



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

**REPORT OF  
THE EIGHTH WORKING GROUP MEETING OF  
AERONAUTICAL TELECOMMUNICATION NETWORK (ATN)  
IMPLEMENTATION CO-ORDINATION  
GROUP OF APANPIRG  
(ATNICG WG/8)**

**Christchurch, New Zealand  
28 September to 1 October 2010**

The views expressed in this Report should be taken as those of ATNICG WG/8 Meeting and not of the Organization. This report will be provided as baseline for discussion at ATNICG WG/9 and will be submitted to the Sixth Meeting of ATNICG for further action.

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## **1. OPENING OF THE MEETING**

1.1 The Eighth Working Group Meeting of the Aeronautical Telecommunication Network (ATN) Implementation Co-ordination Group (ATNICG WG/8) of APANPIRG was held at Crown Plaza Hotel, Christchurch, New Zealand, from 28 September to 1 October 2010. The Meeting was hosted by Airways Corporation of New Zealand, Ltd.

1.2 The Meeting was inaugurated by Mr. Ashley Smout, Chief Executive Officer, Airways New Zealand and Chairman of CANSO. In his inaugural address, Mr. Smout highlighted the requirement of increasing the capacity of airspace while maintaining if not improving upon the current level of safety of operations. He also reminded the meeting about ICAO's role in the overall development of civil aviation. Mr. Hoang Tran, Chairman of the ATNICG chaired the meeting. Highlighting the tasks to be progressed by the meeting, Mr. Hoang Tran informed the meeting about the developments that are taking place in the ATN implementation scenario. He also reminded the meeting about the immediate tasks that are required to be taken up to comply with APANPIRG's Conclusion to implement BBIS MTA within the prescribed timeline.

## **2. ATTENDANCE**

2.1 The Meeting was attended by 29 participants from 11 States (Hong Kong China, Fiji Islands, India, Indonesia, Japan, Malaysia, New Zealand, Philippines, Singapore, USA, Viet Nam and 1 Industry). The List of Participants is provided in **Attachment 1** to this Report.

## **3. OFFICERS AND SECRETARIAT**

3.1 Mr. Hoang Tran, AMHS Programme Manager, FAA USA chaired the meeting.

3.2 Mr. Sujan Kumar Saraswati, Regional Officer CNS, ICAO Asia and Pacific Regional Office acted as Secretary for the meeting.

## **4. ORGANIZATION, WORKING ARRANGEMENT, LANGUAGE AND DOCUMENTATION**

4.1 The ATNICG WG/8 met as a single body. The working language for the meeting was English inclusive of all documentation and this Report. List of Working and Information Papers is placed in **Attachment 2** to this Report.

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The meeting started with the introduction of the participants. Tentative agenda, circulated with the invitation was reviewed and was adopted with a minor correction. It was informed that though for some of the Agenda Items, no input in the form of Working/Information Paper was received but it was considered necessary to review the issues involved in the agenda.

**Agenda Item 1: Review the outcomes of CNS/MET SG/14 and APANPIRG/21 meetings on relevant agenda items**

1.1 Presenting WP/5, Secretariat informed the meeting about the outcomes of the CNS/MET SG/14 and APANPIRG/21 meetings. It was informed that the Fourteenth Meeting of CNS/MET Sub Group of APANPIRG was hosted by Directorate General of Civil Aviation, Indonesia from 19 to 22 July 2010 in Jakarta, Indonesia. Twenty First Meeting of APANPIRG, held from 6 to 10 September 2010 reviewed the draft Conclusions/Decisions developed by ATNICG/5 and recommended by CNS/MET SG/14 and adopted them. It was informed that Doc 9896, the document on ATN using IPS had been delivered as the First Edition in June 2010. In response to a query, it was clarified that the issues concerning use of VoIP for air-ground communication, keeping track of RFCs and IPv6 address structure related to Doc 9896 raised in ATNICG/5 meeting will now be forwarded to ICAO HQ to meet the requirements of APANPIRG Conclusion 21/17.

1.2 Meeting was also informed that APANPIRG had adopted Conclusions urging Singapore, Pakistan and India to take initiative in transiting to AMHS connectivity. Amendment to Asia/Pacific ATN/AMHS Implementation Strategy, circulation of forms for collecting AMC data from the States, adoption of IPv4 addressing plan developed in CAR/SAM region, amendment of regional documents, mechanism for reporting PDRs to ACP – M and AFTN routing change between Fukuoka and Moscow, Russia were also adopted by APANPIRG in its Twenty First meeting.

1.3 It was informed that NAT SPG had agreed to the development of Pan-Regional ICAO guidance material for oceanic AIDC ICD based on the current AIDC ICD (Version 3.0) adopted by APANPIRG and the latest AIDC ICD used in the NAT Region. While reviewing the NAT SPG global ICD draft, APANPIRG was of the view that the Asia/Pacific AIDC ICD was for the oceanic as well as terrestrial airspace and hence the Pan-regional ICD should be named 'Pan-Regional ICD for AIDC' and used for both oceanic and terrestrial airspace. Meeting was also informed about ATS Inter-facility Data Communication (AIDC) Implementation Seminar to be held on 12 and 13 October 2010 in Bangkok. Meeting agreed that larger participation in the Seminar will help in quick implementation of AIDC in the region. It was also informed that some States like Fiji, Japan, Korea, USA and New Zealand etc. had already implemented AIDC and experts from some of these States will share their experiences in implementation and will exchange information on AIDC implementation in the Seminar.

1.4 USA proposed Application based solutions to mitigate the problem of network incompatibilities. Usage of Extensible Markup Language (XML), public internet for accessing ATS Messaging Management Center (AMC), the World Area Forecast System (WAFS) Internet File Server, Virtual Private Network public internet etc. are some of the diverse systems which are proposed to be used in the future.

**Agenda Item 2: Review of ATNICG/5 report and Task List**

2.1 Through WP/19, Secretariat reviewed the outcomes of the Fifth Meeting of ATNICG held from 31 May to 4 June 2010 in Kuala Lumpur, Malaysia. The meeting was hosted by the Department of Civil Aviation, Malaysia. ATNICG, attended by 56 participants developed 56 Decisions/draft Decisions/draft Conclusions for the recommendations/consideration of CNS/MET SG/APANPIRG.

2.1.1 Meeting reviewed 15 Action Items developed in the earlier meetings and progress on these was reported as follows:

<b>Action Item</b>	<b>Status</b>	<b>Remarks</b>
1	Completed	Implementation Planner adopted by APANPIRG
2	Completed	USA/FAA will represent APAC region for ACP WG-M and will track PDRs
3	Continuing	Revised Strategy will be reviewed to ensure issues like justification, security etc. are included
4	Completed	Recommended addition of Test Procedures in the AMHS manual adopted by APANPIRG
5	Continuing	Coordinate with ACP WG-I/M for IPv6 addressing plan and track the developments
6	Completed	Recommended issues addressed in the revised Strategy adopted by APANPIRG
7	On-going	Planner adopted by APANPIRG, but needs to be updated periodically
8	Continuing	IPv4 address plan adopted by APANPIRG as an interim measure. A guidance document needs to be developed on IPv4 addressing and Lima needs to be informed about the adoption of address plan
9	Closed	In view of action item 8
10	Continuing	USA-UK AMHS service delayed, Report to be presented in 2011 (ATNICG/6)
11	Continuing	TOR reviewed, operational procedure included. No necessity felt to revise TOR at this stage
12	Continuing	Documentation Tree presented by USA. To be finalized
13	Completed	Regional Implementation Strategy updated
14	Continuing	Hong Kong China to take up the proposal of route structure change in future
15	Completed	Amended FASID Tables 1B, 1C and 1E published. States requested to review changes and advise change

The Action Items remaining to be completed are as follows:

- Action Item 3: Meeting was of the view that all the issues requiring justification in ATN implementation like security of the network etc. should be adequately reflected in the strategy.*
- Action Item 5: APANPIRG should acquire a regional address prefix of a certain length for IPv6 address block and incase it does not become possible to acquire the address prefix, then region should self-designate a prefix which is unlikely to be allocated by IANA in near future.*
- Action Item 7: States are required to provide implementation status to Hong Kong China, so that the planner could be updated. This action item should be read along with Action Item 1.*
- Action Item 8: Asia/Pacific Region 1 adopted IPv4 address assignment proposed by the CAR/SAM region, if the States want to use IPv4 network.*
- Action Item 10: USA assured to present a paper on ATN/OSI interface with IPS when it completes the MTA interface with UK in 2010 using RFC 1006 over TCP/IP network.*
- Action Item 11: It was agreed that inclusion of operational issues in the Terms of Reference will be taken up for consideration in the next Working Group Meeting.*
- Action Item 12: Task Leads will inform Mr. V. Patel (FAA) about the status of relevant documents, so that the currency of these could be ensured*
- Action Item 14: It was decided that the States concerned with the change of ATN route structure as proposed by Hong Kong China that is Hong Kong China, Australia, Fiji etc. should consider the change proposal and the proposal should be reviewed in the next ATNICG meeting.*

2.1.2 Discussing the issues related to incompatibility of AMHS versions implemented in Japan and ROK, it was informed that compatibility between IPM84 (Version 2) with some PDRs and IPM88 (Version 3) was assessed in USA. It was however stressed that Japan should confirm the compatibility at the earliest as the same issue was also relevant for Japan's connectivity with China (Hong Kong and Beijing), Australia, Singapore, Taiwan, and US and would also affect the network performance of the whole region. Following Action Item, hence was developed by the meeting

*Action Item 16: Japan should address the issues related to incompatibility of AMHS versions installed in Japan with the versions installed in the neighboring States as it affects the overall network connectivity and hence the implementation of AMHS in the whole region.*

2.1.3 It was informed that Japan may not complete the dual stack implementation by 2012 as committed to earlier and the implementation may be delayed. While reviewing APANPIRG Conclusion urging Singapore, Pakistan and India to take initiative in transiting to AMHS, India informed about its readiness to commence the trials with Oman. Singapore informed the meeting that connectivity with Bahrain will be taken up in the first quarter of 2011 after the connectivity with UK has been established. It was also informed that operation between Singapore and Mumbai is likely to be started in November this year.

2.1.4 While reviewing the Security-related issues, it was clarified that the security environment also included IP Subnet. It was informed that the first step in transition will be to phase out X.25 by migrating ATN router connections to IP sub-network over point-to-point links using the IP SNDCF, then to combine the point-to-point links into a fully-meshed IPS network and introduce security measures at that time. It was agreed that the region should start with the basic security measures and develop them after gaining some experience.

**Agenda Item 3: Planning the use of XML and SWIM related standards in AMHS environment**

3.1 The US presented Working Paper 11 on transmission of MET Data Using Web Services over AMHS. This paper first provides background information on Web Services and the use of SOAP Messaging. This paper next describes the WXXM Weather Data Model and provides an example METAR message using WXXM. This paper finally describes how SOAP messaging could be performed over AMHS by describing the possibility of a SOAP binding to X.400.

3.2 The US representative was assigned an ACTION ITEM to prepare a paper for the MET group. The paper is to describe what communication services could be used to carry MET data and to inquire if the MET group had yet considered what protocols and data conventions would be used, e.g., W3C/OASIS Web Services standards, OGC WCS and WFS standards, WXXM standards etc.

*Action Item 17: USA to prepare a Working Paper for presentation to CNS/MET SG-15 through ATNICG/6 addressing the requirement of standards for using XML over ATN for OPMET data.*

**Agenda Item 4: Review and adopt APANPIRG AMHS IPS Implementation Strategy**

4.1 Strategy developed in ATNICG/5 meeting and adopted by APANPIRG/21 on the recommendation of CNS/MET SG/14 was reviewed. It was agreed that the Strategy adequately covers implementation of ATN over IPS. It was hence concluded that no change is required to be made in the Strategy at this stage.

**Agenda Item 5: Review Global Internet Protocol Suite (IPS) Implementation Plan**

5.1 Progress of global ATN over IPS implementation was reviewed. Meeting was generally informed about the status of implementation in CAR/SAM and EUR/NAT regions. Within the region implementation status of ATN over IPS is informed as below:

Circuit	Status
USA/UK	Early 2011
Singapore/UK Trial	1 <sup>st</sup> Quarter 2011
Singapore/Bahrain Trial	1 <sup>st</sup> Quarter 2011

Information on other important inter-regional circuits like Australia/South Africa, Japan/Russia etc. was not immediately available.

### **Agenda Item 6: Develop IPS Implementation Schedule**

6.1 The meeting was reminded that replacing X.25 with IP had been agreed in the regional strategy adopted for the implementation of ATN over IPS, as the first step and as per the information provided in FASID Table 1B, most of the circuits in the region were still operating on X.25. The necessity hence was felt of emphasizing the replacement of X.25 with IP. Following sequence was generally agreed to in transiting towards IPS

Phase out X.25 → Point to Point IPS → IPS Network within region

Following action item was developed by the meeting to meet the objective of moving to meshed IPS network:

*Action Item 18: Decide about the sunset for X.25. It was agreed that a strategy to phase out X.25 network protocol and implementation of IP network underlining the IP subnet and security approach as well as dual stack application will be analyzed at the next Working Group. The Chairman will develop a WP with input from Mark Brown of Japan to be presented at the next meeting.*

### **Agenda Item 7: Develop IP routing policy, review addressing plan**

7.1 Option of using IPv4 over X.25 was discussed, particularly with reference to cost involved in changing the media to IP.

7.2 Japan, through Information Paper 2, presented the proposed address assignment conventions for use in the Asia/Pacific regional ATN network. The proposal was originally made in the Fifth meeting of the ATNICG in Kuala Lumpur. USA informed the meeting that CAR/SAM and EUROCONTROL are proposing to use similar address plan for IPv6. USA also proposed that the three bits immediately after /32 bit address can be designated for identifying the regions and then remaining bits can be assigned for identifying States/Organizations etc.

7.3 The US presented Information Paper 5, an initial draft version of ASIA/PACIFIC IP Routing Policy. This policy is consistent with the Asia/Pacific IDRP Routing Policy. While presenting the paper, the US described how BGP-4 and IDRP are similar. An architectural difference is that IDRP has a built-in transport protocol while BGP uses TCP. The US went on to explain that the levels of route aggregation and associated policies for route acceptance and route distribution would be the same as for IDRP. The primary difference is that BGP-4 would advertise prefixes based on the IPv6 addressing plan rather than the NSAP addressing plan. The US noted that in its current form the plan is only for IPv6 and not for IPv4. The Asia/Pac IPv4 addressing plan is based on the use of private addresses because of the depletion of the IPv4 address space. The use of private address in IPv4 is recommended but it cannot be guaranteed. If a particular State or organization obtains a static IPv4 address from an ISP, it is not likely that it will be the one identified in the IPv4 addressing plan. The US representative also recommended that the draft IPv6 addressing plan be modified to use the same address format as EUROCONTROL. It was noted that the EUROCONTROL plan had reserved 3 bits after the RIR assigned prefix; therefore as mentioned above, these three bits could be used to indicate the ICAO regional office.

7.4 The US representative accepted an ACTION ITEM to describe proposed addressing approach in a working paper which would be presented at the next ICAO ACP Working Group I meeting.

*Action Item 19: USA to develop an IPv6 addressing approach for presentation to the next ACP Working Group – I meeting.*

**Agenda Item 8: Discuss security related issues – Guidance document, SWIM Security, IPS security**

8.1 Japan presented Considerations for Introducing Security into the Asia/Pacific Regional Ground ATN/IPS Network through Working Paper 8. Same paper was presented to the ATNICG in its Fifth meeting. Paper generally discussed the security environment and the resources that should be protected and informs about the means available for protecting them. Various tools available for ensuring security like the key management etc. were also discussed in the paper. Paper recommended that the Asia/Pacific region should create a plan and policies for introducing security in the ATN/IPS ground network, with policies to secure the network links and routing information established as a matter of priority, before implementation of IPS begins.

8.2 The meeting considered the options of developing a new high level regional policy or enhancing the policy already approved by APANPIRG. It was felt that issues like disaster recovery etc. need to be included. In Europe, PENS is being implemented and in USA FTI has been implemented, but in Asia/Pacific regions there is no arrangement like that. Hence it needs to be decided whether there is a need to go for routed IP network infrastructure in the region or the existing arrangement of point-to-point contacts will be adequate. It was also felt that over security may be counter productive and hence it was proposed that the security should be optimized taking into account the operating environment. In any case, the problems will appear, once the transition from point-to-point to meshed network is initiated.

*Action Item 20: Hong Kong China, USA, Singapore, Japan and other States to review recently published ICAO Doc 9896 and to provide inputs to Mr. V. Patel (FAA) for developing a comprehensive Working Paper for presentation to ACP WG-M, ATNICG and other relevant forums bringing out all the issues like detailed guidance for the implementation of ATN over IPS etc.,*

8.3 The US presented Working Paper 12, Web Service Security Standards. This paper provides a general introduction to web services security standards. The US representative did not go through paragraph by paragraph but rather described each of the standards in relation to a diagram of all of the standards which was adapted from NIST SP 800-95, Guide to Secure Web Services. The meeting was invited to note the information. Until the actual use of web services is better defined for the region specific web services security standards cannot be recommended

**Agenda Item 9: Enhanced Services – Planning and Strategy**

9.1 Japan presented Working Paper 6 in response to the Working Paper 10 presented in the Fifth Meeting of ATNICG on the same subject. It was reminded that the primary objective of providing Directory Services was to support AMHS operations. To get the maximum benefits from the Directory Services, it was felt essential that following two assumptions are met:

- a) All the ANSPs actually implement AMHS; and
- b) All the AMHS implement ATN Directory services

9.2 Paper also raised issues regarding synchronization between all the MTAs connected, so that the directory data used by them is exactly the same at all the times. Issues regarding the meaning of ATC Object (as mentioned in the WP 10 presented in ATNICG/5), requirement of secure, efficient and timely management of the service were also raised through the paper. Some issues related to the real-time on-line operation of Directory Service were also raised in the paper. It was informed that synchronizing Directory at global level was difficult, however efforts were being made in Europe to integrate Directory service with AMC. This may lead to provision of semi-automatic services and synchronization between MTAs. Further synchronization efforts can be taken up only after all the ANSPs have registered with AMC.

**Agenda Item 10: VoIP strategy for the region**

10.1 The US presented Information Paper 3- on VoIP. The paper conveys following information which is required to be considered for the implementation of VoIP service in the region:

1. Translational Signaling vs. Transparent Signaling
2. FXS/FXO or E & M for analog signaling
3. VoIP Bandwidth requirement and compression calculation
4. VoIP standard to support existing legacy voice switching equipment

**Agenda Item 11: Discuss the Aeronautical Fixed Service (AFS) evolution and modernization Strategy**

11.1 The US presented Working Paper 15 on network incompatibility between ICAO regions. The paper conveys that Asia/Pacific region implemented the ATN based on OSI using X.25 subnet while Caribbean and South American region implemented ATN based on IPS using IPv4 address and European region has adopted the use of ATN based on IPv6 addressing scheme. It was informed that European region can support both IPv4 and IPv6 using AMHS (RFC1006/2126). The paper indicated the routing of messages through AMHS and the AFTN/AMHS gateway rather than using router to resolve network incompatibility. This paper was presented at APANPIRG CNS/MET SG/14 to address the concern of this meeting in delivering ATS related data.

**Agenda Item 12: Review newly developed AIDC Implementation Plan and review global AIDC ICD**

12.1 Two papers were presented under this Agenda Item by the Secretariat.

12.2 Secretariat presented the Global Air Traffic Service Inter-Facility Data Communication (AIDC) Interface Control Document (ICD) (draft) through Working Paper 02. Meeting was informed that APANPIRG/20, through its Decision 20/14 extended its support to the work being undertaken by the United States to coordinate the development of a global Interface Control Document (ICD) for AFTN AIDC and invited the Asia/Pacific Regional Office to act as the regional point of contact. To meet this requirement, *Global Interface Control Document (ICD) for ATS Inter-facility Data Communication (AIDC)* was presented to the ATM/AIS/SAR Sub Group of APANPIRG in its Twentieth meeting. Document referred was presented to the meeting and the participants were invited to send their comments to Ms. Karen Chiodini (e-mail: [Karen.L.Chiodini@faa.gov](mailto:Karen.L.Chiodini@faa.gov)) at the earliest. While reviewing the ICD, it was pointed out that the information provided in paragraph 3. 'Engineering Considerations' was not entirely correct and needs to be reviewed.

*Action Item 21: Information provided in Part II, Paragraphs 1 and 33 , may be reviewed and comments on the same may be conveyed to the ICAO APAC Office by end October for further transmission to Ms. Karen Chiodini.*

12.3 In the CNS/MEG SG/14 meeting held in July 2010, Hong Kong China was requested to develop an Implementation Planner for AIDC on the same lines as the AMHS Implementation Planner. Planner developed by Hong Kong China was presented to the meeting. Four phases for implementation of AIDC recommended in the planner are as follows:

- a) AIDC Interoperability test completion (CRC-CCITT): it was pointed out that the parameter values used for CRC-CCITT should be the same on both the ends of the circuit;

- b) AICD over dedicated AFTN link commission: option of shared link may be considered;
- c) AIDC over ATN via AFTN/AMHS Gateway commission; and
- d) AIDC over ATN

The planner was further explained through an example using AIDC data in respect of Hong Kong. A copy of the planner is placed at **Appendix A**

### **Agenda Item 13: Review operational procedures and AMC update**

13.1 Since there was no input (Working/Information Papers) available and because of non availability of the task lead, not much could be progressed.

13.2 The meeting was however informed that in future, the AMC data, after update will be disseminated automatically, which will help in synchronization. It was also reminded that the procedure to be followed for entering/updating AMC data had already been adopted by APANPIRG and had been circulated to the States. It was suggested that the latest AMC data circulated by EUROCONTROL should be stored by the ANSPs and should be activated as per the AIRAC Cycle schedule.

### **Agenda Item 14: Other technical issues related to TCP/IP and ATN/OSI Interface**

14.1 Through Working Paper 7, Japan presented Asia/Pacific ATN IPS Router ICD Draft Proposal. Same paper had been presented as Working Paper 54 to the Fifth Meeting of ATNICG held in Kuala Lumpur. The proposal has been developed on the basis of the existing ICD.

14.2 Secretariat, through Working Paper 4 provided comprehensive information on the 'Manual on the Aeronautical Telecommunication Network (ATN) Using Internet Protocol Suite (IPS) Standards and Protocols (Doc 9896)'. It was informed that the First Edition of the Manual had been published in June 2010. The Manual is in three parts as described below:

*Part I:* contains general description of ATN over IPS and covers the network, transport and security requirements

*Part II:* contains description of applications supported by ATN over IPS and includes convergence mechanism and application services that will allow legacy ATN over OSI applications to operate over ATN over IPS transport layer

*Part III:* contains guidance material on ATN over IPS communications including information on architecture, as well as general information to support the implementation of ATN over IPS.

14.3 The paper further described the contents of each part and particularly the portion on VoIP as included in the Manual was described in detail. Participants were urged to follow the guidance provided in the Manual for the implementation of ATN over IPS in their administrations.

*Action Item 22: USA will develop and present the point to point IP Router ICD after cut over with UK in early 2011.*

14.4 USA Presented Working Paper 13 addressing CLARIFICATION ON DOC 9896 INTERNET PROTOCOL SUITE IPV6. The paper discussed the implementation issues related to transition from ATN/OSI to ATN/IPS environment as specified in ICAO Doc 9896 Internet Protocol Suite Technical Manual. It concluded that the following issues need to be clarified before a regional

implementation plan can be developed: publication of ICAO Doc 9896, Edition 2; IPv6 address block assignment; VoIP performance; and status of industry Request for Comment (RFC) referred in ICAO Doc 9896. The ATNICG/5 recommended that its chairman report to APANPIRG/21 through CNS/MET SG/14 requesting for a more thorough clarification from ICAO Air Navigation Commission.

Following four issues were discussed:

1. ICAO Doc 9896 ATN/IPS Technical Manual, Applications and Guidance Material
2. The use of VoIP as provided in ICAO Doc 9896
3. The reference of RFC s in ICAO Doc 9896.
4. Regional IPv6 address block assignment

For each of these issues, related recommendations were discussed. The meeting approved the paper with out any issues or concerns. The recommendations will be further discussed at the next ACP WG I and ATNICG S/G meetings for an implementation approach, which will need coordination with ICAO ACP also.

A preliminary review of the provisions on VoIP in the newly published ICAO Doc 9896 indicates that these refer to industry standard at a very high level only. The term “Administrative Domain” was discussed with reference to obtaining IPv6 address block for the region.

#### **Agenda Item 15: Update ATNICG Task List**

15.1 The Task List adopted by APANPIRG was reviewed and the updates recommended by ATNICG/5 meeting were noted. Some additional updates were recommended in the Tasks/Sub Tasks in view of the developments that have taken place. Updated Tasks List is placed at **Appendix B** to this report. It is proposed to present this revised Subject/Tasks list to ATNICG in its next meeting for review.

15.2 Japan pointed out that the current Asia/Pacific regional AMHS ICD was based on Doc 9705 Edition II and hence needs to be updated. USA was of the view that the information contained in an ICD was already included in the AMHS Manual and this information was based on Doc 9705 Edition III. After a brief discussion on various issues related to the currency of the information provided in the ICD, Japan was requested to review the contents of the current ICD and inform about the significant differences between Edition II and Edition III based systems.

*Action Item 23: Japan to review the current AMHS ICD and suggest changes required for making it compatible for Doc 9705 Edition III.*

#### **Agenda Item 16: Managing PDR a.k.a Amendment Proposals to ACP**

16.1 Meeting was reminded that the mechanism developed by ATNICG/5 meeting for facilitating those States, which were not attending the ACP meetings regularly to file PDRs was adopted by APANPIRG on the basis of CNS/MET SG/14 recommendation. The mechanism was once again read out to the meeting and the States were urged to submit their points for PDR to the ICAO APAC office, so that these could be presented to the ATNICG/ATNICG WG for their recommendations. These points for PDR will then be forwarded to the ACP-M Secretariat along with the recommendations from ATNICG/ATNICG WG.

**Agenda Item 17: Review Documentation Tree and status of the documents**

17.1 It was agreed that the documentation tree to include ICAO Doc 9880, 9896, Regional AMHS Manual, AMC, Security, and many other documents will be updated and presented at the ATNICG WG/9 to be held in January 2011.

**Agenda Item 18: Any other business**

18.1 Meeting was informed that the next meetings of ACP Working Group M and Working Group I are likely to be held in the last week of January/first week of February 2011 in Bangkok. It was proposed that the next ATNICG Working Group meeting be held from 26 to 28 January 2011 in Bangkok, prior to the ACP Working Group M and I meetings.

18.2 Chairman, ATNICG thanked Airways New Zealand for hosting the meeting and complemented the excellent arrangements made. The meeting specially thanked Mr. Ashley Smout for his presence to inaugurate the meeting. The meeting also thanked Mr. Ian Dore for his efforts in making wonderful arrangements.

18.3 Meeting ended with the thanks to the chair.

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No.	PERFORMANCE OBJECTIVE	ICAO Strategic Objective	Associated GPI	Tasks/Strategy	Benefits	Deliverables	Target Date	Leader	Supporting Members	ATNICG/5 Update
1	ATN Implementation Coordination	D. Efficiency	GPI-17, GPI-19, GPI-22	(1) Review of implementation problems and develop co-ordinated solutions (2) Coordinate/compile the regional implementation schedule (3) Monitor Implementation	Expedite implementation activities, ensure system compatibility through out the region	(1) Co-ordination Report (2) Waterfall schedule (3) Monitor AMHS Implementation Planner	(1)Ongoing/Semi-annually until (2010)- (2) (3) On going	Steven Chan, Hong Kong China	All members	(1)Updated the information in the ATN Router and AMHS planning tables and the implementation status.(2) Completed, maintain the AMHS Implementation Planner.
2	ATN Operational Procedures	D. Efficiency	GPI-17, GPI-19, GPI-22	(1) Development of Interim Database for Directory Services	Make available real time and quality assurance addresses for ATN message delivery	(1) Interim Database	(1) Ongoing	Chonlawit (USA)	Thailand, Hong Kong China, Japan	The database was demonstrated. Aerothai will maintain the database on behalf of the regional ICAO Office. Aerothai will serve as POC for AMC coordination between Asia/Pac States and Eurocontrol. ATN Operational Procedures is completed and forward for adoption.
				(2) Develop the operational database management procedures		(2) Operational Procedures	(2) (2007)			Completed.

No.	PERFORMANCE OBJECTIVE	ICAO Strategic Objective	Associated GPI	Tasks/Strategy	Benefits	Deliverables	Target Date	Leader	Supporting Members	ATNICG/5 Update
3	ATN Certification & Validation Process	D. Efficiency	GPI-17, GPI-19, GPI-22	(1) Develop conformance procedures and checklist for AMHS and ATN routers	Expedite implementation activities, ensure global system compatibility	(1) Checklist	(1) (2007)	Sin Hie Sng (Singapore)	China, Hong Kong China, Indonesia, ROK, USA,	Completed
				(2) Develop validation process document		(2) Conformance Document	(2) 2007			Completed and forward to CNS/MET SG and APANPIRG/20 for review and adoption
						(3) Update to Conformance Document	(3) Ongoing until 2010			Completed
4	(1) ATN Documentation (2) Review all documents adopted by ATNICG and ATNTTF	D. Efficiency	GPI-17, GPI-19, GPI-22	(1) Study DIR objects/attributes proposed in ACP and follow development within other groups (2) Update document tree/establish tracking table for suspended dates (3) Standardized Report form and Guidance Material	Expedite implementation activities, ensure global system compatibility	(1) Directory Report (2) Tracking table/Updated documentation tree (3) AMC report (4) Report Form (PDR filing) and Report Guidance	(1) Annually until (2010) (3) Periodically (4) 2010	Chonlawit B. (Thailand)	USA	Update the database. AMC mandated by ICAO. Training completed. Directory Service will be implemented in coordination with ACP and phases will be developed.

No.	PERFORMANCE OBJECTIVE	ICAO Strategic Objective	Associated GPI	Tasks/Strategy	Benefits	Deliverables	Target Date	Leader	Supporting Members	ATNICG/5 Update
				(2) Development AIDC documentation (including ICD) and follow development within other groups		(2) AFTN AIDC/ATN Gateway Specification ATN AIDC ICD	(2) 2008 (ACP-dependent)	(Thailand)	Thailand	Task Closed in view of the removal of provision from Doc 9880
				(3) Update of AMHS ICD to comply with SARPs 3rd Edition		(3) Report differences between existing ICD and requirements for Edition 3 of Doc 9705 (3)	(1) Sept 2010(3) (2007)	US	Japan	AMHS ICD relevant for Doc 9705 Edition 3 already incorporated in AMHS Manual
				Managing PDR	Update ICAO Documents (9880/9896)	PDR filing and tracking	On-going	US	All the Member States	Additional Task proposed in ATNICG/5
5	ATN Performance	D. Efficiency	GPI-17, GPI-19, GPI-22	(1) Develop/establish/adapt/monitor/identify/analyse performance indicators	Assure QOS, service continuity, timely delivery of services	(1) AMHS performance report	(1) Annually until (2010)	Japan	Republic of Korea, India	Final Draft of the Document complete. Will be presented.
6	ATN Service Enhancements	D. Efficiency	GPI-17, GPI-19, GPI-22	(1) Review the impact of the implementation of Directory Services in the Region	Enhancing the service	(1) Report on directory service	(1) Annually until (2010)	Fiji	USA, Thailand, New Zealand, Japan, Australia	Complete. AMC has been adopted by ICAO. Aerothai has been designed as POC for Asia/Pac region

No.	PERFORMANCE OBJECTIVE	ICAO Strategic Objective	Associated GPI	Tasks/Strategy	Benefits	Deliverables	Target Date	Leader	Supporting Members	ATNICG/5 Update
				(2) Directory Service - Implementation Strategy	Enhancing the operation	Directory Service Requirement Analysis Report & Implementation Strategy	1) 2011 2) 2012	Thailand		Additional Task Proposed in ATNICG/5
				ATN/IPS Implementation Plan	Inter-regional and intra regional network compatibility	1) ATN/IPS router ICD 2) IPS addressing plan 3) ATN/OSI - ATN/IPS Transition Plan 4) ATN/IPS routing policy 5) Update FASIS Tables to accommodate IPS 6) IDRP over IP subnet - ICD	2011 2) 2011 3) 2011 4) 2012 5) 2011 6) 2010	USA	Australia, China, India, Fiji, HongKong, China, Japan, and USA	Proposed an additional task
				Providing support for emerging requirements of OPMET, AIS/AIM, AIDC etc.	Enhancing the service	ask Report on XML based messages over AMHS platform	2011	USA	Hong Kong China, Singapore	Additional Task proposed in ATNICG/5 Preliminary tests carried out between USA and Hong Kong China. Report on progress will be presented to ATNICG/6
				(5) Study for transition of AFTN-based AIDC as an alternative to ATN based AIDC to ATN environment	Improving the service and lowering the operating cost	(5) Report on the impact of transition of AFTN-AIDC to ATN-AIDC AFTN AIDC/ATN Gateway Specification	(5) (2008)	Thailand	India, Indonesia, New Zealand, USA,	Closed: No provision of ATN AIDC in Doc 9880

ATNICG WG/8  
Appendix B to the Report

No.	PERFORMANCE OBJECTIVE	ICAO Strategic Objective	Associated GPI	Tasks/Strategy	Benefits	Deliverables	Target Date	Leader	Supporting Members	ATNICG/5 Update
		D. Efficiency	GPI-17, GPI-19, GPI-22	Analyze Common Address Prefix Proposal	Improving the service and routing efficiency	Report on common prefix based analysis conducted	End of 2008	Mark Brown (Japan)	Australia, Fiji, HongKong China, New Zealand and USA	Completed. Action Items developed at ATNICG/2 for follow-up at WG meetings.
7	Security	B. Security	GPI-17, GPI-19, GPI-22	(1) Develop ATN System Security policy	Safe and Secure Inter and Intra Regional Communication and service infrastructure	(1) Policy Document	(1) Annually until (2010)	Vidyut Patel (USA)	Australia, Hong Kong China	Adopted by APANPIRG/19
				(2) Develop ATN System Security Guidance		(2) Guidance Document	(2) (2011)			On-Going review and update

No.	PERFORMANCE OBJECTIVE	ICAO Strategic Objective	Associated GPI	Tasks/Strategy	Benefits	Deliverables	Target Date	Leader	Supporting Members	ATNICG/5 Update
				(3) Develop ATN System Security Solution for Initial and Enhanced Services		(3) Security, Technical, Management and Operational Control	(3) (2008)			Completed
				(4) Co-ordinate and monitor ACP working group and other regions including Directory Service, PDRs		(4) Report	(4) Semi-Annually until (2010)		Thailand	On-Going review and update
				5) Develop IPS Security Policy and update the relevant guidance documents		Policy and updated guidance documents	2011			Proposed additional task to facilitate ATN/IPS
				(5) Develop ATN System Security Check List based on Security Control and Regional Incident Response Plan and Contingency Plan		(5) Check List, Regional Incident Response Plan and Contingency Plan	(5) (2009)			Forward to CNS.MET SG and APANPIRG for review and adoption

No.	PERFORMANCE OBJECTIVE	ICAO Strategic Objective	Associated GPI	Tasks/Strategy	Benefits	Deliverables	Target Date	Leader	Supporting Members	ATNICG/5 Update
8	ATN Service Enhancements (supporting amended ICAO Flight Plan and ATS Message Formats)	D - Efficiency	GPI - 17, GPI - 19, GPI - 22	1) Review the impact of the implementation of Amendment 1 to 15th Edition of Doc. 4444 effective 15 Nov. 2012 (PANS ATM Chapter 4 and Appendix 3 relating to the ICAO Flight Plan and associated ATS Message formats to the AFS	Enhancing the service	1) Report on capability of existing and planned AFS systems to the revised ICAO Flight Plan and ATS Message Format	1) Annually until 2011	USA	Fiji India Hong Kong New Zealand Singapore USA	Pending result from ICAO Flight Plan and ATS Message TF
				2) Identify the new requirements for AMHS/AFTN to support new message format	Enhancing the operation	2) Report on impact of New ATS message format in AMHS	2) 2010	Thailand	Fiji India Hong Kong New Zealand Singapore USA	On-going task-Report at ATNICG/4
				3) Identify the link control procedure using the AMHS to support the revised ATS message format to the ATC automation system	Enhancing the service	3) Report whether special link control procedure is required	3) 2010	Thailand	Fiji India Hong Kong New Zealand Singapore USA	On-going task
<p><b>The ATN PERFORMANCE OBJECTIVE</b></p> <p>The APAC ATN ground-to-ground infrastructure will be fully operational 53 percent at 23 locations by December 2007.</p> <p><b>(GPI-22) COMMUNICATION NETWORK INFRASTRUCTURE</b></p> <p><b>Related ATM objectives:</b> AMSS; HF data; VHF data; SSR Mode S; ATN</p> <p><b>Scope:</b> To evolve the aeronautical mobile and fixed communication infrastructure, supporting both voice and data communications, accommodating new functions as well as providing the adequate capacity and quality of service to support ATM requirements.</p> <p><b>(GPI-19) METEOROLOGICAL SYSTEMS</b></p> <p><b>Objective:</b> To improve the availability of meteorological information in support of a seamless global ATM system.</p> <p><b>(GPI-17) IMPLEMENTATION OF DATA LINK APPLICATIONS</b></p>										

No.	PERFORMANCE OBJECTIVE	ICAO Strategic Objective	Associated GPI	Tasks/Strategy	Benefits	Deliverables	Target Date	Leader	Supporting Members	ATNICG/5 Update
<p><b>Scope:</b> Increase the use of data link applications</p> <p><b>Related ATM objectives:</b> Application of data link; Functional integration of ground systems; with airborne systems; ATS inter-facility data communication (AIDC)</p>										

**Eighth Working Group Meeting of ATN Implementation Coordination Group of  
APANPIRG (ATNICG WG/8)  
Christchurch, New Zealand  
28 September to 1 October 2010**

**Attachment 1 to the Report**

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*International Civil Aviation Organization*

**AERONAUTICAL TELECOMMUNICATION  
NETWORK IMPLEMENTATION  
COORDINATION GROUP – EIGHTH  
WORKING GROUP MEETING (ATNICG WG/8)**

**AIRWAYS**  
NEW ZEALAND

Christchurch New Zealand  
28 September – 1 October 2010

**LIST OF WORKING AND INFORMATION PAPERS**

WP/IP/ SP No.	Agenda Item	Subject	Presented by
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**LIST OF WORKING PAPERS**

WP/1	-	Provisional Agenda	Secretariat
WP/2	12	Global Air Traffic Service Inter-facility Data Communications (AIDC) Interface Control Document (ICD)	Secretariat
WP/3	12	ATS Inter-facility Data Communication (AIDC) Implementation Seminar	Secretariat
WP/4	17	Manual on the Aeronautical Telecommunication Network (ATN) Using Internet Protocol Suite (IPS) Standards and Protocols (Doc 9896)	Secretariat
WP/5	1	Outcome of CNS/MET SG/14 and APANPIRG/21 Meetings relevant to AFS and AMS	Secretariat
WP/6	9	Discussions on Topics Related to Directory Services	Japan
WP/7	14	Asia/Pacific ATN Router ICD Draft Proposal	Mark Brown (Japan)
WP/8	8	Considerations for Introducing Security into the Asia/Pacific Regional Ground ATN/IPS Network	Mark Brown (Japan)
WP/9	15	Review of Updated ATNICG Subject/Tasks List	Secretariat
WP/10	2	Report on the Outcome of the Fifth Meeting of ATN Implementation Coordination Group (ATNICG/5)	Secretariat
WP/11	3	MET Data Using WEB Services over AMHS	USA
WP/12	3	WEB Service Security Standards	USA
WP/13	3	Clarification of Doc 9896 Internet Protocol Suite IPv6	USA

<b>WP/IP/ SP No.</b>	<b>Agenda Item</b>	<b>Subject</b>	<b>Presented by</b>
WP/14	3	ASIA/PAC Aeronautical Telecommunication Network Security Guidance Document (Draft Second Edition, June 2010)	USA
WP/15	3	Network Protocols Incompatibility Issues and Solutions	USA

**LIST OF INFORMATION PAPERS**

IP/1	1	Meeting Bulletin	Secretariat
IP/2	7	Asia/Pacific IPv6 Addressing Plan Proposal	Mark Brown (Japan)
IP/3	10	Voice over Internet Protocol (VOIP) Integration to Air Traffic Service (ATS) Voice Communication	USA
IP/4	3	Report on Testing of XML-Based OPMET Delivery over AMHS	USA, Hong Kong China and Singapore
IP/5	7	Asia/Pacific IP Routing Policy – Version 1.0 (Initial Draft)	USA

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