising:
 - 1 January to 31 March 2012 - ANSPs software delivery and internal testing,
 - 1 April to 30 June 2012 – ANSPs external testing and implementation, and
 - 1 July to 15 November 2012 – airspace users testing and implementation.
- 6) Not implement 'NEW' capability by States before the commencement of the ANSPs external testing and implementation period (i.e. no ANSP 'NEW' before 1 April 2012) and, insofar as possible, complete ANSP implementation of 'NEW' capability by the end of the ANSPs external testing and implementation period (i.e. complete ANSP 'NEW' before 30 June 2012);
- 7) Recognizing the risk to automated systems of having all users simultaneously commencing 'NEW' on the common implementation date (15 November 2012), encourage users to take full advantage of the airspace users testing and implementation period to ensure operational readiness of flight planning systems;
- 8) Encourage ANSPs and airspace users to coordinate appropriate implementation methodologies in order to ensure a staggered migration of airspace users to 'NEW' during the airspace users testing and implementation period (i.e. 1 July – 15 November 2012);
- 9) Encourage States and users to immediately commence preparations to implement Amendment 1 provisions in accordance with the declared transition period and report progress to the FPL&AM TF periodic meetings;
- 10) Require States to inform the Regional Office of scheduled transition date by 1 July 2010 in accordance with APANPIRG Conclusion 20/8, for relay to the FPL&AM TF;
- 11) To mitigate Date Of Flight (DOF) complexities, adopt a regional approach that does not require processing of flight plans more than 24 hours prior to Estimated Off Blocks Time (EOBT) during the declared transition period;
- 12) Require that States retain capability to simultaneously support 'PRESENT' and 'NEW' provisions (flight plan and ATS message format) from the activation of their 'NEW' capabilities until the end of the transition period (i.e. until 15 November 2012), at which point 'PRESENT' capability shall be discontinued;

(last amended FPL&AM TF/2, November 2009)

DRAFT

Terms of Reference of the AIS-AIM Implementation Task Force (AAITF)

The objectives of the Task Force are to:

- a) study means of aeronautical data management by civil aviation authorities and/or ATS providers in other regions including the aeronautical information exchange model (AIXM) and the electronic AIP (eAIP), and consider the feasibility in making use of these methods/models in the Asia/Pacific Region;
- b) examine the means of aeronautical data exchange used in other regions and application in the Asia/Pacific Region;
- c) assist States to implement Quality Systems for aeronautical information in an expeditious manner;
- d) develop training material and conduct workshops on the Guidance Manual for AIS in the Asia/Pacific Region;
- e) develop guidance material for Static Data Procedures and the AIS Automation Plan;
- f) review and update the Guidance Manual taking into account amendments to ICAO SARPs, guidance material;
- g) monitor and review technical and operating developments in the AIS field especially in the area of automation and database management; and
- h) monitor the transition from AIS to AIM, and in particular monitor development of the replacement of Annexes 4 & 15 and guidance documents under development by ICAO.

To achieve the above objectives, the Task Force shall consider:

- a) results of the ICAO Aeronautical Information Services – Aeronautical Information Management Study Group (AIS-AIMSG);
- b) amendments to Annex 4, Annex 5, the AIS Manual (Doc 8126), and the Aeronautical Chart Manual (Doc 8697); and
- c) revisions to the EUROCONTROL *Operating Procedures for AIS Dynamic Data* (OPADD); and
- d) implementation of the regional performance framework performance objectives contained in the Performance Framework Form (PFF).

The Task Force will report to the ATM/AIS/SAR Sub-Group of APANPIRG

(Adopted by the 14th Meeting of the Asia/Pacific Air Navigation Planning and Implementation Regional Group, 2003, and amended by the ~~18th~~ 20th Meeting of the ATM/AIS/SAR/SG, 2008/2010)

STATE SAR AGREEMENTS

(last updated 11 September 2009)

ID NO.	DATE	STATES	REMARKS
1	14 April 1972	ASEAN States - Indonesia, Malaysia, Philippines, Singapore and Thailand	Multilateral agreement for the facilitation of search for aircraft in distress and rescue of survivors of aircraft accidents
2	March 1997	Viet Nam - ASEAN	Viet Nam signed instrument of accession to 1972 ASEAN Agreement (as above)
3	June 1982	Indonesia / Singapore	
4	11 August 1984	Malaysia / Singapore	
5	29 August 1985	Malaysia / Indonesia	
6	September 1985	Singapore / Thailand	Updated July 1996
7	9 September 1985	Malaysia / Thailand	
8	9 December 1985	Malaysia / Philippines	
9	August 1986	Indonesia / Philippines	
10	1986	United States / Japan	
11	1988	United States / Indonesia	
12	1990	Indonesia / Papua New Guinea	JBC MOU signed
13	November 1990	Australia / Indonesia	Updated 5 April 2004
14	July 1996	Philippines / Singapore	
15	July 1996	Viet Nam / Singapore	
16	September 1996	Viet Nam / Philippines	
17	16 December 1998	Malaysia / Brunei Darussalam	
18	1998	Lao PDR / Vietnam	LOA for provision of assistance
19	February 1999	Cambodia / Viet Nam	
20	February 2001	Australia / Papua New Guinea	
21	September 2002	New Caledonia / New Zealand	
22	November 2002	United States / Republic of	

ATM/AIS/SAR/SG/20
Appendix D to the Report on Agenda Item 4

ID NO.	DATE	STATES	REMARKS
		Palau	
23	2003	United States / New Zealand	
24	notified 2003	United States / Marshall Islands	
25	notified 2003	United States / Micronesia	
26	notified 2003	United States / China	
27	June 2005	Tonga / New Zealand	
28	notified 2005	New Zealand / Australia	Updated April 2009
29	notified 2005	New Zealand / Samoa	
30	April 2006	Australia / Maldives	Letter of Arrangement
31	notified July 2006	Indonesia / United States	Agreement on the Coordination of SAR Services
32	notified July 2007	New Zealand / Cook Islands,	
33	notified July 2007	New Zealand/Chile	Final draft agreement being considered by authorities in Chile
34	notified July 2007	New Zealand/Niue	No requirement for separate SAR agreement, covered under Government to Government aid agreement
35	notified July 2007	New Zealand/Tahiti French Polynesia	Final draft agreement being considered by authorities in Tahiti
36	notified July 2007	New Zealand/Tokelau	No requirement for separate SAR agreement, covered under Government to Government aid agreement
37	16 May 2007	Republic of Korea/China	
38	30 April 2008	Republic of Korea/Japan	
39	March 2009	Viet Nam/Lao PDR	SAR Agreement
40	March 2009	Viet Nam/Cambodia	SAR Agreement
41	1 June 2009	New Zealand/Chile	Arrangement for coordination of SAR services
42	17 March 2010	Japan/Philippines	SAR Agreement

Note: ATM/AIS/SAR/SG/18 re-ordered the List by date, any additional updated entries by ATM/AIS/SAR/SG/20 in bold type.

ATM/AIS/SAR/SG/20
Appendix E to the Report on Agenda Item 4

Analysis of SAR Capability of ICAO States in the ASIA/PAC Region

	Training	Alerting	SAR committee	Agreements	Relationships	Communications	Quality Control	Civil/Military	Resources	SAREX	Library	Computerisation	SAR programme	Supply dropping	Special equipment	SAR aircraft	Navigation	Cospas-Sarsat	Dist	ELTs
Afghanistan																				
Australia	E	E	E	E	E	D	E	E	E	E	E	E	E	E	E	E	E	E	D	E
Bangladesh	B	C	D	A	A	C	C	A	D	A	A	C	A	A	C	C	D	A	D	C
Bhutan																				
Brunei	E	E	E	E	E	E	E	E	E	E	E	E	E	E	D	D	E	E	E	A
Cambodia	D	D	C	D	C	D	C	A	D	C	C	C	B	C	A	A	B	B	A	D
China	E	E	E	E	E	E	D	D	E	D	D	C	B	A	E	E	E	E	E	A
Cook Islands	A	B	B	A	A	C	C	C	B	A	B	A	A	A	A	B	B	A	E	A
DPR Korea	B	D	B	D	A	B	D	D	D	C	B	A	A	A	B	A	C	C	A	A
Fiji	B	C	C	C	C	C	C	B	D	C	D	C	A	C	B	A	C	C	C	A
French Polynesia	C	D	D	D	C	D	E	A	E	C	C	B	A	A	E	D	E	E	E	A
Hong Kong, China	E	E	E	E	D	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E
India	D	C	C	B	B	C	C	A	C	C	C	C	C	D	D	D	C	A	E	E
Indonesia	E	D	E	E	E	D	D	D	E	D	E	D	D	D	C	D	D	D	D	E
Japan	E	E	E	E	D	E	E	E	E	E	E	E	D	E	E	E	E	E	E	E
Kiribati																				
Lao PDR	B	A	B	B	B	A	B	A	B	B	A	C	A	A	A	A	A	A	A	A
Macau, China	E					E	E				E						E			
Malaysia	E	E	C	E	D	E	E	E	E	E	E	D	E	E	E	D	E	E	E	B
Maldives	B	A	A	A	A	A	A	A	D	A	C	A	A	A	A	A	A	A	A	A
Marshall Islands																				
Micronesia	C	B		A	A	B	C					A		B	B					
Mongolia	A	C	C	A	B	B	B	A	B	B	B	C	B	B	A	A	A	A	B	A
Myanmar	B	A	B	C	A	D	C	C	D	A	A	A	A	A	C	A	D	C	A	A
Nauru																				
Nepal	D	D	C	B	A	C	C	B	D	B	A	B	A	D	D	C	D	D	D	B
New Caledonia	C	D	D	D	C	D	E	A	E	C	C	B	A	A	E	D	E	E	E	E
New Zealand	E	E	E	E	A	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E
Pakistan	C	C	D	D	A	D	D	C	D	C	A	A	A	A	D	A	D	D	C	E
Palau																				
Papua New Guinea	D	E	D	C	D	D	C	C	D	C	C	D	C	C	C	A	A	A	E	A
Philippines	D	C	E	D	D	C	D	D	E	C	C	C	C	C	C	B	C	E	C	A
Rep. of Korea	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E
Samoa																				
Solomon Islands																				
Singapore	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E
Sri Lanka	D	A	C	D	B	C	C	D	E	D	B	C	A	A	D	D	C	A	C	A
Thailand	E	E	E	E	D	E	E	E	E	E	E	D	D	D	E	E	E	E	E	E
Timor Leste																				
Tonga	C	B	A	A	B	C	C	A	D	A	A	A	A	A	A	A	C	A	E	A
United States	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E
Vanuatu																				
Viet Nam	D	D	D	E	D	D	D	C	E	D	C	C	B	C	C	D	D	C	D	D

(Last updated 11 September 2009)

Categorisations:	
A = Not implemented	D = Meets Annex 12 requirements in most areas
B = Initial implementation	E = Fully meets Annex 12 requirements
C = Meets Annex 12 requirements in some areas	Blank = No response

**AGENDA ITEM 5: CONSIDER PROBLEMS AND
MAKE SPECIFIC
RECOMMENDATIONS
CONCERNING THE PROVISION
OF ATM/AIS/SAR IN THE
ASIA/PACIFIC REGION**

Agenda Item 5: Consider Problems and Make Specific Recommendations concerning the Provision of ATM/AIS/SAR in the Asia/Pacific Region

Update on the Development of ICAO EUR/NAT Regional Database for the Five-Letter Name-Codes Allocations

5.1 The meeting was informed that the ICAO Five-Letter Name-Codes (5LNC) and Route Designators Database (ICARD) managed from one global database provided by EUROCONTROL will be soon be relocated at an ICAO Headquarters' website. Australia, China, Japan, Malaysia, New Zealand, Republic of Korea, Singapore and Thailand have already become authorized users of ICARD. APANPIRG/18, in its Conclusion 18/11 recognized considerable benefits of using the ICARD system and encouraged States in ASIA/PAC Region to join the operation at the earliest opportunity.

5.2 The duplication issue of 5LNC is still being reported partly because of the fact that most States are not yet using ICARD or using either the codes which are not in ICARD or have not reserved codes in ICARD. The meeting therefore felt the need to overcome this problem by further encouraging those States who have not joined ICARD to join it and formulated the following draft conclusion.

Draft Conclusion SG 20/8 – Use of Global database for allocation of Five-Letter Name-Codes in the Asia and Pacific Regions

That States which have not done so yet be urged to:

- a) nominate an ICARD authorized user in order to make use of the ICARD system and improve the process of allocation of Five-Letter Name-Codes (5LNCs);
- b) review the list of allocated 5LNCs with respect to each States, identify non-used, duplicate or non-ICAO 5LNCs and take actions to rectify the situations; and
- c) update the ICARD database by adding missing information, e.g. latitude and longitude coordinates, etc; and
- d) take necessary actions to implement the widespread use of the ICARD system.

46th Conference of Directors General of Civil Aviation, Asia and Pacific Region

5.3 The meeting was informed of the outcomes of the 46th Conference of Directors General of Civil Aviation (DGCAs), Asia and Pacific Region which was hosted by Japan Civil Aviation Bureau in Osaka, Japan from 12 to 16 October 2009. The Conference was attended by 215 delegates from 34 States/Administrations and 5 international organizations. The Conference raised 12 Action Items as provided in **Appendix A** to the Report on Agenda item 5. The specific Action Items of interest to this meeting were as follows:

Action Item 46/1 – Seamless Sky - ATM

5.4 Japan, while acknowledging the regional planning process of ICAO, highlighted the need to plan future ATM systems for the region and stated that whether the regional plan was short- or long-term, it should be developed by APANPIRG for Asia and Pacific Regions. Some States expressed the view that there was a need for seamless long-term planning, thus requiring a dedicated body for the long-term planning for the region. However, it was pointed out that further discussion would be needed to develop a better understanding of the issue.

5.5 The Conference noted that the *Global ATM Operational Concept* (doc 9854) and the *Global Air Navigation Plan* (Doc 9750) provided the global framework, but at the same time, felt that NextGen and SESAR type planning could be useful to the region. The Conference therefore requested ICAO Regional Office to take a leadership role and arrange for further discussion on this matter.

5.6 It was noted that the President of the ICAO Council stated that seamless sky was a priority of ICAO and was a mandate of ICAO Assembly. The President stressed on the need for developing specific Terms of Reference to support this concept and establish a starting point.

5.7 The meeting noted the above action and recognized the role of ICAO Asia and Pacific Office and the APANPIRG in promoting and fostering implementation of ICAO provisions for short- and medium-terms according to the Regional Air Navigation Plan. It was recognized that the APANPIRG forum will be the starting platform to discuss and plan for the future ATM system aiming for the seamless sky for the Asia/Pacific Region with the target dates and a timeline through collaboration of the Asia/Pacific States.

Action Item 46/6 – Implementation of Continuous Descent Operations

5.8 The 46th DGCA Conference also recognized the efficiency and environmental benefits of Continuous Descent Operations (CDO) that many States had been developing over the years with different techniques, naming, conventions and phraseology. Seeing the need to harmonize these operations, ICAO is developing a Manual that will provide guidance on the development and implementation of CDO. The Manual will contain guidance material on the airspace design, instrument flight procedures, ATC facilitation and flight techniques necessary to enable Continuous Descent profiles.

ICAO Asia and Pacific Seamless ATM Workshop

5.9 In accordance with Action Item 46/1 of the DGCA Conference, Japan and the United States presented a paper. It was noted that ICAO developed the Global Air Traffic Management operational system with the implementation target of 2025. The Global Air Traffic Management System will be based on the components described in the Global ATM Operational Concept. It was further noted that the United States and Europe had been developing their future air traffic modernization programmes based on the ICAO ATM Operational Concept, namely the Next Generation Air Transportation System (NextGen) and the Single European Sky ATM Research (SESAR), respectively, and promoting the seamless ATM operation.

5.10 In order to deal with the expected rapid growth of air traffic as well as the diversified needs for air transport, Japan had been discussing the long-term vision for the Air Traffic Systems in Japan through the year, and finally compiled them as the Collaborative Actions for Renovation of Air Traffic Systems (CARATS). Specific measures for short-, mid- and long-term schedule had been developed. In the future vision, Japan has clarified how the future ATM system should be and try to realize the seamless ATM operation based on the cooperation with neighbouring countries.

5.11 In order to move forward toward seamless sky, it was proposed that APANPIRG should start the discussion and set the implementation target and direction of renovation at regional levels to establish the seamless future ATM in Asia Pacific regions.

5.12 As a first step toward seamless sky, it was considered important to extend knowledge about ICAO Global ATM Operational Concept and the Future ATM visions such as NextGen, SESAR and CARATS. To achieve this objective, the FAA and Japan Civil Aviation Bureau (JCAB) proposed to hold a workshop on the future air traffic systems in collaboration with ICAO Asia and Pacific Office in early 2011. In view of the foregoing, the meeting adopted the following Draft Conclusion:

Draft Conclusion SG 20/9 – 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.

5.13 United States provided clarifications on questions raised by participants regarding the subject matters to be discussed at the workshop and the duration in addition to the details given in Proposal worksheet presented by Japan.

Air Traffic Management (ATFM) Survey for Asia/Pacific

5.14 The meeting noted that a regional ATFM Seminar/Workshop was held in Fukuoka in October 2008 hosted by Japan Civil Aviation Bureau, in accordance with Conclusion 18/7 of APANPIRG. The result of the Seminar/Workshop was presented to APANPIRG/20. Based on the review of the results, APANPIRG/20 had adopted Conclusion 20/11 identifying a need for the establishment of a Regional Steering Group tasked with the preparation of ASIA/PAC Regional ATFM Concept of Operations based on an analysis of regional data and traffic flows.

5.15 It was noted that in order to facilitate the work of the AFTM Steering Group, a survey was conducted from March to April 2010 based on the ATFM Survey Questionnaire that had been prepared by the ATM/AIS/SAR and the CNS/MET Sub-Groups in accordance with Conclusion 20/13 of APANPIRG. Replies to the survey were received from Australia, Hong Kong China, Macau China, Fiji, India, Japan, Malaysia, Mongolia, New Zealand, Pakistan, Philippines, Republic of Korea, Singapore, Thailand and the United States. The meeting noted the result of survey. It was also noted that the MET aspect of the ATFM was passed on to the MET/ATM Task Force for review.

5.16 It was noted that eight States/Administrations had responded that they had figured out the Airport Acceptance Rates (AAR) to base the total airport capacity. Out of 14 Administrations which provide the enroute control service, eight responded that they have the method to calculate the enroute capacity. The Regional Office will issue letter of invitation to the ATFM Steering Group Meeting planned for September 2010. The Group at its first meeting will develop its TOR and work programme. It was noted that Japan is expected to join the Group and will also provide expertise to assist the Group.

BOBCAT Activities Update since BOB-RHS/TF/2

5.17 The meeting recalled that on the AIRAC Date 5 July 2007, international long range ATFM procedure using the BOBCAT system became fully operational. It was agreed at the 12th Meeting of the ATFM Task Force (July 2008, Bangkok) that monthly traffic data collection in samples of seven consecutive days each month would continue.

5.18 The traffic data would be collected by all States for one agreed week each month, send to the ATFMU for analysis by the BOBCAT Development Team for presentation to the ATFM Task Force meetings. BOBCAT issues have been discussed at various Bay of Bengal Reduced Horizontal Separation Implementation Task Force (BOB-RHS/TF) meetings.

5.19 Based on estimates provided by IATA, and taking into account the current traffic volume, the use of BOBCAT ATFM procedure had been able to save approximately 14 million kg of fuel per year, equivalent to approximately 60 million kg of carbon dioxide emissions per year as well as an annual airline operating cost savings of around US\$ 14 million.

Overall Data Analysis – Traffic Volume

5.20 The meeting noted that the traffic demand distribution based on BOBCAT Slot Request in Figure 1 showed a maximum traffic peak of 73 aircraft in April 2009. However, average nightly traffic between June 2009 and June 2010 have been consistently between 55-60 aircraft with the exception of 3-4 days in April 2010, when the Icelandic volcanic ash cloud situation showed single figure departures numbers from Asian airports feeding Europe.

5.21 The meeting also observed that BOBCAT traffic demand in May 2010 grew by 23 percent when compared to the commencement of operational trials in July 2007.

Effect of Volcanic Ash Situation

5.22 The meeting noted that during the month of April 2010, there was a volcanic ash situation in Europe, which caused the slot allocation to fall by over 75 percent for the several days when European airspace was closed to virtually all traffic. Naturally, this caused an overall effect on statistics produced within the paper.

Overall Data Analysis – Traffic Distribution by Airport

5.23 The meeting is invited to note the traffic demand distribution based on BOBCAT Slot Request organized by departure airport in Figure 2 between July 2007 and May 2010.

5.24 The top-8 airport providing the most traffic to the BOBCAT system were:

- a) VTBS: Bangkok, Thailand
- b) WSSS: Singapore
- c) VIDP: Delhi, India
- d) WMKK: Kuala Lumpur, Malaysia
- e) VABB: Mumbai, India
- f) VHHH: Hong Kong, China
- g) VVNB: Ha Noi, Viet Nam
- h) VVTS: Ho Chi Minh, Viet Nam

Flights Transiting the Kabul FIR at the Allocated or Higher Preferred Flight Level

5.25 The meeting observed that the percentage of flights transiting the Kabul FIR at the allocated or higher preferred flight level according to collected ATFM data fluctuates between 85.36% in April 2010 and 92.31% in April 2010, while in some days all aircraft were able to transit the Kabul FIR at the allocated or higher preferred flight level.

5.26 The meeting also noted that, analysis of ATFM data collected between January and April 2009 in respect to aircraft transiting the Kabul FIR at a flight level lower than slot allocation in respect of causes diagnosed, have been separated and shown into Figure 1 with the following causes:

- a) Early or Late departures of the specific aircraft or another aircraft;
- b) EET inaccuracy;
- c) VIDF FL Orientation issue (tactical ATM);
- d) Eastern Bay of Bengal FL Orientation issue (tactical ATM);
- e) Departures without slot; and,
- f) Unknown reason due to insufficient data

Early and Late Departures

5.27 The meeting is advised that, based on the above information, a major cause for aircraft having to transit the Kabul FIR at flight level lower than allocated was early or late departures, either buy the aircraft receiving the lower level or being forced down by another aircraft.

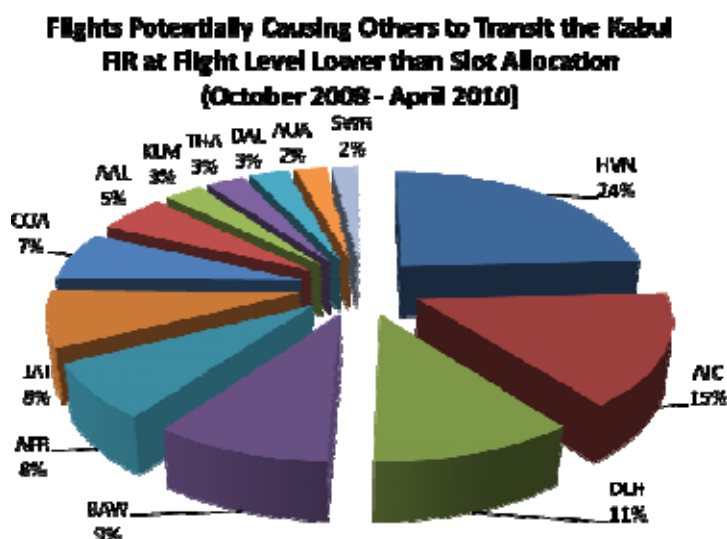


Figure 1: Flights Potentially Causing Others to Transit the Kabul FIR at a Flight Level Lower than Slot Allocation (January 2009 – April 2010) Organized by Airline Operator

5.28 As traffic increases, the meeting noted that it is likely that cases of early and late departures in respect to Allocated Wheels-Up Time (AWUT) would have more impact on the overall performance of the system. In effect, everyone pays more for the lack of compliance.

Participation in Data Collection

5.29 The meeting was given details of participation in the ATFM Data Collection between January and May 2010 in Figure 2 below. Thailand thanked States involved in this ATFM Data Collection process, which no doubt has proved to be resource intensive, however on the positive side, could assist in the enhancement of the ATFM/BOBCAT procedures and operation.

	January 2010	February 2010	March 2010	April 2010
WSFC	7 days	7 days	7 days	7 days
WMFC	7 days	7 days	7 days	7 days
VTBB	7 days	7 days	7 days	7 days
VYYY	7 days	7 days	7 days	7 days
VOMF	7 days	7 days	7 days	7 days
VECF	7 days	7 days	7 days	N/A
VABF	7 days	7 days	7 days	7 days
VIDF	7 days	7 days	7 days	7 days
OPKR	7 days	7 days	7 days	7 days
OPLR	7 days	7 days	7 days	7 days
OAKX	N/A	N/A	2 days	7 days

Figure2: States' Participation in Data Collection by FIR

Operational Messages Sent to the Bangkok ATFMU

5.30 The meeting was reminded that, according to the ATFM Users Handbook, “[aircraft] operators shall also address flight plan and related ATS messages (e.g. DEP, DLA, CNL, CHG) to the Bangkok ATFMU.” Unfortunately, some flight plans and ATS messages are still not being received in the Bangkok ATFMU, especially for departures west of the Bay of Bengal.

5.31 The meeting is invited to note that in Figures 3 and 4, the percentage of flight plan and departure messages received by the Bangkok ATFMU from major departure airports contributing BOBCAT traffic between January 2010 and April 2010 are described.

% FPL Receipt	January 2010	February 2010	April 2010
VTBS	100.00%	100.00%	100.00%
WSSS	97.92%	100.00%	93.33%
VIDP	75.00%	74.65%	88.24%
WMKK	100.00%	93.94%	90.48%
VABB	0.00%	0.00%	0.00%
VHHH	100.00%	77.78%	80.00%
VVNB	100.00%	100.00%	100.00%
VVTS	100.00%	100.00%	85.71%

Figure 3: Percentage of Flight Plan Messages Received by the Bangkok ATFMU (January 2010 – April 2010)

% DEP Receipt	January 2010	February 2010	April 2010
VTBS	100.00%	100.00%	100.00%
WSSS	94.79%	86.21%	85.00%
VIDP	72.73%	30.99%	66.67%
WMKK	100.00%	93.94%	90.48%
VABB	0.00%	0.00%	0.00%
VHHH	100.00%	77.78%	80.00%
VVNB	100.00%	85.71%	100.00%
VVTS	100.00%	71.43%	85.71%

Figure 4: Percentage of Departure Messages Received by the Bangkok ATFMU (January 2010 – April 2010)

BOBCAT Airlines Satisfaction Survey

5.32 The meeting was advised that, in cooperation with IATA, AEROTHAI conducted a BOBCAT Airlines Satisfaction Survey with the key objective of including enhancements in ATFM/BOBCAT Procedures as well as the BOBCAT system software. The result in Appendix XX was presented at the BOB-RHS/TF/3 meeting. As a result of discussions at the meeting, AEROTHAI is currently investigating a timetable and priority to implement the most favoured features requested as a result of the Survey. Further coordination will take place with the parties concerned to enhance and develop the BOBCAT system.

Report on Development of an ICAO Global Air Traffic Flow Management (ATFM) Manual

5.33 United States informed the meeting that the global ATFM Manual was in the later stage of development with additional discussion and the exchanges of idea were required to finalize the Manual. The target date for publication was the end of 2010. It, however, was noted that there were lots of work yet to be done within the limited time. The meeting reviewed the Table of Contents of the Manual. The review did not result in any immediate comment. The meeting requested participants to send comments if any at an earliest time to the Regional Office.

SID/STAR Level Revisions

5.34 It was noted that the ANC, considering difficulties encountered by several States, air navigation services providers (ANSP) and aircraft operators with the implementation of the procedures relating to altitude restrictions on standard instrument departure (SID) and standard terminal arrival (STAR) procedures contained in the amendment to the Fifteenth Edition of the *Procedures for Air Navigation Services — Air Traffic Management* (PANS-ATM, Doc 4444) which became applicable on 22 November 2007, requested the Secretariat to investigate the situation. In this regard, a State letter AN 13/2.1-09/25 dated 3 April 2009 was issued with a view to determine the extent and severity of the difficulties.

5.35 An analysis of the replies indicated that the potential for misunderstanding existed largely due to inconsistent implementation by all States. It became clear to the ANC and the Secretariat that immediate action was required to be taken by all States, ANSPs and aircraft operators to ensure that no confusion exists as to the intent of ATC clearances when aircraft are cleared to levels above those specified on SIDs or below those specified on STARs.

5.36 In this regard ICAO invited States' urgent action on this matter along the following recommended lines.

- a) promulgate any difference from the PANS-ATM SID/STAR provisions;
- b) ensure air traffic controllers are familiar with existing differences;
- c) develop and provide flight crew training material for operators;
- d) consider additional actions, such as promulgation of local procedures; and
- e) review current SID/STAR designs to confirm their efficacy.

Review of the Asia/Pacific ATS Route Catalogue

5.37 The meeting noted that Version 6 of the *Asia/Pacific ATS Route Catalogue* provided at the ICAO Asia/Pacific website (<http://www.bangkok.icao.int/>) under the menu "APAC eDocuments". It was informed that Version 7 would soon be published on the website. On-going updates are undertaken by the Regional Office based on the information provided by States and airspace users.

5.38 In considering the role of the Catalogue at the Second Meeting of the ATS Route Network Review Task Force (ARNR/TF/2, February 2005), it was clarified that the Catalogue is an informal document containing consolidates material from the Basic Air Navigation Plan (BANP) and related documents to serve as an aid to States and users for route planning purposes. It was noted that **the Catalogue does not replace the BANP** or provide a basis to be used as an established operational requirement. Since the document is meant to be an aid to States as a living document, its amendments are carried out in an informal manner.

5.39 All the requirements in respect to the BANP are developed and amendments are carried out in accordance with established procedures. IATA noted that the route catalogue provided an important point of reference for all stakeholders containing proposals for the entire region. In view of this, all States were requested to review the various proposals and update the status at the appropriate ICAO meetings on a regular basis.

AEROTHAI involvement in ICAO Regional ATM initiatives

Southeast Asia Route Review Task Force (SEA-RR/TF)

5.40 The meeting noted that Thailand (AEROTHAI) was involved in two important Task Force programmes which involved recent initiatives in the South China Sea (SEA-RR/TF) and the Bay of Bengal and beyond (BOB-RHS/TF).

5.41 Regarding the SEA-RR/TF, it was recognized that a sub-regional traffic data collection was crucial in order to determine traffic loading on various city pairs as well as RNAV routes through this important area of operations.

5.42 The meeting observed that the Task Force had agreed to a weekly traffic sample data collection commencing in January 2010 for the week beginning on the third Sunday of each month.

5.43 The traffic sample data is currently being collated and analyzed by Singapore CAAS in cooperation with AEROTHAI with results to be reported to ongoing SEA-RR/TF meetings. It is expected that the regional traffic sample data could be used to prioritize future route implementation in the area under discussion.

Bay of Bengal Reduced Horizontal Separation Implementation Task Force (BOB-RHS/TF)

5.44 The meeting further noted that a data collection has also been implemented for the BOB-RHS/TF, to provide a business case approach to justify the implementation of the reduced horizontal separation. This data will also be used for other studies such as the introduction of RNP 4 (30NM) separations on specific routes or on all routes in the area under consideration.

5.45 To date, AEROTHAI has received cooperation from States concerned in collating flight plans in order to analyze traffic demand. These results will be presented to the upcoming BOB-RHS/TF/4 meeting in October 2010.

5.46 The meeting also observed that it has been some time since there were a request for SSR radar and VHF communications coverage in the Bay of Bengal and Arabian Sea sub-regions. Coverage charts were presented by States at the BOB-RHS/TF/3 meeting held in May 2010. Due to different methods of presentation of these charts, AEROTHAI accepted the responsibility in combining all charts showing both radar and VHF coverage over the entire Bay of Bengal and Arabian Sea area at FL290 in a standard format. It was expressed that this method would prove useful for sub-regional planning in the introduction of new ATM initiatives throughout this part of the region.

5.47 The meeting was informed that AEROTHAI would also be prepared to use this method in other sub-regions of the Asia/Pacific where there was considered a benefit to do so.

PBN State Plan Harmonization Report

5.48 At PBN TF/6, IATA and a group of volunteering States (Australia, Hong Kong China, New Zealand and Thailand) were tasked to conduct a review and provide a harmonization report of State PBN implementation plans to PBN/TF/7.

5.49 The findings of this report highlighted slow progress in PBN implementation within the Asia Pacific Region. Approximately half of the Asia Pacific States did not submit PBN implementation plans by the end of 2009 as was mandated by ICAO. Of the plans submitted, only one-third demonstrate a path toward timely and successful implementation. It is apparent the APAC region will not meet ICAO 2010 implementation targets and stands at risk of not meeting ICAO Resolution A36-23 implementation targets for 2014 and 2016.

5.50 Based on the conclusions of the plan review, prompt action needs to be taken by the APAC Region in an effort to accelerate PBN planning, development and implementation to a pace of at least achieving closure on the ICAO resolution targets.

5.51 The PBN/TF/7 was rescheduled to convene just prior to APANPIRG/21. It was felt that the timing of the meeting may not allow any conclusions of that meeting to be submitted to the appropriate sub-groups and APANPIRG until late 2011. In view of the time constraints the report was directly presented to the ATM/AIS/SAR/20 Sub-Group. Subsequently it will be presented to CNS/MET SG/14, prior to the PBN/TF/7 meeting in order to generate the necessary discussion and to forward recommendations on Regional PBN implementation to APANPIRG/21.

PBN State Plan Harmonization Report

5.52 IATA summarized a review of the State PBN plans undertaken by a core group as tasked by PBN TF/6. Unfortunately, due to rescheduling of the Task Force meeting, it had not yet been presented to the PBN TF. However, it will be presented to the CNS/MET SG/14 meeting to be held in Jakarta from 19 to 23 July.

5.53 The specific results for each State would be treated as confidential with feedback provided directly to the respective State. The report was an overview of the results noting the number of plans as robust, marginal or incomplete and a summary of results within the review criteria.

5.54 The report highlighted slow progress within the Asia Pacific region with approximately half the States having not submitted a plan to ICAO as mandated by ICAO (by the end of 2009). Of the plans submitted, only 7 State plans were rated as robust demonstrating that many States may need extra support for implementation.

5.55 The report indicated that the APAC region will not meet the ICAO 2010 implementation targets and stands at risk of not meeting the future targets for 2014 and 2016.

5.56 WP/30 also presented by IATA noted the results of the review and called on urgent action by the States and the region to accelerate PBN planning, development and implementation.

5.57 A specific area of the Regional plan that needs addressing is implementation in the en-route phase with regards to airspace design and harmonisation across FIR boundaries.

5.58 Noting the revised schedule of the PBN TF meeting to the week prior to APANPIRG/21 in September 2010, IATA felt it important to highlight these issues at this ATM/AIS/SAR/SG meeting to enable appropriate consideration and comments to be passed on to APANPIRG.

5.59 IATA reinforced the need for increased support and proposed items that should be included within the Regional Support Strategy. It was suggested that the creation of PBN Regional Development and Implementation (REDI) teams might be considered to help fulfill several of these objectives and engage at a working level to coordinate and provide assistance to States in areas such as:

- completion and improvement of PBN implementation plans;
- conducting safety assessments;
- collection of required data and practices to maintain data integrity;
- guidance to establish the regulatory framework, approvals process and other mechanisms necessary for implementation and sustainment of PBN capabilities.

5.60 States that are further advanced in PBN implementation would be encouraged to participate on the PBN REDI Teams to assist other developing States by bi-lateral arrangement and/or through collaborative Regional activities such as seminars, workshops and on-site State support visits.

5.61 The Strategy also needs to provide increased guidance to States for implementation in the en-route phase. The Southeast Asia Route Review Task Force is currently responsible for improving en-route airspace in the WPAC/SCS area south of the Fukuoka FIR, considering AR 9 traffic flow, and is the only group tasked specifically to consider PBN en-route requirements.

5.62 Given the importance of PBN implementation to ATM activities IATA felt it important that the meeting highlight its concerns to APANPIRG to ensure a clear strategy and focus is provided for future activities including those within existing workgroups.

5.63 The meeting agreed the need for increased interaction between the PBN TF and ATM experts. The participants from the ATM community were encouraged to attend the CNS/MET SG/14 meeting and had coordinated with the PBNTF Secretariat for increased ATM participation at the forthcoming CNS/MET SG meeting. If this was not possible due the short time remaining then early within the PBN TF meeting the ATM participation was considered to be beneficial. It was important that these issues be given urgent consideration to enable appropriate recommendations to be passed to APANPIRG/ 21 by the PBNTF/7 rather than risking a delay until next year.

Global Air Traffic Service Inter-Facility Data Communications (AIDC) Interface Control Document (ICD)

5.64 At the APANPIRG/20 held from 7-11 September 2009 in Bangkok, Thailand, the meeting recognized the benefits that would accrue from a common Global Oceanic and Remote ICD, and thanked the United States for agreeing to undertake this work. The meeting requested that the Regional Office take Asia/Pacific coordination responsibility for the project. APANPIRG adopted Decision 20/14 supported the work being undertaken by the United States to coordinate a global Interface Control Document for AFTN AIDC and the Asia/Pacific Regional Office to act as the regional point of contact for this work.

5.65 The FAA drafted a *Global Interface Control Document (ICD) for ATS Inter-Facility Data Communications (AIDC)* which was provided to the Informal Pacific ATC Coordinating Group (IPACG) for review and comments. The meeting took note of activities carried out by the United States for the development of the Global document and appreciated the work carried out. As the meeting did not have the expertise, participants were requested to take this information back to respective States for review and to provide resulting comments to Ms. Karen Chiodini (email: Karen.L.Chiodini@faa.gov) by 31 August 2010. With respect to the approval procedure of the document, it was informed that the same procedure undergone for approval of the GOLD would be applicable for this Global ICD also. The document, however, was expected to be completed for consideration by APANPIRG in 2011, and the meeting felt that it was too early to formulate a Conclusion. The meeting suggested the United States to submit the document to the CNS/MET/ SG meeting to be held in Jakarta from 19 to 23 July 2010. The Secretariat also suggested that the Asia/Pacific AIDC Implementation Seminar be held in Bangkok from 12 to 13 October 2010 and this forum could also be used to seek comments.

LIST OF ACTION ITEMS ARISING FROM THE 46th CONFERENCE

Agenda Item 1

Action Item 46/1

Seamless Sky – ATM

Recognizing the leadership role of ICAO Asia and Pacific Office and the efforts of APANPIRG in promoting and fostering the implementation of the ICAO provisions for the short and medium term according to the Regional Air Navigation Plans, the Conference requested the ICAO Asia Pacific Office to coordinate with Chairman APANPIRG and agreed that APANPIRG be the starting platform to discuss and plan the future ATM system of the Asia and Pacific Region including targets and a time schedule through the collaboration with Asia/Pacific States / Administrations.

Agenda Item 46/2

Seamless Sky - Air Cargo, Security

Recognizing that the security of air cargo is critical, and appreciating the need to enhance air cargo security and facilitate international trade, the Conference requested ICAO to examine the inclusion of provisions on air cargo security in ICAO Annex 17 with the aim of securing safety and protecting the entire cargo supply chain for transport of cargo by air.

Agenda Item 46/3

Seamless Sky – Aviation Safety

To ensure a high standard of safety the Conference urged States to:

- a) implement the State Safety Programme;
- b) ensure that service providers within their jurisdiction effectively implement safety management systems;
- c) monitor the safety of foreign aircraft operating into their jurisdictions, including the conduct of ramp inspections; and
- d) co-operate in the above efforts, in sharing such safety information, and in promoting harmonization.

Agenda Item 2

Action Item 46/4

Submission of Implementation Status – List of Action Items

Taking note of the low percentage of submission of implementation status on the Action Items arising from the earlier DGCA Conference by the States / Administrations, the Conference urged the States / Administrations to provide ICAO APAC Office with a summary of actions taken within the timeframe agreed by the DGCA Conference (six months of the Conference) and a follow-up report (at least two months) prior to the next Conference.

Action Item 46/5

Asia Pacific Consultative Link

Taking note of the progress made in establishing the APCL Portal and agreeing that the APCL has the potential to serve as an effective mechanism of communication among the Asia and Pacific DGCA's, the Conference urged States / Administrations that have not nominated their APCL Coordinators or who have not logged into the revamped APCL to do so as soon as possible.

Agenda Item 3

Action Item 46/6

Implementation of Continuous Descent Operations

Recognizing the efficiency and environmental benefits of Continuous Descent Operations (CDO), and the need to harmonize these operations in the interest of safety and efficiency, the Conference encouraged States to include implementation of Continuous Descent Operations (CDO) as part of their PBN implementation plans and to implement CDO in accordance with the ICAO CDO Manual, to be available by April of 2010.

Action Item 46/7

Asia-Pacific Flight Procedure Programme

Taking note of the lack of adequate procedure design capability as a major obstacle to meeting the PBN implementation goals of Assembly Resolution A36-23, the Conference, urged States to indicate their intention to participate in the Asia-Pacific Flight Procedure Programme by 22 October 2009 in order to build or improve their instrument flight procedure capabilities, meet the PBN implementation goals of Assembly resolution A36-23 and enhance flight safety, efficiency and environmental protection in their States and the region.

Agenda Item 4

Action Item 46/8

Preparation for WRC 2011

Recognizing the crucial importance of protecting the aeronautical frequency spectrum at the World Radiocommunication Conference (WRC-2011), the Conference strongly urged Asia Pacific States:

- a) to give high priority to ensure support to ICAO position for WRC-2011 through enhance coordination between the respective authorities; and
- b) to actively implement APANPIRG Conclusion 19/41 and 20/58.

Agenda Item 5

Action Item 46/9

USOAP Pre-audit Documents

Taking note of the lack of submission of the USOAP Compliance Checklists and the SAAQ by a sizeable number of States and recognizing the importance of establishing an effective Safety Oversight System, the Conference urged States:

- a) to note that the ultimate responsibility for safety oversight rests with the Contracting State, who should continuously review their respective safety oversight capabilities;
- b) to submit their pre-audit documents as required under the Comprehensive Systems Approach (CSA) audit [State Aviation Activity Questionnaire (SAAQ) and the Compliance Checklists (CC)] at the earliest so as to facilitate undertaking and better understanding by the audit team; and
- c) that have been audited to share their USOAP audit experience and provide assistance to States in need of help.

Action Item 46/10

Language Proficiency Requirements

Noting that language provisions address a safety concern and that the transition period to comply with the language proficiency requirements will terminate in March 2011, any additional measures will be considered by ICAO only if there is a clear and definite indication of widespread non-compliance among States, the Conference urged States to:

- a) ensure that the questionnaire attached to ICAO State letter AN 12/44.6-09/53 dated 17 July 2009 is completed and returned to ICAO Headquarters; and
- b) explore possibilities of technical co-operation and assistance amongst States in terms of training, expertise and experience.

Agenda Item 8

Action Item 46/11

Technical Cooperation

Recognizing the multifarious difficulties faced by Contracting States in fulfilling their obligations for the effective safety and security oversight of aviation activities taking place under their jurisdictions and, making note of the enormous potentials in the Regional Cooperative Arrangements to help solve such situations, the Conference:

- a) requested the States to actively participate at the various ongoing Regional Technical Cooperation Programmes such as CASP, CAPSCA, COSCAP and PASO etc.;
- b) requested the States to make the optimum use of the opportunities, facilities or services provided by such Programmes or Projects to meet their national requirements including the staff training;
- c) requested the international agencies and donor community to continue extending their support in cash and/or in kind for the wellbeing of the Regional Cooperative Programmes;
- d) appealed to States having necessary resources and expertise to join the ICAO Developing Countries Training Programmes in order to provide assistance to States for training of national staff; and
- e) requested the Developing States to make use of the opportunities provided under the ICAO Developing Countries Training Programmes for training of their national staff as and when they are made available.

Agenda Item 9

Action Item 46/12

Recognising the support from States to have "International Aviation and the Environment" as a separate Agenda Item in future Conferences of the DGCA's, the Conference urged States to submit papers under this Agenda Item for the 47th DGCA Conference.

**AGENDA ITEM 6: REVIEW OF ATS COORDINATION
GROUP MEETINGS**

Agenda Item 6: Review of ATS Coordination Group Meetings

Update on Activities of ATS Coordination Groups in the Asia/Pacific Region

6.1 The meeting was updated on the activities since ATS/AIS/SAR/SG/10 (June 2009, Bangkok) of the ICAO and the States' ATS coordination groups that contribute to the work of APANPIRG. The following sub-regional ATS coordination group meetings were held:

1. ICAO ATS Coordination Groups

• **Bay of Bengal ATS Coordination Group (BBACG)**

FANS Implementation Team for the Bay of Bengal (FIT-BOB)

- FIT-BOB/11 & Seminar (August 2009, Bangkok) with the Satellite Data Link Operational Continuity Meeting (SOCM)
- FIT-BOB/12 (February 2010, Bangkok, with BOB-RHS/TF/2)

Asia/Pacific Air Traffic Flow Management Task Force (ATFM/TF)

- ATFM/TF/13 (September 2010, Bangkok)

Bay of Bengal Reduced Horizontal Separation Implementation Task Force

- BOB-RHS/TF/1 (November 2009, Bangkok)
- BOB-RHS/TF/2 (February 2010, Bangkok, with FIT-BOB/12)
- BOB-RHS/TF/3 (May 2010, Singapore)

• **Southeast Asia ATS Coordination Group (SEACG)**

SEACG/17 (May 2010, Singapore, with FIT-SEA/10)

Southeast Asia Route Review Task Force (SEA-RR/TF)

- SEA-RR/TF/1 (December 2009, Bangkok)
- SEA-RR/TF/2 (March 2010, Bangkok)

FANS Implementation Team for South -East Asia (FIT-SEA)

- FIT-SEA/10 (May 2010, Singapore, with SEACG/17)

• **Asia/Pacific ICAO Flight Plan & ATS Messages Implementation Task Force**

FPL&AM/TF/2 & Seminar (November 2009, Bangkok)

2. ICAO Interregional Coordination Meetings

- **China, Mongolia, Russian Federation, IATA ATS Coordination Group (CMRI)**

Last meeting CMRI/5 (June 2007, Bangkok)

- **Trans-Regional Airspace and Supporting ATM Systems Steering Group (TRASAS)**

TRASAS/3 postponed; last meeting TRASAS/2 (March 2008, Bangkok)

3. State ATS Coordination Groups

- **Informal South Pacific ATS Coordinating Group (ISPACG)**

ISPACG/24 (March 2009, Brisbane, with FIT/16)

FANS Interoperability Team (FIT)

- FIT/17 (with ISPACG/24)

<http://www.airways.co.nz/ispacg/index.asp>

- **Informal Pacific ATC Coordinating Group (IPACG)**

IPACG/32 (May 2010, Honolulu, with FIT/19)

FANS Interoperability Team (FIT)

- FIT/19 (Honolulu, 11 May 2010, with IPACG/32)

http://www.faa.gov/about/office_org/headquarters_offices/ato/service_units/enroute/oceanic/ipacg/

- **Asia/Pacific Regional Air Navigation Service Providers Conference (ANSP Conf)**

ANSP/5 (April 2010, Hua Hin) cancelled

- **Arabian Sea/Indian Ocean ATS Coordination Group (ASIOACG)**

ASIOACG/5 (April 2010, Dubai)

<http://ekgroup.com/raws>

Twelfth Meeting of the FANS Implementation Team for the Bay of Bengal (FIT-BOB/12)

6.2 FIT-BOB/12 was held in conjunction with BOB-RHS/TF/2. The meeting noted the TOR and objectives of FIT-BOB.

Review of Bay of Bengal ADS/CPDLC Operations

6.3 The main point of interest arising from FIT BOB/12, meeting with respect to trial operations were as follows:

Result of ADS/CPDLC Operational Trial in the Kuala Lumpur FIR

6.4 To prevent the ADS/CPDLC ground system problems from happening again in future, the ADS/CPDLC systems software upgrades at Kuala Lumpur Area Control Centre (ACC) was required to meet the need for more advance settings. The latest software update of the current ADS/CPDLC systems was carried out which was expected to be completed in May 2010 and full trial can commence on 10 October 2010.

ADS/CPDLC Trial Progress in the Ujung Pandang FIR

6.5 ADS-C/CPDLC trial operation for all international routes within the Ujung Pandang FIR was expected to take effect on 7 April and continue until 6 May 2010.

ADS/CPDLC Trial Progress in the Male FIR

6.6 The trial discontinued at Male after some time due to equipment problem which was expected to be rectified to resume tests again in March 2010.

Results of ADS/CPDLC Bench Testing with Chennai and Mumbai Centres

6.7 The meeting noted a list of the issues identified from dedicated bench test sessions. In addition to issues identified relating directly to auto handoffs, a couple of other related issues were identified. Based on the analysis of the identified problems, recommendations were made encouraging ATSU's to implement them in order to overcome the problems.

6.8 There were 88 problem reports identified and the main reason for failures was identified. ATSU's were encouraged to automate the connection sequence. It was recognized that to ensure the connection hand off steps are to be followed correctly to overcome the problem.

Report on Bay of Bengal Reduced Horizontal Separation Task Force (BOB-RHS/TF)

6.9 To date, three BOB-RHS/TF meetings had been held, and significant cooperation and progress had been accomplished. The fourth meeting of the Task Force was scheduled to take place in October 2010. This meeting will be a Go/No Go meeting based on the implementation plan mentioned later in this report.

6.10 The first meeting of the task force decided to vary the TORs to include the Mumbai Oceanic FIR and some RNAV routes which passed through the Bay of Bengal into the Indian Ocean, especially to South Africa, within the Asia/Pacific region. This was considered necessary as many of the routes which either pass through the Bay of Bengal continue across the Indian Sub-Continent on

their way to the Middle East through the Mumbai Oceanic FIR, or transit the Bay of Bengal enroute to South African destinations.

Phased approach to implementation of RNP 10 and RNP 4 PBN

6.11 Under the Objectives and the Terms of Reference, the task force noted that a step by step implementation process should be adopted. The first step was to implement widespread 50NM longitudinal separation using DCPC or CPDLC communications in the Bay of Bengal and the Oceanic Mumbai FIR.

6.12 The Task Force also considered that crossing routes in the Bay of Bengal should also be taken into consideration from an ATC simplicity and efficiency point of view.

Effect of 50NM Longitudinal Separation in the Bay of Bengal on ATFM/BOBCAT Operations

6.13 The Task Force recalled that, during the westbound night-time ATFM/BOBCAT period, special arrangements had been devised and agreed to which strategically ensures that aircraft entering the Kabul FIR are adequately spaced by a minimum of 10 minutes during the stipulated four hour period of 2000 -2359 UTC. In order to introduce RNP 10 50 NM longitudinal minima into the Bay of Bengal area, it will be necessary to assess what effect this proposed initiative may have on the present ATFM/BOBCAT system and whether there will need to be some adjustments instituted so that both ATFM and RNP10 longitudinal of 50NM are able to operate in harmony.

6.14 The task force was advised by Afghanistan that they would address the proposals for reduced longitudinal separation and would review requirements for implementation of 50 NM longitudinal separation in the Kabul FIR. It was of interest to the task force that plans are being quickly developed by Afghanistan to enhance communications and surveillance capabilities with in Kabul FIR for the benefit of users and providers alike.

Implementation Strategy for use of 50 NM longitudinal separation in the Bay of Bengal and Arabian Sea

6.15 Over the period of the three Task Force meetings, it was finally agreed that three phases would be used in the implementation process of 50 NM longitudinal separation as follows:

Phase 1: N571, P628 and P762

Phase 2: L301, L510, L759, M300, M770, N563, N877, P570 and P574

Phase 3: All other RNP 10 routes over Bay of Bengal, Arabian Sea and Indian Ocean

6.16 The proposed timetable for all these three phases were agreed to as:

Phase 1 - to commence on AIRAC Date 13 January (or 10 February) 2011.

Phase 2 - to commence on AIRAC Date 28 July (or 25 August) 2011.

Phase 3 - to commence either with Phase 2 or at a date prior to January 2012

6.17 It was noted that RNAV route P762 was scheduled to be a part of the Phase 1 in the above programme. However, satisfactory data link services in both the Colombo and the Yangon FIRs needs to be confirmed prior to implementation of 50 NM longitudinal spacing on this RNAV route.

Exclusive Route and/or Flight Levels for Data Link Equipped Aircraft or Mixed Air Traffic on an Opportunity Basis

6.18 There were considerable discussions by the Task Force in trying to come to a satisfactory agreement on the procedures for the three routes of N571, P628 and the crossing route P762 regarding the introduction of exclusive levels for FANS aircraft using 50 NM spacing, or mixed traffic on an opportunity basis. It was brought to the Task Force's attention that RNP 10 50 NM longitudinal separation has been implemented in many parts of the world and that in all cases, there is no implementation of exclusive use by data link aircraft on any route using a 50 NM longitudinal separation procedure. It was also noted that, with the implementation of 50 NM longitudinal separation, no levels were exclusive and the application of 50 nm separation was achieved on an opportunity basis between data link equipped aircraft. In case where one aircraft was non-data link, 10 minutes (80 NM) separation was applied. Taking into consideration that there were only a maximum of three RNAV routes involved in the Phase 1 of the implementation strategy, the majority of Task Force members were of view that this project should follow the same path of previous implementations of 50 NM separations which used the opportunity basis procedures.

6.19 After considerable discussion, it was finally agreed that, during the Phase 1 trial period, reduced horizontal separations would be applied on an opportunity basis. However, to enable ATC to become accustomed to the provision of reduced separations, priority handling could be applied to data link equipped aircraft on N571 for a period of two AIRAC cycles after implementation of Phase 1.

Horizontal Enroute Monitoring Agency for the Bay of Bengal and Mumbai FIR

6.20 The task force observed that there was presently no dedicated safety monitoring agency established to perform the important task of processing traffic data analysis in this area to ensure that the Target Level of Safety (TLS) in the longitudinal-plane could be met. In addition, it would appear that, notwithstanding the implementation of lateral separation implementation of 50NM in EMARSSH, safety monitoring has not been continuous.

6.21 India advised the task force that, taking into consideration the amount of airspace within their FIRs in both the Bay of Bengal and the Arabian Sea, they are prepared to establish an Enroute Monitoring Agency in accordance with ICAO provisions to cover all routes to which 50NM longitudinal separations will be applied.

6.22 Singapore, who is responsible for the EMA service for the South China Sea area, offered to share their experience with India in their establishment of SEASMA as the EMA service for the South China Sea area.

6.23 The task force was also advised that, in an endeavour to acquire Safety Monitoring Capabilities, AAI had also sought FAA's guidance. Federal Aviation Administration (FAA), U.S. Department of Transportation has offered to assist India by providing suitable guidance and software tools. AAI is forming a Team comprised of experts from ATC, Safety, Avionics and also a member with Mathematical/Statistical expertise. The Team is expected to visit the FAA Technical Centre shortly.

Operational Letter of Agreement (LOA) for Monitoring of Aircraft Navigation Errors in the Bay of Bengal, Arabian Sea and Indian Ocean Airspace

6.24 The Task Force recalled that the implementation of reduced horizontal separation minima requires continuous monitoring of aircraft navigation errors. This includes the identification and reporting of any Large Lateral Deviations (LLD) or Large Longitudinal Errors (LLE), to ensure that the target level of safety (TLS) of the operations within the airspace in question meets the regionally established TLS.

6.25 The first step in the monitoring process would be to identify suitable designated areas where monitoring can be done by means of surveillance. This is usually from the point an aircraft leaves the surveillance coverage till the point where it will again enter surveillance coverage. There are also occasions that the monitoring is done within total surveillance coverage. On day-to-day basis, air traffic controllers carrying out their ATC duties should be the front line first person to initiate the report should they encounter any aircraft with navigational errors.

6.26 The Task Force agreed that an LOA should be put in place by the relevant States to ensure that the procedures for reporting of navigation errors and traffic movement counts are administered accurate and consistently by all States involved.

6.27 The Task Force reviewed the draft LOA proposed by India and agreed that both India and Singapore will revise the draft to harmonize with the ICAO Asia Pacific En-route Monitoring Agency Handbook. The LOA would be circulated through ICAO to all the States concerned for their comments and targeted for signing prior to the Go/No Go meeting in October. The meeting also agreed that the data collection of the aircraft navigation errors would commence from 1 July 2010.

Data collection to provide a business case supporting reduced horizontal separation decisions

6.28 The task force was advised that traffic demand through the airspace would be the key criteria in providing a business case supporting a reduced horizontal separation implementation timeline. This traffic demand information should include items such as aircraft types and planned entry and exit time from the concerned airspace. Based on traffic demand, possible simulation could be performed on how various horizontal separation standards would affect traffic demand involved.

6.29 It was noted that this traffic sample data is the record of actual traffic and it could be argued that the data collected may include other factors such as current separation standards as well as uncertainties like weather phenomena. This traffic sample data would also become useful in post-implementation safety monitoring such as those carried out by RMAs and EMAs.

6.30 The task force noted that that another potential source of traffic demand data could be as simple as flight plans. Since it is required that flight plans include estimated elapsed time when crossing FIR boundary and planned routing, it is possible to construct a list of FIR boundary crossings of a particular flight simply by processing flight plan information. This crossing information would then form a basis of traffic demand useful for reduced horizontal separation implementation decisions.

6.31 Taking into consideration the usefulness of business case data, it was agreed that flight plans and related ATS messages transiting the Bay of Bengal and/or the Oceanic Mumbai FIR would be forwarded to the Bangkok ATFMU at its AFTN Address, VTBBZDZX. In this respect, AEROTHAI would coordinate follow up actions with States and airlines involved regarding this issue.

Future of the ATFM Task Force

6.32 The meeting recalled that the ATFM Task Force was formed in 2005 to develop and implement an ATFM system to cater for westbound aircraft departing from Southeast and South Asia airports entering the Kabul FIR during the busy night-time period.

6.33 Extensive development of the ATFM/BOBCAT system took place over many meetings between States concerned, ICAO and IATA and their airlines, which culminated in an agreed fully operational air traffic flow management system being implemented in July 2007. During ATFM/TF/12 meeting in July 2008, it was agreed that the implementation program dealing with the management of Kabul FIR transit flights should be considered as completed, apart from small changes to the BOBCAT computer system to enhance the product for the benefit of airlines and States participating in this ATFM programme.

6.34 The meeting noted that the Key Priorities for CNS/ATM Implementation in the Asia/Pacific Region adopted by APANPIRG/18 (September 2007) included ATFM, in which States were to consider and implement aspects of ATFM including:

- a) centralized ATFM;
- b) inter-regional cooperative ATFM;
- c) establishment of ATFM databases;
- d) application of strategic ATFM planning;
- e) application of tactical ATFM planning; and
- f) assessment of economic and environmental impact.

6.35 It was also observed that, at the Twentieth meeting of the Asia/Pacific Air Navigation Planning and Implementation Regional Group (APANPIRG/20) held from 7-11 September, 2009 in Bangkok, Thailand, a number of ATFM matters were discussed. There were three important Conclusions adopted by APANPIRG/20 relating to the overall development of ATFM within the Asia and Pacific region, i.e. Conclusion 20/11 – ATFM Steering Group and Concept of Operations, Conclusion 20/12 – Adopt ATFM Communications Manual and Conclusion 20/13 – Conduct Regional ATFM Survey.

ATFM Regional Concept of Operations

6.36 The meeting noted that the ATFM Workshop held in Fukuoka, Japan, recognized that the preparation of an ATFM regional Concept of Operations document for the Asia/Pacific Region represented a significant body of work, which would need to be undertaken in a collaborative manner between States over a period of time. In particular, analysis was necessary to identify major traffic flows which would benefit from ATFM solutions.

6.37 The meeting was advised that the Workshop also examined the methodologies utilized and lessons learned from the implementation of long range ATFM procedures in the Bay of Bengal, as well as pre-tactical experiences with the Centralized Traffic Management System (CTMS) in Australia.

6.38 The meeting also appreciated that this task is sizeable however with good planning and diligence, a step-by step approach to achieve operational efficiency gains throughout the region in recognized areas and along regional major traffic flows could be achieved.

6.39 Finally, the meeting agreed that the present ATFM Task Force had achieved the aims of their Terms of Reference and therefore could be dissolved. Consequently, the meeting agreed to the following Decision:

Decision SG 20/10 – Dissolution of the ATFM Task Force

Taking into account that the ATFM Task Force has completed their work in accordance with the Objectives and Terms of Reference of the ATFM Task Force, it was agreed that the ATFM Task Force be dissolved.

6.40 The meeting congratulated the ATFM Task Force on their positive work in providing an effective ATFM tool to manage the westbound night-time traffic operating through the Kabul FIR. The meeting specially thanked AEROTHAI for their role in planning and provision of the BOBCAT system; an effective and efficient ATFM tool, whose concept of operations could be of benefit in the development of other ATFM initiatives within the Asia and Pacific Region.

Tenth Meeting of FANS Implementation Team for South-East Asia (FIT-SEA/10)

6.41 The Tenth Meeting of the FANS Implementation Team for South-East Asia (FIT-SEA/10) was held in Singapore on 24 May 2010. The main points of interest arising from FIT-SEA/10 as noted by the meeting were as follows:

Need to File Problem Report (PR)

6.42 FIT-SEA/10 identified the need for States to report problem reports (PR) as such reports were not widely filed in this region as compared with other regions. In this regard it was noted that CRA Japan had not received any PR since 2008. Singapore had sent two PR recently.

Termination of FIT-CRA Service by Japan

6.43 Japan informed the meeting that CRA Japan has been providing FIT SEA CRA service on a temporary basis in accordance with the TOR of FITSEA CRA. It was stated that Japan will be able to act as FIT-SEA CRA until the end of March 2011 but will not be able to continue beyond March 2011, not solely because of its financial resource but also due to other reasons. The meeting appreciated Japan and CRA-Japan for the services graciously provided free of charge for over three years.

6.44 In this regard the meeting noted that establishment of FIT-SEA CRA by States concerned was the only viable option and that funding issues were required to be further discussed.

ADS/CPDLC in the Ho Chi Minh FIR

6.45 Viet Nam had officially started providing data link services on eight RNAV routes in the oceanic area of the Ho Chi Minh FIR since 10 April 2008. It was reported that only half of 200 flights had been equipped with both ADS and CPDLC and 65 flights initiated the logon daily and 98 present logged on successfully.

Preparations for ADS/CPDLC Trial in Manila FIR

6.46 During FIT/SEA-9, the Philippines had informed the meeting that the current system of Manila ACC would be replaced by a system that has built-in data link capabilities. In connection with this, data link trials were planned for the fourth quarter of 2010 with the objective of providing the full operations in 2012. The meeting noted that CRA Japan would be able to act as CRA to support for data link implementation in Manila FIR considering it vital and that formal CRA for FIT SEA.

Review of ADS/CPDLC in Singapore FIR

6.47 The monthly periodic status reports submitted to CRA-Japan showed that the data link performance is within the FOM criteria except for downlinks. As previously noted at FIT-SEA/9, there were performance issues for downlink in both Singapore and Ho Chi Minh FIR last year. This was a known performance issue that was attributed to the B777 types which formed a majority of the aircraft types operating FANS in Singapore FIR.

6.48 Boeing had reported that a fix will be provided to the operators. Airborne trials with AIMS-2 (with one test originating from Singapore Changi airport) and AIMS-1 software had been completed. The upgraded AIMS-2 software will be retro-fitted to existing B777s, with AIM-1 software targeted for Jun/Jul 2010. However it is expected it would take time for all the aircraft to be updated. Update to the AIMS-2 software is expected to begin in 4th quarter 2010.

6.49 In February 2010, Singapore carried out a detailed study of the occurrences of the marginal downlink performance. Most of the occurrences were found to be in the VHF-SATCOM transition areas. The results validated that the poor downlink performance was correctly attributed to the B777 problem. Singapore will continue to monitor this issue and provide an update at the next meeting.

Seventeenth Meeting of South-East Asia ATS Co-Ordination Group (SEACG/17)

6.50 The SEACG/17 was held in May 2010 in Singapore following FIT-SEA/10. The objective of SEACG was to address implementation and coordination issues and to develop solutions to overcome the current problems experienced in the provision of ATS by developing an action plan with specified timelines. The meeting noted the main points of interest arising from SEACG/17 were as follows:

Terms of Reference (TORs) of South-East Asia ATS Coordination Group

6.51 SEACG has been working without the Terms of Reference (TORs). To provide States a clear focus of work as well as to avoid duplication of work with other grouping(s) and/or Task Force(s), it was considered that a Terms of Reference would be required for the SEACG.

6.52 As agreed at SEACG/17, Hong Kong, China presented a draft TORs on behalf of the Group for review and consideration by the meeting. The draft TORs also included composition of the Group. After a considerable discussion on two main points with respect to the inclusion of composition of the Group in the TOR and the need to designate members outside the Southeast Asia area, the meeting agreed to the TOR of the Group and the membership of the Group as shown in **Appendix A** to the Report on Agenda Item 6. It was also agreed that the membership should be open to those States and organization willing to join and contribute to the work of the Group.

6.53 It was recalled that during the discussion on the draft TOR at SEACG/17, it also considered the needs to reflect the development of aviation and to harmonize with ICAO terminology, and proposed to revise the title of the group from Southeast Asia ATS Coordination Group to Southeast Asia ATM Coordination Group. This proposal was also reflected in the draft TOR. The meeting reviewed and adopted the proposed draft TORs and the title, and reached the following Decision:

Decision SG 20/11 – Terms of Reference (TORs) of the South East Asia ATM Coordination Group

That the Terms of Reference, change in the title and composition of SEACG be adopted as shown in **Appendix A** to the Report on Agenda Item 6.

Fifth Meeting of Southeast Asia Sub-Regional ADS-B Implementation Working Group

6.54 SEACG/17 reviewed the outcomes of the Fifth Meeting of South-East Asia Sub-Regional ADS-B Implementation Working Group (ADS-B SEA WG/5, January 2010) hosted by Indonesia.

Australia-Indonesia Data Sharing Project

6.55 Australia and Indonesia had provided an update on their data sharing project. Airservices Australia had approved the Phase 1A plan. Indonesia had also approved the Phase 1A and an ADS-B Filter was installed in MAATS, Makassar. The tests were conducted between two States and the result of the test was successful.

6.56 The target date of using ADS-B data for situational awareness and safety nets by ATC was set for 2010 for Australia and 2011 for Indonesia. The project was expected to extend to the Phase 1B and possibly to the Phase 2.

Restriction on G581

6.57 Japan drew to the attention of SEACG/17 that the current flight level allocation scheme (FLAS) on ATS route G86 was discussed and agreed at the Western Pacific/South China Sea RVSM Scrutiny Group (WPAC/SCS RSG) and EATMCG meetings, and was implemented on 3 July 2008. Subsequently, Hong Kong and Taipei ACCs imposed certain restrictions. In order to overcome this problem Hong Kong, China and Japan had agreed that they would hold a tripartite meeting including Taipei ACC and report the outcomes to the Regional Office as soon as possible.

Implementation of 50 NM Lateral Separation Minimum for RNAV Routes L625, M767, N884 and N892

6.58 Singapore presented a report on the progress of discussion amongst Singapore, the Philippines and Vietnam on 50 NM lateral separation standard for RNAV routes L625, M767, N884 and N892. The proposal was supported by a safety assessment conducted by SEASMA, which was presented at RASMAG/12 (December 2009, Bangkok). N892 is partially within the Sanya FIR and the responsibility of ATS on that portion of N892 has been delegated to Ho Chi Minh ACC. Due to the procedural considerations, China required further coordination amongst the concerned parties. After further discussions, the four States agreed to continue discussion off-line and would report the progress to ATM/AIS/SAR/SG/20 to be held in early July 2010, with a tentative implementation date of the separation standard on 26 August 2010. Singapore, on behalf of China, the Philippines and Vietnam, informed the meeting that the four States had agreed to implement 50 NM lateral separation minimum for L625, M767, N884 and N892 on 26 August 2010. NOTAM would be issued by the States concerned prior to the implementation. The proposed amendment for the Regional Supplement Procedures (Doc 7030) had been submitted to the Regional Office.

Harmonisation of State Contingency Plans

6.59 It was recognized that it is advantageous for States to harmonise their contingency plans through a coordinated regional effort to ensure that these plans remain effective and relevant. This will not only serve to fulfil States' requirement to meet the ICAO Annex 11 requirements on contingency arrangements but would also ensure that the disruption of international air traffic movements would be minimised across the affected FIRs. IATA pointed out to the meeting the importance for States to ensure that their contingency plans were robust and catered to multiple scenarios, as well as the need to be kept up-to-date in order that, as and when such plans are required to be activated, the appropriate contact points could be established in the most effective manner. Both Singapore and IATA noted that the RVSM operations only took account of aircraft capability, and the ATM infrastructure in the airspace concerned has no bearing on the operations. Hence, any activation of the contingency plan in an FIR would not impact on the RVSM classification in its airspace.

RNAV 5 Preferential Operation

6.60 The circumstance where RNAV 5 routes and VOR routes are established in the same airspace leads to an increase in air traffic controllers' workload. Air traffic controllers always have to be extra cautious in providing separation between aircraft on RNAV 5 route established close to VOR route, because lateral separation between RNAV 5 route and VOR route was not considered while establishing RNAV 5 route. The Sky Highway is to segregate flights on RNAV 5 routes where as VOR routes are operationally at FL 290. The Sky Highway will be in force in October 2010 when the fourth runway of the Tokyo International Airport (Haneda) will be opened.

Volcanic Contingency Arrangements

6.61 In view of the recent volcanic activity in Europe, IATA considered that there was a need for States in Southeast Asia area to review existing contingency arrangements and consider establishing an effective coordination arrangement amongst States. States were encouraged to participate in a forthcoming MET/ATM Task Force meeting to be held in Fukuoka, Japan in January 2011, which would cover volcanic ash contingency procedures. States were also urged to designate appropriate contact points to establish and maintain contacts before the contingency plan becomes available. In view of the foregoing, the meeting formulated the following Draft Conclusion:

Draft Decision SG 20/12 – Develop Sub-Regional Volcanic Ash Contingency Plan

That,

- a) in view of the recent volcanic activity in Iceland, the CNS/MET Sub-Group be invited to develop sub-regional volcanic ash contingency plans; and
- b) urge States to designate appropriate contact points to establish/maintain contacts in the interim period until the sub-regional volcanic ash contingency plans become available.

Establishment and Operation of the CRA for Southeast Asia ADS/CPDLC Operation

6.62 The need to establish and operate Central Reporting Agencies (CRAs) for Southeast Asia and the Bay of Bengal areas was recognized in order to support the ADS/CPDLC operations which required international cooperation to ensure the provision of a multinational service.

6.63 In Southeast Asia, FIT-SEA/1 (May 2004, Bangkok) requested CRA-Japan to undertake the role of CRA for the States in South China Sea, as an extension to its existing activities. Japan agreed that CRA-Japan would provide the services for FIT-SEA until the formal FIT-SEA CRA is established by the team.

6.64 Japan announced at FIT-SEA/10 (May 2010, Singapore) that they would no longer be able to provide the FIT-SEA CRA service after March 2011 because of its national budget and other reasons. FIT-SEA/10 recognized the need to establish a formal FIT-SEA CRA as soon as possible but not later than March 2011 by Philippines, Singapore and Viet Nam. In the meantime, Japan would continue to support ADS/CPDLC implementation in the Manila FIR beyond March 2011 until it can start a regular operation, possibly through Japan International Cooperation Agency (JICA) programme.

Bay of Bengal

6.65 It was noted that FIT-BOB/3 (February 2004, Bangkok) recognized that the participating States in the FIT-BOB area were responsible for the airspace safety management programmes for the provisions of ATS in their FIRs where ADS/CPDLC would be implemented. FIT/BOB/3 reviewed and endorsed the recommendations of a special coordination meeting to establish a CRA to evaluate ADS/CPDLC systems performance during trial and to determine the budget for CRA in consultations with all concerned and establish a funding arrangement. IATA was requested to collect funds for the CRA from airlines and other stakeholders and seek contributions from other parties to contribute to the cost of operating the CRA and make these funds available to the CRA service provider

6.66 IATA informed FIT-SEA/10 that the operating cost of the FIT-BOB CRA was about USD 100,000 per year. The current arrangement for FIT-BOB CRA where IATA charges fee from users and pays to Boeing, would cease next year but the CRA could continue to run for some years with the residual funds.

Pacific

6.67 In the North Pacific, for example, two CRAs have been established under the Informal Pacific ATC Coordinating Group (IPACG) FIT which was established in 2000 by Japan Civil Aviation Bureau (JCAB) and the United States Federal Aviation Administration (US FAA). JCAB CRA is responsible for the Fukuoka FIR and the FAA CRA is responsible for the Anchorage and the Oakland FIR.

6.68 Each CRA has a CRA Supporting Agency (CRASA), i.e. JCAB CRASA and the FAA CRASA. JCAB CRASA is operated by Air Traffic Control Association – Japan (ATCA-J) and the FAA CRASA is operated by Boeing Co. Under this arrangement, JCAB (JCAB CRA) and the FAA (FAA CRA) pay the operational cost to the respective CRASA.

6.69 It was noted that the Civil Aviation Bureau of Japan (JCAB) will host the IPACG/33 meeting from 15-19 November 2010.

Central Reporting Agencies (CRA) - IATA

6.70 The meeting recognized that data link, i.e. ADS-C/CPDLC, was an enabler for many ATM efficiencies including improved communication, increased capacity and reduced ATC workload. In accordance with ICAO Annex 11 provisions, it is States responsibility to satisfy the safety monitoring requirements for data link as per other ATM systems. This principle has led to the establishment of several CRAs throughout the region that continue to be fundamental in supporting

the implementation of reduced separations such as 50 nm longitudinal and RNP4 30/30 as per ICAO Regional Plans. IATA further advised that the increasing availability of data link capabilities has presented new challenges to ensure that appropriate monitoring of performance is undertaken by the establishment of CRA arrangements on a regional, sub regional and also on a trans-regional basis, as considered appropriate.

6.71 It was further noted that the Indian Ocean area was an example of where increased challenges are arising. While Boeing currently provides CRA services for FIT-BOB States, these services do not cover adjacent areas included within the major traffic flows. To meet the requirements for the provision of separation services, the CRA requirements must be met to ensure that harmonized separation standards can be applied. It was noted that IATA highlighted this issue at the recent ASIOACG/5 meeting as IATA was requested to draw attention to this issue at the appropriate ICAO forums within the three ICAO regions (AFI, MID and APAC).

Review by the Meeting

6.72 In view of the urgent need to continue the CRA function, Singapore had carried out consultations with Philippines and Vietnam with the intention to assume the responsibility of providing the CRA service after March 2011. Subject to further discussion on technical and funding arrangements, Singapore offered to assume the role of CRA after March 2011. It was assured that CRA Japan would continue to assist CRA Singapore as required during the transition period. The meeting appreciated the offer made by Singapore.

6.73 In view of the urgent need for the continuation of the CRA functions, Singapore, Philippines and Vietnam had a side meeting. Philippines and Vietnam requested Singapore to assume the role of the CRA after March 2011. Singapore informed the meeting that it would seek management approval and will provide the update at APANPIRG/21 to be held in September 2010. It was assured that CRA Japan would assist Singapore in establishing the formal FIT-SEA CRA as required during the transition period until 31 March 2011. The meeting appreciated the offer made by Japan and Singapore.

The 5th Meeting of the Arabian Sea/Indian Ocean ATS Coordination Group (ASIOACG/5)

6.74 The meeting was informed that ASIOACG/5 was held in Dubai, United Arab Emirates from 19 to 21 April 2010. The meeting noted the action taken by ASIOACG/5 as follows:

Update from ANS

6.75 Australia confirmed that RNP 4 had been implemented throughout all oceanic airspace within the Brisbane and the Melbourne FIRs. User Preferred Routes (UPRs) were now operational within the Melbourne FIR (Indian Ocean area).

6.76 The India was working to meet the government deadlines for the implementation of the AUTOTRAC3 system at Mumbai and Delhi. AIDC trials between Mumbai OCC and Muscat ACCs were likely to start shortly.

6.77 Maldives informed the meeting that with effect from 1 January 2010, radar service was being provided daily between 0100 to 1400 UTC with the operational coverage of 200 NM. Seven remote control air-to-ground (RCAG) sites were implemented to extend VHF coverage of 90 % of the Male FIR. Maldives also implemented ADS-C and CPDLC data link services in the Male' FIR in 2009.

6.78 Oman informed that an “Auto-Trac II” ATM system has been installed and 4th Area Control sector. Plans for a 5th sector are to be completed by the end of 2010. Oman is ready to test AIDC with Mumbai FIR AFTN based on the latest technology has been upgraded to 64 kbps link-. Oman is ready for the introduction of 50/50 separation standards or 30/30 once India is ready for implementation.

6.79 Sri Lanka has already taken steps to modernise the existing Colombo ACC/FIC with a new and fully integrated ATM system (Radar, ADC-C, ADS-B, etc). It is expected that this project will be completed by the end of 2010. It was also informed that Sri Lanka had decided to construct the 2nd International Airport in the southern part of Sri Lanka (90NM south/east of VCBI). AASL has already commenced the work of this new airport and planning to complete by the end of 2011.

6.80 The representative from “Air Traffic and Navigation Services South Africa” (ATNS) informed the meeting of ATM planning initiatives which had been introduced ahead of the FIFA World Cup (11th June – 11th July 2010). These included the establishment of a Central Air Traffic Flow Management Unit and the installation of CAT II ILS on all runways at Johannesburg.

6.81 A 5NM radar separation standard was now being used within all Johannesburg and Cape Town airspace, providing for much greater operating efficiencies. The next stage would be to implement a 3NM separation standard within the Johannesburg TMA later in 2010.

6.82 ATNS is working with Airservices Australia for the enhancement of AIDC messaging between the two ATS Centres.

CNS/ATM Working Group

6.83 The CNS/ATM Working Group was established at ASIOACG/4 (Jan 2009) with the objective to “*Deliver ATM in support of COM /NAV/SUR capabilities of aircraft operating in the ASIOACG area*”.

6.84 The meeting was informed that the CNS/ATM Working Group meeting which discussed data collection, ATM initiatives and CNS issues with most progress in aircraft routing through the Male FIR. The concept of the Indian Ocean Strategic Partnership to Reduce Emissions (INSPIRE) was also considered by the working group.

Free Route Airspace Concept

6.85 In this context, “Free Route Airspace” meant a specific airspace within which users shall freely plan their routes between an entry point and an exit point without reference to ATS route network.

6.86 Under this proposal, the Maldives would implement a series of Waypoints separated by 50 nm around the FIR allowing free entry, exit and direct routing between boundaries Fixes based on RNAV10 Separation Standards above FL285.

6.87 It was agreed that Australia, Emirates Airline and Etihad Airways would work with Mumbai ATS in the development of connector routes before proceeding with the Paper Trial. It was also agreed that the implementation of “Free Route Airspace” would be reviewed at the next meeting of ASIOACG (1st quarter, 2011).

User Preferred Routes (UPRs) in the Indian Ocean

6.88 IATA called on ASIOACG to establish a core group to develop and guide implementation of UPRs. It was recognised that the principle of UPRs was a well established principle of ICAO, identified under Global Plan Initiative GPI 7 in the ICAO Global Air Navigation Plan (GANP). The meeting also noted that the implementation of UPRs was also a cornerstone of many of the environmental programs currently in effect (e.g. ASPIRE and AIRE).

6.89 In addition to supporting the introduction of UPRs within the Indian Ocean, the meeting also agreed to the inclusion of Dynamic Airborne Reroute Procedures (DARP) as a longer term benefits/component of the overall program.

6.90 The meeting agreed to refer the implementation of UPRs to the CNS/ATM Working Group, emphasising the need to involve all of the neighbouring FIRs.

Indian Ocean Strategic Partnership to Reduce Emissions (INSPIRE)

6.91 Australia provided the meeting with background information on the successful “*Asia and South Pacific Initiative to Reduce Emissions*” (ASPIRE) and presented a Working Paper on a proposal to establish the “*Indian Ocean Strategic Partnership to Reduce Emissions*” (INSPIRE).

6.92 It was agreed that INSPIRE initiatives should be directed across 3 traffic flows within the Indian Ocean/Arabian Sea area, namely:

- Arabian Gulf – Australia;
- Southern Africa – Australia / South East Asia; and
- South West Indian Ocean – Arabian Gulf.

6.93 Future partners may also include other ANSPs and Airlines such as Oman Air and Qatar Airways etc. IATA confirmed its full support for the INSPIRE program and will work with member airlines to ensure successful outcomes. The meeting supported Australia’s suggestion that the INSPIRE program should aim for an initial trial involving 3 flights across the 3 Indian Ocean traffic flows on the same day.

Central Reporting Agency (CRA) Services for the Arabian Sea & Indian Ocean

6.94 IATA presented a paper on CRA services for the Arabian Sea and Indian Ocean airspace, highlighting the need for CRA services beyond the scope of those already available.

6.95 The meeting recognised that the provision of CRA services required the allocation of special technical and human resources which currently, could only be provided through the Boeing or Airbus technical departments. In considering the possibility of establishing a sub-regional CRA within ASIOACG ANSPs, the meeting was referred to an example of where two CRAs could effectively operate within the one ATS Coordination group as is the case within IPACG, where both the JCAB CRA (Japan) and FAA CRA (United States of America) provide CRA services.

6.96 It was noted that the meeting had agreed that the requirement for CRA services across the Indian Ocean/Arabian Sea should be referred to APANPIRG and MIDANPIRG through individual state and IATA representations. It was agreed that the next meeting of the CNS/ATM Working Group would be held over 2 days during the latter part of 2010 and that ASIOACG/6 would convene during March or April of 2011.

24th Meeting of the Informal South Pacific ATS Coordinating Group

6.97 The twenty-fourth meeting of the Informal South Pacific Air Traffic Service Coordination Group (ISPACG/24, March 2010) was hosted by Airservices Australia (ASA) and held at the Stamford Plaza, Brisbane, Australia. ISPACG/24 followed the eighth meeting of the ISPACG Planning Team (ISPACG PT/8) on 8 March 2010 and the Seventeenth ISPACG Future Air Navigation System (FANS) Interoperability Team (FIT/17) that took place from 9-10 March 2010.

6.98 The meeting noted the summary report. It was noted that the full and detailed meeting report, including attendees listing, action item tracking, capacity enhancement tables, and report of the Seventeenth FANS Interoperability Team (FIT/17) Meeting are available on the Airways New Zealand web site. All documentation relating to ISPACG/24, including the final report, supporting papers and presentations, and a complete attendees listing are available at <http://www.airways.co.nz/ispacg/index.asp>

Thirty-first and Thirty-second Meetings of the Informal Pacific Air Traffic Control (ATC) Coordinating Group (IPACG/31 & 32)

6.99 The FAA, USA provided a brief summary of outcome of IPACG/31 and 32 meetings. The group was established to provide a forum for air traffic service providers and airspace users to informally meet and explore solutions to near term ATC problems that limit capacity or efficiency within the Anchorage, Oakland, and Fukuoka Flight Information Regions (FIRs). Many collaborative issues were discussed and agreements reached on efforts to improve the efficiency of air traffic operations in the North and Central Pacific, as well as the cross-polar environment.

6.100 Updates were provided on all ongoing activities such as User Preferred Routes (UPRs) trials and Dynamic Airborne Reroute Procedures (DARP) in Asia/Pacific Region.

6.101 The FAA presented information and solicited comments on a consolidated Interface Control Document (ICD) for the North Atlantic and Asia/Pacific Regions to provide for harmonized Air Traffic Service Inter-facility Data Communications (AIDC). Comments are due by 31 July 2010 to the FAA. This document will also be coordinated with ICAO regional groups, as appropriate.

6.102 The FAA briefed that in the past twelve months, the ASPIRE Partnership has welcomed two new members: the Civil Aviation Bureau of Japan (JCAB) on 11 October 2009 and the Civil Aviation Authority of Singapore (CAAS). The cumulative fuel savings of the ASPIRE flights is 32,386 kilograms (Kg), leading to an overall carbon dioxide (CO₂) reduction of 101,986 Kg.

6.103 Detailed reports are available on the U.S. Federal Aviation Administration's web site at: http://www.faa.gov/about/office_org/headquarters_offices/ato/service_units/enroute/oceanic/ipacg/

Terms of Reference (Draft)

South-East Asia ATM Co-ordination Group (SEACG)

1. Terms of Reference of SEACG:
 - 1) Identify current problems or deficiencies in ATM being experienced in the Southeast Asia area;
 - 2) Develop solutions to resolve noted problems or deficiencies that do not require long-range planning in the Southeast Asia area;
 - 3) Prepare a co-ordinated action plan with time lines for implementation of the agreed actions in a manner that is harmonized with adjacent regions, consistent with ICAO SARPs and Global Air Navigation Plan (Doc 9750);
 - 4) Make specific recommendations to the APANPIRG through the ATM/AIS/SAR Sub-Group, aimed at improving ATM/AIS/SAR services within the South East Asia Region and the adjacent Regions.
 - 5) Report to the ATM/AIS/SAR Sub-Group of the APANPIRG
2. The SEACG comprises representatives from the following, but not limited to:

Australia, Brunei Darussalam, Cambodia, China, Hong Kong China, Indonesia, Japan, Lao PDR, Malaysia, Papua New Guinea, Philippines, Singapore, Thailand, Viet Nam, IATA, IFALPA, IFATCA, ARINC and SITA.

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**AGENDA ITEM 7: REVIEW OUTCOME OF THE
TWELFTH MEETING OF THE
REGIONAL AIRSPACE SAFETY
MONITORING ADVISORY
GROUP (RASMAG/12)**

Agenda Item 7: Review Outcome of the Twelfth Meeting of the Regional Airspace Safety Monitoring Advisory Group (RASMAG/12)

Regional RVSM and Horizontal Safety Performance

7.1 The meeting noted that RASMAG/12 was held in Bangkok from 14 to 18 December 2009. The full reports of RASMAG/12 is available at the website of the Asia/Pacific Regional Office at <http://www.bangkok.icao.int/> under the 'Meetings' menu.

7.2 The meeting reviewed a summary from RASMAG of the most up-to-date safety assessments of RVSM operations in the widespread airspaces of Asia/Pacific Region, as prepared by the Regional Monitoring Agency (RMAs), and reduced horizontal separation operations in the South China Sea, as prepared by an Enroute Monitoring Agency (EMA).

7.3 The airspace safety monitoring for all RVSM airspaces of the Asia/Pacific Region is conducted as a regional programme in accordance with the standards of Annex 11 – *Air Traffic Services* (paragraphs 3.3.5.1 & 3.3.5.2), utilizing the specialist expertise of the Asia/Pacific RVSM Regional Monitoring Agencies (RMAs) approved by APANPIRG. RVSM has now been successfully implemented throughout the Asia/Pacific Region except in Kabul and Ulaanbaatar FIRs.

7.4 It was noted that safety assessments were conducted by the Asia/Pacific RMAs on a periodic basis utilizing data obtained from States that includes large height deviation (LHD) reporting and the annual December traffic sample data (TSD) required in accordance with APANPIRG Conclusion 16/4. Safety assessments are submitted by RMAs to RASMAG for review which is included in RASMAG/12 report.

7.5 The main highlights of Regional RVSM and Horizontal Safety performance are as follows:

- With the exception of the Kabul and the Ulaanbaatar FIRs, RVSM has been implemented throughout Asia/Pacific Region. RVSM was implemented in Pyongyang FIR on 26 October 2009 and implementation in the Kabul and Ulaanbaatar FIRs is scheduled for 2012;
- Safety monitoring for RVSM operations in the Asia/Pacific is undertaken by five APANPIRG Approved RMAs – AAMA Australia: China RMA, ATMB CAAC: JCAB RMA, Japan: MAAR, AEROTHAI, Thailand and PARMO US FAA;
- Horizontal safety monitoring of the South China Sea parallel route structure is undertaken by SEASMA, operated by the Civil Aviation Authority of Singapore.
- RVSM safety monitoring in Asia/Pacific is undertaken as a regional programme in accordance with Annex 11 requirements;
- In general terms, the TLS for RVSM operations are being widely satisfied across the Asia/Pacific Region;
- The regional TLS is not being satisfied in the Fukuoka FIR. Investigation and remedial action by Japan is ongoing;
- For the South China Sea parallel route structure the horizontal TLS (lateral and longitudinal) is being satisfied; and

- The single biggest issue leading to LHD in the Asia/Pacific RVSM operational environment is caused by the errors in the ATC Unit-to-ATC Unit coordination interface.

Activities of the RASMAG

Long-Term Height Monitoring Infrastructure

7.6 Through an analysis of the traffic flows and input from the respective RMAs, RASMAG/12 determined that there were five main blocks of airspace within Asia and Pacific Regions that contained the major traffic flows of the fleets that remained essentially within one or more of those five areas. These five areas could be broadly described as Southeast Asia, India/Pakistan, China, Japan and Australia including Indonesia, New Zealand and Papua New Guinea. In assessing the types of monitoring infrastructure required in each of these areas, the meeting agreed with the following:

- For the Japanese FIRs, a ground-based HMU to capture the domestic fleet plus those aircraft operating across the North Pacific or between Japan and SE-Asia.
- For the China FIRs several ground-based HMU essentially to accommodate the large number of Chinese domestic fleet that operate within those FIRs only, and to be available for other international flights that may operate in that airspace. Additionally, monitoring capability is available by EGMU through the China RMA.
- For South-East Asia, given the proposed infrastructure in the other areas, MAAR advised that their assessment is that any required monitoring of the fleet of States in this area can be accommodated by use of available EGMUs.
- For the India/Pakistan area, a ground based HMU to cater primarily for the large domestic fleet that operates in that area. The type and location of the HMU is to be determined following a more in-depth analysis by India and Pakistan in coordination with MAAR. In the short term MAAR believes that monitoring could be effectively completed using EGMU.
- For the Australian area including Indonesia, New Zealand and Papua New Guinea, the widespread Australian and Indonesian ADS-B network and the proposed ADS-B mandate for Australian airspace effective 2013, will provide significant monitoring capability without the need for other ground based systems.

7.7 China RMA was willing to take over the responsibility for the oceanic airspace of the Sanya FIR from the Monitoring Agency for Asia Region (MAAR), Thailand. It was therefore agreed that China RMA would provide monthly LHD reports and the December TSD for the oceanic airspace to MAAR for the safety assessment of the South China Sea airspace. In Conclusion 19/14, APANPIRG had explicitly authorized China as the RMA for China's sovereign airspace. It was also noted that RASMAG/11 had endorsed China RMA's taking over from MAAR as the RMA for the Pyongyang FIR. The following draft conclusion formulated by RASMAG was noted.

RASMAG Draft Conclusion 20/XX – Area of Responsibility of China RMA

That China Regional Monitoring Agency (RMA) be approved as an APANPIRG Asia/Pacific RVSM RMA with responsibility for all RVSM airspaces in China FIRs, and the Pyongyang FIR.

7.8 The main points of interest arising from the meeting are provided below. The RASMAG/12:

- 1) was provided with a copy of the draft revised RVSM Manual for RASMAG's review for any feedback to be provided to the Chairman by 30 March 2010;
- 2) made one suggestion to include an example of the methodology used by the Asia and Pacific Regions to assess operational errors and that this could be included in Appendix A to the RASMAG/12 report to supplement examples already detailed for NAT and EUR Regions;
- 3) noted that APANPIRG had reviewed a consolidated report of the RVSM safety performance across the Asia/Pacific Region and this report met the metric adopted as the Asia/Pacific Safety Metric "*Percentage of RMA sub-regions achieving the regional Target Level of Safety (TLS) for RVSM operations, as of April each year*";
- 4) proposed that the traffic flows should provide the basis for the provision of the appropriate long term height monitoring infrastructure;
- 5) in assessing the types of monitoring infrastructure required in each of the identified areas within the Region, the meeting agreed with the following:
 - for the Japanese FIRs, a ground-based HMU, to capture the domestic fleet plus those aircraft operating across the North Pacific or between Japan and SE-Asia.
 - for the China FIRs several ground-based HMU essentially to accommodate the large number of Chinese domestic fleet that operate within those FIRs only, and to be available for other international flights that may operate in that airspace.
 - for South-East Asia, given the proposed infrastructure in the other areas, MAAR advised that their assessment is that any required monitoring of the fleet of States in this area can be accommodated by use of available EGMUs.
 - for the India/Pakistan area, a ground based HMU to cater primarily for the large domestic fleet that operates in that area.
 - for the Australian area including Indonesia, New Zealand and Papua New Guinea, the widespread Australian and Indonesian ADS-B network and the proposed ADS-B mandate for Australian airspace effective 2013, will provide significant monitoring capability without the need for other ground based systems.

- 6) agreed that each of the RMAs would develop an analysis of the States for which they are responsible assuming that the proposed monitoring systems were in place;
- 7) noted that China RMA advised that to enhance the means to detect, report and investigate the occurrence of large height deviations (LHD), it had established a reporting mechanism for LHD events from all the domestic Chinese operators since June 2009;
- 8) noted, following discussions with the Australian Transport Safety Bureau (ATSB), pilot reports to the mandatory incident reporting system maintained by that organization, and which fit the criteria for an LHD are now passed to the AAMA on a monthly basis. The United States stated that they considered the work that China is doing in this regard to assist reporting from operators is an activity of importance however can be difficult as it is realistically an ongoing process due to staff changeovers, new operators entering the airspace and other factors;
- 9) Japan reported that AIDC had been implemented among ACCs of the two countries (three ACCs of Japan and an ACC of ROK) since 15 June 2009;
- 10) agreed to task the RMAs that could provide data and analysis in relation to the effect of AIDC on Category E LHDs, to do so;
- 11) noted if the EMA databases were designed to include a set of PBN approval fields that covers all PBN approval types, they would be future-proofed against changes in the scope of the tasks of the EMAs;
- 12) endorsed the format at **Appendix A** to the Report on Agenda Item 7 and tasked the Secretary to amend the EMA Manual accordingly;
- 13) noted that occurrences of non-approved aircraft indicating RVSM approved on flight plans have led some ANSPs to express a need for rapid access to approvals databases to ascertain the approval status of specific aircraft;
- 14) Singapore highlighted the need to include all PBN approval types into the flight plan for all flights so as to facilitate future implementation of reduced horizontal separation; this would also greatly assist in the airspace monitoring duties of the En-route Monitoring Agency;
- 15) was suggested, in order to ease this difficulty, airlines can make use of the flight plan form Field 18 "Other Information" to include all type of PBN approvals pertaining to that aircraft when filing a flight plan even if the PBN approval is not required in that segment(s), route(s) and/or area concerned;
- 16) tasked the Secretary with coordinating this proposal to the Flight Plan Task Force and to the ATM/AIS/SAR Sub-Group;
- 17) noted that China RMA was willing to take over the responsibility for the oceanic airspace of Sanya FIR from MAAR;

- 18) noted that the assessment undertaken by China RMA showed that the total number of aircraft in the RVSM airspace without an RVSM approval was 2,335 which accounts for 1.944% of the total flights;
- 19) was explained by Australia that checks in January 2009 while identifying a number of 'rogue' aircraft, also revealed a number of issues related to the approvals database held by the State authority due in part to delays in having that data base updated following the issuing of approvals to operators;
- 20) was informed that the AAMA was now confident that the issue of rogue airframes operating in RVSM airspace within the Australian FIRs was being effectively controlled through close cooperation with the State authority.;
- 21) noted the continuing research being undertaken by Australia and the United States in relation to the use of ADS-B for estimating altimetry system error; and
- 22) noted that the data suggest that a significant portion of the major airline fleets and specific type groups based in this region already had the potential for being height-monitored using ADS-B within the Australian airspace alone.

7.9 The meeting recalled that they had a lengthy discussion on the CRA arrangement. During the discussion, the meeting noted that the CRA arrangements are made on an individual sub-regional basis and the arrangements and the mechanisms differed from sub-region to sub-region. The meeting felt that a region-wide safety monitoring arrangement for data link operations with oversight by RASMAG would be preferred. Accordingly, the meeting formulated the following Draft Conclusion:

**Draft Conclusion SG 20/13 – CRA Arrangement under RASMAG
Responsibility**

That, in light of the variation of the CRA arrangement across the region, RASMAG be invited to provide guidance and oversight in the arrangement for the establishment and the operations of CRA in order to achieve a sustainable mechanism for the region.

ATM/AIS/SAR/SG/20
Appendix A to the Report on Agenda Item 7

PROPOSED APPROVALS DATABASE RECORD FORMAT

Aircraft & Operator Details													
Registration No													
State of Registry													
Registration Date													
Name of Operator													
State of Operator													
Operator Identifier													
Operator Type		[CIV/MIL]											
Aircraft Type													
Aircraft Series													
Manufacturers Serial No													
Mode S Address Code													
Approval	Airworthiness Approval <i>(State)</i>	Primary Sensor Type <i>(DME-DME/ INS/IRS/GNSS)</i>	Time Limit <i>(hrs)</i>	Vertical Guidance <i>(APV/LPV)</i>	RF Leg Capable <i>(Yes/No)</i>	Limitations <i>(text)</i>	Date	Operational Approval <i>(State)</i>	Date	Expiry date	Approval withdrawn <i>(date)</i>	Information provided by State authority	Regional approval
RNAV10													
RNAV5													
RNAV2													
RNAV1													
RNP4													
RNP2													
Basic RNP1													
Advanced RNP1													
RNP APCH													
RNP AR APCH													
RVSM													
VDL													
Mode S													
SATCOM													
HF													
Remarks													

**AGENDA ITEM 8: REVIEW DEVELOPMENTS
RELATING TO CNS/ATM
IMPLEMENTATION**

Agenda Item 8: Review Developments relating to CNS/ATM Implementation

Review Result of the First Meeting of the MET/ATM Task Force

8.1 The First Meeting of the ASIA/PAC MET/ATM Task Force (MET/ATM TF/1) of the CNS/MET Sub-group (CNS/MET/SG) of APANPIRG was held in Bangkok, Thailand from 2 to 4 December 2009. The meeting was attended by 50 representatives from 18 States, 2 International Organizations and ICAO. The full meeting report is available on the ICAO Asia/Pacific web site at http://www.bangkok.icao.int/meetings/2009/metatm_tf1/index.html.

Terms of Reference of MET/ATM Task Force.

8.2 It was noted that the Task Force reviewed the Terms of Reference (TOR) and proposed amendments to the TOR. A draft Decision formulated for consideration by the 14th meeting of CNS/MET/SG was noted by the meeting and did not propose any change.

New Terminal Forecast

8.3 MET/ATM TF/1 was appraised on developments of the New Terminal Forecast (NTF, now referred as the Meteorological Services in the Terminal Area - MSTa) which would apply to aerodromes with high traffic density. The new MSTa was expected to provide ATM and operators with a forecast of convection, wind information, low ceilings/visibility and winter weather for a wider terminal area out to 150 NM currently not provided in Annex 3. The example prototype NTF graphic for MET, ATM and airline operators would serve as a user friendly product for the users and based on commonalities of display systems used today. Availability of the new product is contingent on decisions made at the WMO CAeM session/ICAO MET Divisional Meeting in 2013/2014. Consideration for additional products (wind shear and turbulence, icing in the terminal area, runway condition forecast, wake turbulence forecast, noise abatement and air quality forecast, and probability forecasts of convection, wind, ceiling and visibility) is envisioned from 2015-2018. Preliminary responses to the prototype NTF provided at the meeting were positive.

States' Coordination Arrangements between MET and ATM

8.4 It was noted that that the Task Force shared States' coordination arrangements between MET and ATM with States represented at MET/ATM TF/1. It was also noted that the process of developing an arrangement of MET services for ATM will be expanded on by Japan and provided to the CNS/MET SG/14 meeting as guidance material.

States' current and planned MET support to ATM

8.5 The Task Force noted ATM disruptions caused due to MET elements. Forecast improvements were discussed such as increasing the Tropical Cyclone forecast from 24 to 48 hours and investigating sub-regional products. Volcanic ash disruptions to NOPAC routes were discussed based on an event that occurred on 12 June 2009 in Russia which had a large scale impact and disruption to air traffic further revealing the need for inter-State and regional coordination for such events.

Review of Guidance Material

8.6 The Task Force noted ATM concerns involving the fluid nature of MET information in ATIS versus other more stable aeronautical information, but determined that a separate ATIS is a requirement for Air Traffic Services to decide upon.

Planning for the MET/ATM Coordination Seminar in 2010

8.7 The meeting noted the offer from the Japan Meteorological Agency (JMA) in hosting the MET/ATM Seminar in January 2011.

Review MET Parts of BANP and FASID, and VOLMET Requirements

8.8 It was noted that updating and maintaining the Basic Air Navigation Plan (BANP, Doc 9673) and the associated Facilities and Services Implementation Document (FASID) serves, among others, to reflect changes in operational requirements for timely implementation by States.

8.9 The meeting noted that it was considered practical to move and maintains FASID Table ATS 2, HF radiotelephony VOLMET broadcasts from Table ATS 2 to the MET part of FASID. It was also noted that requirements for VOLMET are contained in Annex 3. Historically, this table was maintained by ATS since this was considered as an ATS operational requirement. The proposed change would facilitate timely review and updating of the Table. In view of the foregoing, the meeting endorsed the following Draft Conclusion, which would also be referred to CNS/MET/SG/14:

Draft Conclusion 20/14 – Transfer FASID Table ATS 2 from ATS to MET

That, ICAO consider the transfer of FASID Table ATS 2, HF radiotelephony VOLMET broadcasts, from ATS to MET, which would involve moving the Tables related to VOLMET broadcasts from the ATS part to the MET part of all ANP/FASID, where applicable.

Airspace Definitions in Asia Pacific

8.10 IATA expressed the view that implementation of newer technologies and procedures such as Performance Based Navigation and ADS-B presented new opportunities beyond the scope of the original definition of Continental Airspace, particularly within Asia/ Pacific.

8.11 Of the 9 major Traffic Flows, 6 are designated as Oceanic with two, AR2 and AR9 designated as Oceanic High Density. This indicates that traffic densities in these two flows are at or near capacity at times. IATA considered that application of PBN specifications could enhance capacity. The Oceanic separation standards, 50/50 for RNP 10 and 30/30 for RNP 4 are based on data link (ADS-C/CPDLC) with the rationale of availability of a limited navigation and ATC infrastructure.

8.12 In some parts of Asia and Pacific, while a majority of an ATS route may well be over the “high seas” and therefore is prescribed as an Oceanic route, it may also be within range of ATM capability such as direct surveillance and communication. Aircraft on these routes are also generally within range of ground facilities for large portions of their flight enabling regular navigation update capability.

8.13 These enhancements may offer the potential for “Continental” capability based on the direct surveillance/ communication capabilities which can offer significant advantages over the application of “Oceanic” standards based on data link application.

8.14 With the wide bodied aircraft, the capability of data link is relatively high within this region due to the relatively newer fleet. It is however more limited amongst narrow body aircraft and the cost of retrofitting data link to older aircraft can be extremely high. The capability of Continental RNAV requirements however are not subject to the same specific requirements. Most commercial aircraft currently operating within this region have at least RNAV5 and probably RNAV2 capability.

This would enable the application of consistent separation standards without the need for specific equipage requirements as an overwhelming majority of operators already have the capability.

8.15 It was stated that example of the benefits may be found with the 2 primary South China Sea routes between Singapore and Hong Kong, L642 and M771. These routes are designated RNP 10 with 50/50 separations applied and are experiencing growing movements. The State PBN plans already identify RNP4 as a future step.

8.16 It was also noted that except for a relatively small portion of airspace between Vietnam and Singapore, the entire route is covered by radar surveillance and VHF communications. With the planned implementation of the ADS-B project involving Indonesia, Singapore and Vietnam, this surveillance gap will be remedied. This capability enables consideration of what is considered to be a “Continental” type application. IATA had also brought this issue to the attention of the South East Asian Route Review Task Force (SEA-RR TF) and the South East Asia ATS Coordination Group (SEACG) meetings. While some States present at the meetings raised no objections, several States voiced concerns as to whether this was within the existing ICAO guidelines, in particular, the Regional PBN Plan. IATA had sought clarification as to how the definition, particularly with the application of the PBN plan, can be applied.

8.17 IATA considered that where traffic requirements support reduced separations and the CNS/ATM capability enable direct surveillance and VHF communication, then the airspace (route or portion thereof) should be considered “Continental”.

8.18 Where the capability does not exist, then the airspace (route or portion thereof) should be considered either “Remote Continental” or “Oceanic”.

8.19 IATA also recognized that if agreed, the application of those standards would take some planning and consideration of a number of issues.

8.20 In order to realize significant benefit IATA had sought endorsement in principles that State consider air routes/airspace to be “Continental” based on CNS/ATM capability where justified, that may otherwise be considered Oceanic.

8.21 The Secretariat stated that there is no longer explicit definition of “Oceanic”, “Remote Continental” and “Continental” airspace in the ICAO documents, and separation application could be determined based on the capability of the CNS/ATM infrastructure.

Improvement of the State Letter Consultation Process on Amendment Proposals to SARPS and PANS

8.22 The meeting noted that ICAO issued the State Letter Ref.: AN 1/1-10/32 on 29 March 2010 regarding the improvement of the State Letter as a consultation tool with States and international organizations on amendment proposals to Standards and Recommended Practices (SARPs) and Procedures for Air Navigation Services (PANS) proposing a re-designed State Letter format. It was aimed to secure better participation through the use of electronic means for submission of comments online by a designated focal point of contact person.

8.23 ICAO had been discussing ways and means for improving the effectiveness of the State letter as a consultation tool with States and international organizations regarding amendment proposals to SARPs and PANS, thus proposing a re-designed State letter format with the aim of enabling better participation through the use of electronic means. The proposed format features a simplified main covering letter and a description of the process in arriving at the proposed amendments. It is anticipated that comments on proposed amendments would be submitted online by

an authorized focal point who should be nominated by the competent authorities using a form. The State letter focal point, comparable to the National Safety Oversight Audit Coordinator, would coordinate and manage State letters. An example of the proposed format was circulated for comments.

8.24 A State Letter secure website is under construction to facilitate the online State Letter responses. A plan to ensure smooth transition to the automated process is in progress. In the meantime, it was requested that the technical readiness survey be completed and returned no later than 14 May 2010. States who have not replied were requested to send their replies as soon as possible. The authorized State Letter focal point will be contacted for further action, as needed.

ADS/CPDLC Operational Trial and the Proposed Action Plan for Transition from the Trial to the Operational Implementation in the Ujung Pandang FIR

8.25 The meeting was informed that Indonesia had conducted the ADS/CPDLC operational trial on oceanic ATS routes A461, B462, B583, B472, B473, B584 and R340/R590 in the Ujung Pandang FIR for all aircraft equipped with FANS-1/A from 3 July 2008 to 3 June 2010. During the first year of the trial, some problems were experienced, which were resolved by 2009. However, AIDC test continued. Indonesia has prepared the AIP Supplement on ADS/CPDLC operation in the Ujung Pandang FIR for publication on 29 July 2010 to notify operation effective 23rd September 2010. The revised Supplementary Letter of Agreement (SLOA) on transfer of ADS/CPDLC between Ujung Pandang ACC and Brisbane ACC was approved and signed on 3 June 2010.

Status of the Development and Implementation of ADS-C Climb/Descend Procedures

8.26 The United States informed the meeting that the FAA was continuing the works associated with the development of an in-trail climb through and descend through procedure using ADS-C capabilities. ADS-C analysis has determined that this oceanic procedure supports the FAA goals for fuel efficiency, emissions reductions and air traffic capacity.

8.27 The ADS-C procedure was designed to improve the FAA service to properly equipped aircraft by allowing an oceanic air traffic controller to have another option for granting an altitude change request when other standard separations such as ADS-C distance-based 30 NM longitudinal separation minima do not allow for a climb or a descent through the altitude of a blocking aircraft. It is strictly an air traffic control tool that a controller initiates after a pilot request, to be applied between RNP 4 maneuvering and blocking aircraft pairs. Accordingly, the FAA had instituted the name change to ADS-C Climb/Descend Procedure (CDP).

8.28 The objective of ADS-C CDP activities in fiscal year (FY) 2009 was to begin development of operational trials over Pacific airspace. These activities included the refinement of procedures developed in FY 2008, the development of necessary safety case documents and obtaining ICAO endorsement.

8.29 During FY 2010, collision risk modeling has been completed, a demonstration plan and procedure have been finalized and the target operational trial start date within the Oakland Air Route Traffic Control Center (ARTCC) oceanic Flight Information Region is July 2010. The operational trial will be a manual execution of the procedure using Ocean21 displays but without changes to the Ocean21 software. During the operational trial, Safety Management System monitoring will be performed, and benefits metrics will be collected.

Update on Activities of the Asia and Pacific Initiative to Reduce Emissions (ASPIRE)

8.30 The meeting was informed by the United States that the Asia and Pacific Initiative to Reduce Emissions (ASPIRE) is a partnership of air navigation service providers focused on environmental stewardship in the region. The ASPIRE partnership was initiated by the signing of the ASPIRE Joint Statement of Purpose by Airservices Australia, Airways New Zealand, and the Federal Aviation Administration at the Singapore Air Show on 18 February 2008. Unlike regional collaborations focused primarily on technology demonstration, the ASPIRE partnership is a comprehensive approach to environmental stewardship for the Pacific Rim.

8.31 The Civil Aviation Bureau of Japan (JCAB) officially joined the ASPIRE Partnership on 11 October 2009. One day before on 10 October 2009, JCAB conducted a flight demonstration (labeled ASPIRE 4) from Honolulu, Hawaii to Kansai International Airport using a Japan Airlines Boeing 747 aircraft. The Civil Aviation Authority of Singapore (CAAS) officially joined the ASPIRE Partnership on 31 January 2010 in a signing ceremony conducted at the Singapore Air Show 2010. CAAS and Singapore Airlines conducted a flight demonstration (labeled ASPIRE 5) on 2 February 2010 from Los Angeles, California to Singapore via Narita (Tokyo) International Airport using a Singapore Airlines Boeing 747-400 aircraft.

8.32 With the addition of Japan and Singapore to the ASPIRE Partnership, the focus of the strategic plan initiatives can now be expanded to the North Pacific and Southeast Asian corridors. As members of ASPIRE, JCAB and CAAS will be developing regional ASPIRE work programs that will focus attention of the region and airlines on the ASPIRE initiatives, and seek to gain benefits and savings through additional regional work led by these new entities.

8.33 The 2010 ASPIRE Annual Report is under development and scheduled for a September publication. The report will include updates from the ASPIRE Partners on work program activities, as well as recent ASPIRE demonstration flights and plans for future enhancements.

8.34 Progress, performance and program updates by the ASPIRE Partnership are published on an annual basis in the ASPIRE Annual Report. The first ASPIRE Annual Report was published by the ASPIRE coordinators in August 2009. The report is available on the ASPIRE website at <http://www.aspire-green.com/>

8.35 The meeting is requested to note the information presented in this information paper. Any questions on ASPIRE can be routed to Mr. Kevin Chamness, FAA ASPIRE Coordinator at kevin.chamness@faa.gov.

**AGENDA ITEM 9: DEFICIENCIES IN THE AIR
NAVIGATION FIELD**

Agenda Item 9: Deficiencies in the Air Navigation Field

Air Navigation Deficiencies in the ATM/AIS/SAR Fields

9.1 The meeting was informed that under the TOR of APANPIRG, one of the primary objectives of the group is to identify and address specific deficiencies in the air navigation field. In meeting this objective, APANPIRG facilitates the development and implementation of action plans by States to resolve identified deficiencies, where necessary. Consequently, APANPIRG and its Sub-Groups are required to regularly review deficiencies in their respective fields and develop recommendations for remedial actions.

9.2 Recognizing the importance of safety in aviation the APANPIRG has been urging States to resolve their Air Navigation Deficiencies. In accordance with Conclusion 18/60 of APANPIRG/18 (September 2008, Bangkok), only 15 States and one Administration had provided the focal point contact person to coordinate with the Regional Office on matters relating to deficiencies. States that have not done so yet are required to designate the focal point of contact person to Regional office at the earliest.

Deficiencies in the ATM/AIS/SAR Fields

9.3 While reviewing the list, the following information was provided.

- i) China informed the meeting of the status of route R216.
- ii) It was noted that Indonesia and Singapore would provide an update on W36 at APANPIRG/21.
- iii) It was also noted that Cook Island had completed the draft of the new AIP but it needs to be confirmed in writing by the State. Similarly, States that had provided some updates were requested to send official confirmation in due course to the Regional Office.

9.4 The meeting reviewed the List of Deficiencies and updated the List based on information provided at the meeting as shown in **Appendix A** to the Report on Agenda Item 9.

9.5 It was noted that several States in the Pacific area had not taken firm corrective action to eliminate deficiencies, which had remained in the List for some time. The meeting recognized the need to urge States to take necessary action for implementation and also advise the regional office if difficulties are encountered in implementation so that the Regional Office with available resources could assist implementation and formulated the following draft conclusion.

Draft Conclusion SG 20/15 – Elimination of Air Navigation Deficiency

That States concerned

- a) be urged to take urgent actions to correct the deficiencies in the ATM/AIS/SAR fields identified in Appendix A to the Report on Agenda Item 4 of APANPIRG/20;

- b) notify details of the problems/difficulties to the Regional Office; and
- c) designate a point of contact in each State to deal with deficiencies and provide details to the Regional Office by 22 October 2010.

ATM/AIS/SAR/SG/20
Appendix A to the Report on Agenda Item 9

AIR NAVIGATION DEFICIENCIES IN THE ATM/AIS/SAR FIELDS IN THE ASIA/PACIFIC REGION

<i>(updated 10 September 2009 by APANPIRG/20, deletions and additions are the updates by ATM/AIS/SAR/SG/20)</i>								
Identification		Deficiencies			Corrective Action			
Requirements	States/facilities	Description	Date first reported	Remarks	Description	Executing body	Target date for completion	Priority for action**
<u>ATS Routes</u>								
Requirements of Part VIII, Table ATS 1 of the Air Navigation Plan	India/Nepal	A473 - Not implemented	16/3/99	A new proposal was submitted in mid-2003 by Nepal. This is being coordinated by Airport Authority of India (AAI) with defense authorities.	Nepal - propose to delete A473 from BANP. India submitted the proposal in March 2008. Nepal yet to submitted the proposal in January 2010. <u>The Regional Office has forwarded the proposal to the headquarter.</u>	Nepal <u>ICAO</u>	Item captured in Chapter 2 of the Route Catalogue. APANPIRG/19 (September 2008, Bangkok) updated re progress.	B
	Philippines/Thailand/ Viet Nam	G473 - Partially implemented	24/11/93	Co-ordination is in progress among States and ICAO.	ICAO - process the amendment the BANP. APAC 09/15 - ATS was approved in October 2010, thus being closed.	ICAO	Superseded by the re-structure of the South China Sea (SCS) route in 2001. Accordingly, the 15th Meeting of South East Asia ATS Coordination Group (SEACG/15, May 2008) was informed that Thailand and States concerned agreed with the deletion of G473. - <u>CLOSED</u>	B
	China	R216 - Not implemented	24/11/93	China advised current the routing B215 KUQA A460 REVKI to Alma Ata met the requirements for traffic from Urumqi to Alma Ata and requests deletion of R216 from BANP (14 Apr 03).	CAAC will coordinate with Kazakhstan to delete R216 from BANP.	China/Kazakhstan <u>ICAO</u>	Captured in Chapter 2 of the Route Catalogue.	B

ATM/AIS/SAR/SG/20
Appendix A to the Report on Agenda Item 9

AIR NAVIGATION DEFICIENCIES IN THE ATM/AIS/SAR FIELDS IN THE ASIA/PACIFIC REGION

Identification		Deficiencies			Corrective Action			
Requirements	States/facilities	Description	Date first reported	Remarks	Description	Executing body	Target date for completion	Priority for action**
	Cambodia/Lao-PDR/Thailand	R345 - Not implemented. Coordination process completed.	24/11/93		<u>APAC 09/15 - ATS was approved in October 2009, thus being closed.</u>	Cambodia/Lao PDR/ Thailand needs to submit joint amendment proposal to Regional Office	Item captured in Chapter 2 of the Route Catalogue. ----- <u>CLOSED</u>	B
	Indonesia	R459 - Implemented as W51 and W36	24/11/93	ICAO has requested Indonesia to implement as R459.	Indonesia, Singapore - consider implementation of the route with designator L504. Singapore advised ATM/AIS/SAR/SG/20 (July 2010, Singapore) that a <u>holistic sub-regional review of ATS routes were being undertaken by Indonesia and Singapore.</u>	Indonesia/Singapore	To be implemented as L504. Target implementation date TBD	B

ATM/AIS/SAR/SG/20
Appendix A to the Report on Agenda Item 9

AIR NAVIGATION DEFICIENCIES IN THE ATM/AIS/SAR FIELDS IN THE ASIA/PACIFIC REGION

Identification		Deficiencies			Corrective Action			
Requirements	States/facilities	Description	Date first reported	Remarks	Description	Executing body	Target date for completion	Priority for action**
<u>WGS-84</u>								
Requirements of Paragraph 3.6.4 of Annex 15	Bhutan	WGS-84 - Not implemented	2/7/1999	Data conversion completed, but not published		Bhutan	TBD	A
	China	WGS-84 - Partially implemented * implemented in the Sanya FIR as of 1 Nov 2001	2/7/1999	Differences to Annex 15 - <i>Aeronautical Information Services</i> are notified		China	China advised APANPIRG/19 (September 2008, Bangkok) that WGS 84 implementation is in progress and planned to be completed in 2010 for all existing airports. All new airports will use WGS84 immediately. <u>China confirmed to ATM/AIS/SAR/SG/20 that the implementation would be completed by the end of 2010.</u>	A
	DPR Korea	WGS-84 - Not implemented				DPR Korea	DPRK advised ATM/AIS/SAR/SG/18 verbally that WGS 84 implementation was completed. The Regional Office is waiting for a formal report.	A
	Kiribati	WGS-84 - Not implemented				Kiribati	TBD	A
	Nauru	WGS-84 - Not implemented		Conferring with consultant		Nauru	TBD	A
	Solomon Islands	WGS-84 - Not implemented				Solomon Islands	1999	A
	Vanuatu	WGS-84 - Implemented at main airports	2/7/1999			Vanuatu	1999	A

ATM/AIS/SAR/SG/20
Appendix A to the Report on Agenda Item 9

AIR NAVIGATION DEFICIENCIES IN THE ATM/AIS/SAR FIELDS IN THE ASIA/PACIFIC REGION

Identification		Deficiencies			Corrective Action			
Requirements	States/facilities	Description	Date first reported	Remarks	Description	Executing body	Target date for completion	Priority for action**
<u>Airspace Classification</u>								
Requirements of Paragraph 2.6 of Annex 11	China	Airspace Classification - Not implemented	7/7/99		Difference to Annex 11 is published in AIP, China.	China	APANPIRG/19 updated, implementation planned by end 2010.	A
	Kiribati	Airspace Classification - Not implemented	7/7/99			Kiribati	TBD	A
	Nauru	Airspace Classification - Not implemented	7/7/99			Nauru	TBD	A
	Papua New Guinea	Airspace Classification - Not implemented	7/7/99			Papua New Guinea	Project in place	A
	Solomon Islands	Airspace Classification - Not implemented	7/7/99			Solomon Islands	TBD	A
	Viet Nam	Airspace Classification - Not implemented	7/7/99			Viet Nam	APANPIRG/19 ATM/AIS/SAR/SG/19 updated, for firstfourth quarter 2009. ATM/AIS/SAR/SG/20 updated, for 2010.	A

ATM/AIS/SAR/SG/20
Appendix A to the Report on Agenda Item 9

AIR NAVIGATION DEFICIENCIES IN THE ATM/AIS/SAR FIELDS IN THE ASIA/PACIFIC REGION

Identification		Deficiencies			Corrective Action			
Requirements	States/facilities	Description	Date first reported	Remarks	Description	Executing body	Target date for completion	Priority for action**
<u>AIP Format</u>								
Requirements of Chapter 4 of Annex 15	Cook Islands	AIP Format - Not implemented	7/7/99			Cook Islands	ATM/AIS/SAR/G/16 (June 2006) updated - AIP COOK ISLANDS in new format in progress with assistance of New Zealand, effective date by the end of 2008	A
	Kiribati	AIP Format - Not implemented	7/7/99			Kiribati	ATM/AIS/SAR/SG/18 (June 2009) was advised AIP in draft stage	A
	Nauru	AIP Format - Not implemented	7/7/99			Nauru	ATM/AIS/SAR/SG/18 (June 2008) was advised work soon to start	A
	Papua New Guinea	AIP Format - Not implemented	7/7/99			Papua New Guinea	TBA	A

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AIR NAVIGATION DEFICIENCIES IN THE ATM/AIS/SAR FIELDS IN THE ASIA/PACIFIC REGION

Identification		Deficiencies			Corrective Action			
Requirements	States/facilities	Description	Date first reported	Remarks	Description	Executing body	Target date for completion	Priority for action**
<u>SAR capability</u>								
Requirements of Annex 12	Cook Islands	Annex 12 requirements not implemented. No agreements with adjacent States.	31/1/95		Cook Islands - implement Annex 12 requirements and co-ordinate LOA with adjacent States ICAO - assist to develop SAR capability and to co-ordinate with adjacent States	Cook Islands	2009. SAR agreement with New Zealand completed 2007.	U
	Maldives	Annex 12 requirements not implemented. No agreements with adjacent States.	24/4/97	SAR services and facilities provided (details to be confirmed). SAR agreements with neighbouring States under development	Maldives - implement Annex 12 requirements and co-ordinate LOA with adjacent States ICAO - assist to develop SAR capability and to co-ordinate with adjacent States	Maldives	2009	U

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Identification		Deficiencies			Corrective Action			
Requirements	States/facilities	Description	Date first reported	Remarks	Description	Executing body	Target date for completion	Priority for action**
<u>Carriage of ACAS II</u>								
Requirement of Chapter 6 of Annex 6	Bhutan	Annex 6 requirement not implemented.	26/8/05		Bhutan - implement Annex 6 as required.	Bhutan	TBD	U
	Cook Islands	Annex 6 requirement not implemented.	26/8/05		Cook Island - implement Annex 6 as required.	Cook Islands	TBD	U
	Kiribati	Annex 6 requirement not implemented.	26/8/05		Kiribati - implement Annex 6 as required.	Kiribati	TBD	U
	Marshall Islands	Annex 6 requirement not implemented.	26/8/05		Marshall Islands - implement Annex 6 as required.	Marshall Islands	TBD	U
	Micronesia	Annex 6 requirement not implemented.	26/8/05		Micronesia - implement Annex 6 as required.	Micronesia	TBD	U
	Nauru	Annex 6 requirement not implemented.	26/8/05		Nauru - implement Annex 6 as required.	Nauru	TBD	U
	Palau	Annex 6 requirement not implemented.	26/8/05		Palau - implement Annex 6 as required.	Palau	TBD	U
	Papua New Guinea	Annex 6 requirement not implemented.	26/8/05		Papua New Guinea - implement Annex 6 as required.	Papua New Guinea	TBD	U
	Solomon Islands	Annex 6 requirement not implemented.	26/8/05		Solomon Islands - implement Annex 6 as required.	Solomon Islands	TBD	U

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Identification		Deficiencies			Corrective Action			
Requirements	States/facilities	Description	Date first reported	Remarks	Description	Executing body	Target date for completion	Priority for action**
	Tonga	Annex 6 requirement not implemented.	26/8/05		Tonga - implement Annex 6 as required.	Tonga	Tonga-advised ATM/AIS/SAR/SG/19 verbally that ACAS II implementation was completed. The Regional Office is waiting for a formal report.	U
	Vanuatu	Annex 6 requirement not implemented.	26/8/05	Pressure altitude reporting transponder required in all airspace since 1/1/00.	Vanuatu - implement Annex 6 as required.	Vanuatu	TBD	U

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AIR NAVIGATION DEFICIENCIES IN THE ATM/AIS/SAR FIELDS IN THE ASIA/PACIFIC REGION

Identification		Deficiencies			Corrective Action			
Requirements	States/facilities	Description	Date first reported	Remarks	Description	Executing body	Target date for completion	Priority for action**
<u>Carriage of Pressure Altitude Reporting Transponder</u>								
Requirement of Chapter 6 of Annex 6	Bhutan	Annex 6 requirement not implemented.	26/8/05		Bhutan - implement Annex 6 as required.	Bhutan	TBD	U
	Cook Islands	Annex 6 requirement not implemented.	26/8/05		Cook Island - implement Annex 6 as required.	Cook Islands	TBD	U
	Kiribati	Annex 6 requirement not implemented.	26/8/05		Kiribati - implement Annex 6 as required.	Kiribati	TBD	U
	Marshall Islands	Annex 6 requirement not implemented.	26/8/05	ACAS II required.	Marshall Islands - implement Annex 6 as required.	Marshall Islands	TBD	U
	Micronesia	Annex 6 requirement not implemented.	26/8/05		Micronesia - implement Annex 6 as required.	Micronesia	TBD	U
	Nauru	Annex 6 requirement not implemented.	26/8/05		Nauru - implement Annex 6 as required.	Nauru	TBD	U
	Palau	Annex 6 requirement not implemented.	26/8/05		Palau - implement Annex 6 as required.	Palau	TBD	U
	Papua New Guinea	Annex 6 requirement not implemented.	26/8/05		Papua New Guinea - implement Annex 6 as required.	Papua New Guinea	TBD	U
	Solomon Islands	Annex 6 requirement not implemented.	26/8/05		Solomon Islands - implement Annex 6 as required.	Solomon Islands	TBD	U

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AIR NAVIGATION DEFICIENCIES IN THE ATM/AIS/SAR FIELDS IN THE ASIA/PACIFIC REGION

Identification		Deficiencies			Corrective Action			
Requirements	States/facilities	Description	Date first reported	Remarks	Description	Executing body	Target date for completion	Priority for action**
	Tonga	Annex 6 requirement not implemented.	26/8/05	ACAS II required.	Tonga - implement Annex 6 as required.	Tonga	Tonga-advised ATM/AIS/SAR/SG/19 verbally that the pressure altitude reporting transponder implementation was completed. The Regional Office is waiting for a formal report.	U

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AIR NAVIGATION DEFICIENCIES IN THE ATM/AIS/SAR FIELDS IN THE ASIA/PACIFIC REGION

Identification		Deficiencies			Corrective Action			
Requirements	States/facilities	Description	Date first reported	Remarks	Description	Executing body	Target date for completion	Priority for action**
<u>Non Provision of Safety-related Data</u>								
Requirement of Paragraph 3.3.4.1 of Annex 11	Bangladesh	Annex 11 requirement not implemented.	11/9/09		Bangladesh - provide the safety-related data as required. <u>Bangladesh advised ATM/AIS/SAR/SG/20 that the data were submitted to MAAR in 2008 and 2009. Thailand to confirm.</u>	Bangladesh		U
	Lao PDR	Annex 11 requirement not implemented.	11/9/09		Lao PDR - provide the safety-related data as required.	Lao PDR		U
	Papua New Guinea	Annex 11 requirement not implemented.	21/8/06		Papua New Guinea - provide the safety-related data as required.	Papua New Guinea	TBD	U

**AGENDA ITEM 10: UPDATE THE ATM/AIS/SAR
TASK LIST**

Agenda Item 10: Update the ATM/AIS/SAR Task List

ATM/AIS/SAR Task List

10.1 The meeting noted that APANPIRG/20 reviewed the Task List as updated by ATM/AIS/SAR/SG/19, agreed that the Task List suitably reflected the work programme of the Sub-Group, and adopted the list as the current work programme for ATM/AIS/SAR/SG of APANPIRG in its Decision 20/19. While reviewing the List amendments of editorial nature and consequential changes were made such as the words PBN Concept was amended to read PBN deleting concepts, AIS to read AIS/AIM in Item 18/6. Mongolia agreed to notify APANPIRG/21 of their RVSM implementation plan. In Item 18/14 the target date of implementation of new flight plan was amended to 2010. Item 18/11 was deleted as the Key Priority had already been included in PFFs.

10.2 The ATM/AIS/SAR/SG Task List was reviewed by the meeting and incorporated the above changes as in **Appendix A** to the Report on Agenda item 10. The meeting did not recognize the need to include any new work item for consideration by APANPIRG.

ATM/AIS/SAR Sub Group of APANPIRG — TASK LIST

The priorities assigned in the list have the following connotation:

A = Tasks of a high priority on which work should be expedited; and

B = Tasks of a medium priority on which work should be undertaken as soon as possible but not to the detriment of Priority “A” tasks.

(last updated 26 June, 2009 8 July 2010)

ACTION ITEM & PRIORITY	GLOBAL PLAN INITIATIVE	DESCRIPTION	TARGET DATE	RESPONSIBLE PARTY	STATUS	REMARKS
18/1 Priority A	GPI-5 Performance based navigation GPI- 8 Collaborative airspace design and management	<p><u>ATS Routes</u></p> <p>a) Identify ATS route requirements and monitor progress of route implementation in APAC Region</p> <p>b) Coordinate implementation of new ATS routes in accordance with the requirements of both States and airspace users</p> <p>c) Maintain Asia/Pacific ATS Route Catalogue on ICAO Regional Office website</p>	ONGOING	<p>States, Airspace Users, Regional Office</p> <p>Functional Responsibility: TRASAS CMRI BBACG FIT-BOB BOB-RHS/TF SEACG FIT-SEA SEA RR/TF</p> <p>ISPACG & FIT IPACG & FIT ASIOACG</p>	OPEN	ATS Routes included as standing agenda item on ATS Coordination Group agendas

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ACTION ITEM & PRIORITY	GLOBAL PLAN INITIATIVE	DESCRIPTION	TARGET DATE	RESPONSIBLE PARTY	STATUS	REMARKS
18/2 Priority A	GPI-5 Performance based navigation GPI-8 Collaborative airspace design and management	<p><u>ATS route implementation based on PBN Concepts</u></p> <p><i>South East Asia</i></p> <p>Conduct ATS route implementations in collaboration with stakeholders based on the Regional PBN Implementation Plan agreed by APANPIRG, to improve en-route airspace efficiency by means of reduced horizontal separation (lateral and longitudinal) based on PBN provisions.</p>	2010	States of South East Asia, Regional Office Functional Responsibility: SEACG, FIT-SEA, SEA RR/TF	OPEN	ATM/AIS/SAR/SG/19 established the SEA Route Review Task Force (SEA RR/TF)
18/3 Priority A	GPI-5 Performance based navigation GPI-8 Collaborative airspace design and management	<p><u>ATS route implementation based on PBN Concepts</u></p> <p><i>Bay of Bengal</i></p> <p>Conduct ATS route implementations in collaboration with stakeholders based on the Regional PBN Implementation Plan agreed by APANPIRG, to improve en-route airspace efficiency by means of reduced horizontal separation (lateral and longitudinal) based on PBN provisions.</p>	2010	States of Bay of Bengal, Regional Office Functional Responsibility: BBACG, FIT-BOB, BOB-RHS/TF	OPEN	BBACG/20 adopted 2010 as target for 50 NM longitudinal, established the Bay of Bengal Reduced Horizontal Separation Implementation Task Force (BOB-RHS/TF) <u>Revised target 2011 with the phased implementation</u>

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ACTION ITEM & PRIORITY	GLOBAL PLAN INITIATIVE	DESCRIPTION	TARGET DATE	RESPONSIBLE PARTY	STATUS	REMARKS
18/4 Priority A	GPI-5 Performance based navigation GPI-8 Collaborative airspace design and management	<p><u>ATS route implementation based on PBN Concepts</u></p> <p><i>Pacific Area (including North Pacific)</i></p> <p>Conduct ATS route implementations in collaboration with stakeholders based on the Regional PBN Implementation Plan agreed by APANPIRG, to improve en-route airspace efficiency by means of reduced horizontal separation (lateral and longitudinal) based on PBN provisions.</p>	2010	<p>States of North Pacific, Central and South Pacific, respectively, Regional Office</p> <p>Functional Responsibility: No ICAO working group established, informal groups doing this work, notably ISPACG, IPACG</p>	OPEN	<p>50 NM longitudinal implemented North Pacific in 2008</p> <p>30/30 NM (RNP4) implemented Honiara, Nauru, Brisbane, Nadia Auckland Oceanic FIRs in January 2005</p> <p>30/30 NM operational trials commenced Oakland FIR 2007, Fukuoka FIR from August 2008, Anchorage FIR estimate 2011</p>

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ACTION ITEM & PRIORITY	GLOBAL PLAN INITIATIVE	DESCRIPTION	TARGET DATE	RESPONSIBLE PARTY	STATUS	REMARKS
18/5 Priority A	GPI-5 Performance based navigation GPI-8 Collaborative airspace design and management GPI-10 Terminal area design and management, GPI-11 RNP and RNAV Standard Instrument Departures (SIDs) and Standard Terminal Arrivals (STARs) GPI-12 Flight Management System (FMS) – based arrival procedures	<p><u>Terminal Area implementation based on PBN-Concept</u></p> <p>Implement ICAO Performance Based Navigation (PBN) provisions for terminal area operations in collaboration with stakeholders based on the Regional PBN Implementation Plan agreed by APANPIRG, to improve terminal area efficiency by use of advanced navigation specifications for SIDs, STARs and instrument approach procedures.</p>	<p>In accordance with Regional & State PBN Plans for 2008-2012 and 2013-2016</p>	<p>States, Users, Regional Office</p> <p>Functional Responsibility: PBN/TF</p>	<p>OPEN</p>	

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ACTION ITEM & PRIORITY	GLOBAL PLAN INITIATIVE	DESCRIPTION	TARGET DATE	RESPONSIBLE PARTY	STATUS	REMARKS
18/8 Priority A	None applicable	<p><u>Identify and manage Deficiencies in the ATM, AIS and SAR fields</u></p> <p>a) Develop and maintain Deficiencies list, b) Identify unimplemented items in the BANP, c) Assist States to correct deficiencies, d) Promote timely resolution of safety-critical items identified by APANPIRG</p>	ONGOING	<p>States, Users, International Organisations, Regional Office, ATM/AIS/SAR/SG APANPIRG</p> <p>Functional Responsibility: No specific working group established, all parties have responsibilities in this area.</p>	OPEN	ALLPIRG/5 (March 2006) raised Conclusion 5/15 in respect of “Last Resort” action to resolve deficiencies
18/10 Priority A	None applicable	<p><u>ATM Contingency Planning</u></p> <p>Prepare ATM Contingency Plans based on model (Indonesia) adopted by APANPIRG/17. Coordinate with neighbouring States to prepare plans</p>	2010	<p>States, Regional Office,</p> <p>Functional Responsibility: No working group established, work item included on agenda of ATS Coordination Groups.</p>	OPEN	Send copies of ATM Contingency Plans to Regional Office

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ACTION ITEM & PRIORITY	GLOBAL PLAN INITIATIVE	DESCRIPTION	TARGET DATE	RESPONSIBLE PARTY	STATUS	REMARKS
18/6 Priority B	GPI-18 Aeronautical information	<p><u>Implement AIS enhancements</u></p> <p>a) Develop AIS implementations plans for introduction of AIS quality systems and AIS databases and consider issues arising from the use of public internet for AIS;</p> <p>b) Study means of aeronautical data management by civil aviation authorities and/or ATS providers in other regions including the aeronautical information exchange model (AIXM) and the electronic AIP (eAIP), and consider the feasibility in making use of these methods/models in the Asia/Pacific Region;</p> <p>c) Develop Regional AIS Automation Plan, training material and conduct workshops on the Guidance Manual for AIS in the Asia/Pacific Region</p>	2012	<p>States, Users, Regional Office</p> <p>Functional Responsibility: AAITF</p>	<p>OPEN CLOSED (Refer Action Item 20/1)</p>	<p>AIS/AIM Implementation Task Force (AAITF) active since March 2006</p>
18/9 Priority B	None applicable	<p><u>SAR Matters</u></p> <p>Assist appropriate provision of SAR facilities, services and procedures within the Asia Pacific Region by:</p> <p>a) Periodic review of SAR facilities, services and procedures in the region,</p> <p>b) Encourage States to delegate or negotiate SAR services,</p> <p>c) Asia/Pacific “SAR Capability Matrix” be kept up to date and distributed to States for information and action.,</p> <p>d) Asia/Pacific “Register of SAR Agreements” be kept up to date and distributed to States for information and action</p>	ONGOING	<p>States, Regional Office, ATM/AIS/SAR/SG APANPIRG</p>	OPEN	<p>States to update the ATM/AIS/SAR/SG each year to permit the periodic update of the SAR Capability Matrix and Register of SAR Agreements.</p>

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ACTION ITEM & PRIORITY	GLOBAL PLAN INITIATIVE	DESCRIPTION	TARGET DATE	RESPONSIBLE PARTY	STATUS	REMARKS
18/11 Priority B	As appropriate	<p><u>APANPIRG Key Priorities</u></p> <p>Regularly review APANPIRG List of Key Priorities for implementation of CNS/ATM systems for the Asia/Pacific region, identify new items as required, encourage and monitor implementation</p>	ONGOING	States, Regional Office, Airspace Users, International Organisations ATM/AIS/SAR/SG	OPEN <u>CLOSED</u>	<p>ATM/AIS/SAR/SG/19 recommended that the key priority items be included in Performance Framework Forms (PFFs) and the Key Priorities List be discontinued.</p> <p>With the adoption of the Performance Framework Form, <u>APANPIRG/20 agreed that the Key Priority List would be discontinued, with immediate effect.</u></p>
18/14 Priority A	<p>GPI-5 Performance based navigation</p> <p>GPI-9 Situational awareness</p> <p>GPI-11 RNP and RNAV SIDs and STARs</p> <p>GPI-17 Implementation of data link applications</p>	<p><u>Amendments to ICAO Flight Plan</u></p> <p>Review Amendment 1 to the Fifteenth Edition of the PANS ATM (Doc 4444, effective 15 November 2012) to identify implementation complexities and consequent regional implementation plans and strategies arising from the adoption of amended PANS ATM provisions relating to the ICAO Flight Plan and associated ATS Message formats.</p>	2010	<p>States, Regional Office, Airspace Users, International Organisations ATM/AIS/SAR/SG</p> <p>Functional Responsibility: FPL&AM/TF</p>	OPEN <u>CLOSED</u> (Refer to <u>Action Item 20/2</u>)	<p>FPL&AM TF/1 drafted the <i>Interim Strategy for the Implementation of New ICAO Flight Plan Format and supporting ATS Messages</i></p> <p>ATM/AIS/SAR/SG/19 recommended that APANPIRG adopt the Interim Strategy</p>

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ACTION ITEM & PRIORITY	GLOBAL PLAN INITIATIVE	DESCRIPTION	TARGET DATE	RESPONSIBLE PARTY	STATUS	REMARKS
<p>20/1 Priority B</p>	<p><u>GPI-18</u> <u>Aeronautical information</u></p>	<p><u>Enhanced Provision of AIS/AIM</u></p> <p>a) <u>Implement the enhanced provisions for AIM becoming available through the work of the AIS-AIM Study Group;</u></p> <p>b) <u>Monitor implementation of the regional performance framework performance objectives contained in the Performance Framework Form (PFF);</u></p> <p>c) <u>Enable future AIM functions to address the new requirements that will be needed to implement the Global Air Traffic Management Operational Concept in a net centric information environment</u></p>	<p>2016</p>	<p><u>States, Users, Regional Office</u></p> <p><u>Functional Responsibility:</u> <u>AAITF</u></p>	<p>OPEN</p>	<p><u>AIS/AIM Implementation Task Force (AAITF) active since March 2006</u></p>
<p>20/2 Priority A</p>	<p><u>GPI-5</u> <u>Performance based navigation</u></p> <p><u>GPI-9</u> <u>Situational awareness</u></p> <p><u>GPI-11 RNP and RNAV SIDs and STARs</u></p> <p><u>GPI-17</u> <u>Implementation of data link applications</u></p>	<p><u>New ICAO Flight Plan Form</u></p> <p><u>Implement Amendment 1 to the Fifteenth Edition of the Procedures for Air Navigation Services – Air Traffic Services (PANS-ATM, Doc 4444, effective 15 November 2012) relating to the ICAO Flight Plan and associated ATS Message formats.</u></p>	<p>2012</p>	<p><u>States, Regional Office, Airspace Users, International Organisations</u> <u>ATM/AIS/SAR/SG</u></p> <p><u>Functional Responsibility:</u> <u>FPL&AM/TF</u></p>	<p>OPEN</p>	<p><u>FPL&AM/TF/1 drafted the Interim Strategy for the Implementation of New ICAO Flight Plan Format and supporting ATS Messages</u></p> <p><u>APANPIRG/20 (September 2009, Bangkok) adopted the Interim Strategy.</u></p> <p><u>FPL&AM/TF/2 drafted the Asia/Pacific Guidance Material for the Implementation of Amendment 1 to Procedures for Air Navigation Services – Air Traffic Management (PANS-ATM, Doc 4444), 15th Edition.</u></p>

AGENDA ITEM 11: ANY OTHER BUSINESS

Agenda Item 11: Any Other Business

Optimization of Air Routes in the Hong Kong FIR

11.1 The meeting was informed by Hong Kong, China that on 22 October 2009, Standard Instrument Arrivals (STARs) for aircraft from the west and the north of Hong Kong was revised, and shortened. The implementation of those revised STARs aimed at enhancing operating efficiency of the air route system in the Hong Kong FIR. After the adjustment, flights arriving at Hong Kong International Airport from South East Asia Mainland China, North America and Europe via the new routes were able to save up to approximately 210 km, or 14 minutes in terms of flight time.

11.2 Based on the traffic figures recorded in the first quarter of 2009, it is estimated that the new routes will enable annual savings of arrival aircraft by more than 10 million km in journey, or 12,000 hours in flight time, reduction in CO₂ emission from aircraft, contribute to the enhancement in ATC operation, minimize crossing and to provide uninterrupted climb and descent as far as practicable.

11.3 Airline operators began to schedule significantly more flights between Bangkok and Guangzhou transiting the Hong Kong FIR due to operational benefits. The CAD will continue to work closely with the aviation community to further enhance the air route system in the Hong Kong FIR through the development and progressive application of more advanced aviation technologies in order to enhance and improve safety and efficiency of flights and ATC operations in the Hong Kong FIR.

11.4 The meeting noted the above information and appreciated the work done by Hong Kong, China to enhance operational efficiency.

Lack of Adequate Resources in the ATM Field at the Regional Office

11.5 The meeting expressed the view that due to the lack of adequate number of ATM Regional Officers at the Regional Office, the ATM-related programmes could be adversely affected. States wished to pursue the work of contingency arrangement by establishing a Task Force which was not possible due to staff shortage at the Regional Office as recognized by the meeting. India, Japan and Thailand recognized the need for additional Regional Officer to be made available to maintain the continuity of the work provided by the Regional Office.

11.6 The Chairman also acknowledged the problem as only one Regional Officer was dealing with the regular programme work and serving all the Task Forces and Groups. The meeting requested ICAO to resolve this concern with priority and ensure that at least two regular programme officers are available to handle the ATM duties at the Regional Office.

**AGENDA ITEM 12: DATE AND VENUE FOR NEXT
MEETING**

Agenda Item 12: Date and venue for next meeting

12.1 The meeting agreed tentatively that the next ATM/AIS/SAR Sub-Group meeting would be held over 5 working days from 27 June – 1 July 2011 at ICAO Regional Office Bangkok. The Regional Office would make appropriate arrangements and advise parties accordingly.

Closing remarks

12.2 In closing the meeting, the Chairman recalled that, amongst other things, there had been very keen exchanges of ideas on the wide range of subject including strategy to prepare for transition to the ICAO NEW FPL format, the ways to apply the ICAO performance-based approach to air navigation planning and implementation, how to fulfill airspace safety assessment requirements and user expectations for PBN implementation, the arrangement for harmonized State contingency planning, etc.. The Chairman thanked Japan for carrying out the role of CRA-Japan for SCS at no cost. He thanked Singapore for their offer of assistance to the region for accepting to take up the role of CRA-SEA after March 2011. He also thanked Singapore for the warm hospitality in hosting the meeting.

12.3 The Chairman thanked all participants for their efforts during the week and urged all to continue with the work programmes agreed during the meeting. He thanked the Secretary and the members of the ICAO and local secretariat. He wished everyone a safe journey home and looked forward to meeting again next year.

— END —

ATTACHMENTS TO THE REPORT

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	Name	Title/Organization	TEL/FAX/E-MAIL
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LIST OF WORKING AND INFORMATION PAPERS

WORKING PAPERS

WP/No.	Agenda Item	Subject	Presented by
1	1	Provisional Agenda	Secretariat
2	2	Review and Update Conclusions and Decisions of APANPIRG	Secretariat
3	2	APANPIRG/20 Report and ANC/Council Actions	Secretariat
4	3	Review of Regional Performance Objectives, Performance Framework Forms and Metrics	Secretariat
5	4, 10	ATM/AIS/SAR Task List	Secretariat
6	4	Second Meeting of ICAO Flight Plan and ATS Messages Implementation Task Force	Secretariat
7	4	Search and Rescue Matters	Secretariat
8	4	Summary Report of the Southeast Asia Route Review Task Force (SEA-RR/TF) First and Second Meetings	Secretariat
9	4	Global Operational Data Link Document (GOLD)	United States
10	4	Outcomes of the Fifth Meeting of the AIS-AIM Implementation Task Force	Secretariat
11	5	Update on the Development of ICAO EUR/NAT Regional Database for the Five-Letter Name-Codes Allocations	Secretariat
12	5	Outcomes of the 46th DGCA Conference	Secretariat
13	6	Summary Report of the 12th Meeting of the FANS Implementation Team (FIT) for the Bay of Bengal	Secretariat
14	6	Summary Report of the Tenth Meeting of FANS Implementation Team for South-East Asia (FIT-SEA/10)	Secretariat
15	6	Review of Outcomes of the 17 th Meeting of South-East Asia ATS Coordination Group (SEACG/17)	Secretariat
16	6	Terms of Reference of the South-East Asia ATS Coordination Group (SEACG)	Hong Kong, China
17	6	Establishment and Operation of the CRA for Southeast Asia ADS/CPDLC Operations	Secretariat
18	6	Future of the ATFM Task Force	Secretariat
19	5	AIS Update from the Second Meeting of ICAO AIS-AIM Study Group	Secretariat
20	6	Summary Report of the first three meetings of the Bay of Bengal Reduced Horizontal Separation Task Force	Secretariat

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WP/No.	Agenda Item	Subject	Presented by
21	7	Regional RVSM and Horizontal Safety Performance	Secretariat
22	7	Report on Activities of the RASMAG	Secretariat
23	8	Air Traffic Management (ATFM) Survey for Asia/Pacific	Secretariat
24	8	First Meeting of the MET/ATM Task Force	Secretariat
25	8	Review MET Parts of BANP and FASID, and VOLMET Requirements of Asia/Pacific FASID Tables	Secretariat
26	9	List of Air Navigation Deficiencies in the ATM/AIS/SAR Fields	Secretariat
27	5	ICAO Asia and Pacific Seamless ATM Workshop	Japan United States
28	6	Central Reporting Agencies	IATA
29	8	Airspace Definitions in Asia Pacific	IATA
30	5	PBN/TF/7 Working Paper for Review and Comment	IATA
31	5	BOBCAT Activities Update since BOB-RHS/TF/2	Thailand
32	5	AEROTHAI Involvement in ICAO Regional ATM Initiatives	Thailand
33	5	PBN State Plan Harmonization Report	IATA
34	4	Proposed Changes to the Operational Letter of Agreement Between States for the Monitoring of Aircraft Navigation Errors in the South China Sea Area	Singapore
35	4	Action for an effective ATM Contingency Plan for the Region	Singapore
36	5	Global Air Traffic Service Inter-Facility Data Communications (Aidc) Interface Control Document (ICD)	United States
37	8	Report of the Performance Based Navigation (PBN) Task Force	Secretariat

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IP/No.	Agenda Item	Subject	Presented by
1	–	List of Tentative Working and Information Papers	Secretariat
2	–	Terms of Reference of ATM/AIS/SAR Sub-Group	Secretariat
3	3	Global Performance-Based Approach and Measurement	Secretariat
4	5	SID/STAR Level Revisions	Secretariat
5	5	Flight Plan Implementation Tracking System (FITS)	Secretariat
6	5	Review of the Asia/Pacific ATS Route Catalogue	Secretariat

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IP/No.	Agenda Item	Subject	Presented by
7	8	Adoption of Amendment 36 to Annex 15 and Amendment 56 to Annex 4	Secretariat
8	8	Improvement of the State Letter Consultation Process on Amendment Proposals to SARPs and PANS	Secretariat
9	4	Volcanic Ash Developments	Secretariat
10	5	Provision of electronic AIP (eAIP)	Japan
11	11	Optimization of Air Routes in the Hong Kong Flight Information Region	Hong Kong, China
12	8	AIS to AIM Activities in Mongolia	Mongolia
13	6	31 st And 32 nd Meeting of the Informal Pacific Air Traffic Control (ATC) Coordinating Group (IPACG/31 & IPACG/32)	United States Japan
14	6	Report on the outcomes of the 5 th Meeting of the Arabian Sea/Indian Ocean ATS Coordination Group (ASIOACG/5)	Secretariat
15	4	Traffic Movements and GNE Reports June 2009 to May 2010 on the Six Designated Monitored Areas in the South China Sea	Singapore
16	11	Report on the Result of the ADS/CPDLC Operational Trial and the Proposed Plan for Transition from the Trial to the Operational Implementation in the Ujung Pandang FIR	Indonesia
17	5	Federal Aviation Volcanic Ash Response	United States
18	8	Status of the Aeronautical Information Management Digital NOTAM Program	United States
19	8	Status of the Development And Implementation Of Aeronautical Information Management Digital NOTAM Program	United States
20	8	Status Of The Development And Implementation of ADS-C Climb/Descend Procedures	United States
21	8	Update on Activities of the Asia And Pacific Initiative to Reduce Emissions (ASPIRE)	United States
22	5	Report on the development of a ICAO global air traffic flow management manual	United States
23	6	24th Meeting of the Informal South Pacific ATS Coordinating Group (ISPACG/24)	United States

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