



*International Civil Aviation Organization*

**NINETEENTH MEETING OF THE COMMUNICATIONS/NAVIGATION  
AND SURVEILLANCE SUB-GROUP (CNS SG/19) OF APANPIRG**

Bangkok, Thailand, 20 – 24 July 2015

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**Agenda Item 3.1: Review Report of the Second Meeting of the Aeronautical Communication Services Implementation Coordination Group (ACSICG/2) including the outcome of the Fourth Meeting of CRV Task Force (CRV TF/4)**

**REVIEW REPORT OF ACSICG/2 MEETING**

(Presented by the Secretariat)

**SUMMARY**

This paper presents the outcome of the second meeting of the Aeronautical Communication Services Implementation Coordination Group (ACSICG/2) for review by the meeting.

Action required by the meeting is at section 3.

**1. INTRODUCTION**

1.1 The Second Meeting of Aeronautical Communication Services (ACS) Implementation Co-ordination Group (ACSICG/2) of APANPIRG was held in Bangkok from 20 to 22 May 2015. The meeting was held back to back with the Fourth meeting of the Common Regional VPN (CRV) Task Force which was held from 18 to 19 May. The Meeting was attended by 56 participants from 20 States/Administrations.

1.2 The meeting considered 13 working papers and 13 information papers under 10 agenda items and also took actions on the report of Fourth meeting of the CRV Task Force.

1.3 The report of ACSICG/2 meeting is available at:  
<http://www.icao.int/APAC/Meetings/Pages/2015-CRVTF4+ACSICG2.aspx>

**2. DISCUSSION**

2.1 The meeting reviewed the outcome of APANPIRG/25 on aeronautical communication and works accomplished by the First Meeting of ACSICG of APANPIRG and pleased to note that most of draft Conclusions formulated by ACSICG/1 meeting and CRVTF were endorsed by CNS SG and adopted by APANPIRG.

2.2 Noting the proposed new structure of APANPIRG contributory bodies, the meeting recommended using CRV OG (CRV Operation Group to replace OOTF in the recommended structure and considered that the name of ACSICG may be kept as it was just renamed by APANPIRG/24 only in 2013. It should be noted that the APANPIRG structure review task force only considered sub-group

level. It will be the responsibility of relevant Sub-group to consider the appropriate terms and names of those contributory bodies reporting to APANPIRG through the Sub-group.

2.3 The meeting noted that ACSICG was expected to review its TOR based on the new project approach once the APANPRIG new structure (at sub-group level) and the project management principle is adopted by APANPIRG.

#### **Review e-ANP related planning Tables**

2.4 The meeting noted the outcome of the e-ANP working group meeting in April 2015 on the recommendations for AFS related tables for e-ANP.

2.5 The meeting reviewed populated **TABLE CNS II-1 - AERONAUTICAL FIXED TELECOMMUNICATIONS NETWORK (AFTN) PLAN** and further updated Table CNS II-1 which is provided in **Appendix D1 to WP/03**. The meeting noted that this table was updated based on the one approved by APANPIRG/25 meeting.

2.6 The meeting also reviewed and further updated **TABLE CNS II-2 - REQUIRED ATN INFRASTRUCTURE ROUTING PLAN**. The updated Table CNS II-2 is provided in **Appendix D2 to WP/03**.

2.7 The meeting discussed the requirement for AFS data between Brisbane and Makassar proposed by Australia and Indonesia. The new circuit would support both AIDC and AFTN traffic. The circuit between Brisbane and Jakarta would be decommissioned once the new circuit between Brisbane and Makassar is operational. The meeting had no objection to this proposed change and agreed to include this in the updated draft Table CNS II-1 which will be processed in accordance with the established procedure for the new e-ANP.

2.8 The meeting also endorsed a proposal from the e-ANP WG to drop the Table CNS 1C - AMHS Routing Plan as the table had not been included in the harmonized templates approved by the Council.

2.9 The meeting noted the recommendation from e-ANP WG that the information contained in the existing Table CNS 1E – AIDC Implementation Plan should be kept as regional specific requirement as AIDC implementation had been identified as one of implementation priorities by APANPIRG. The meeting further noted that this Table was referred to AIDC Task Force (APA TF/1 16-18 June 2015) for refinement in terms of format and the essential planning information contained in the Table.

#### **ATN/AMHS Implementation Status, Transition and Operational Issues**

2.10 Under this agenda item, the meeting reviewed implementation issues and status updates on ATN/AMHS implementation progress achieved and their near plans through information papers presented by the following Administrations:

- Thailand (IP/02)
- India (IP/03)
- Indonesia (IP/11)
- China (IP/06)
- Japan (IP/07 & IP/08)
- Sri Lanka (IP/05)
- Bangladesh (IP/13)
- New Zealand (IP/12)

### **AFS Implementation updates by New Zealand**

2.11 Through the information paper, meeting noted various AFS, AIS and MET related implementation activities in New Zealand. From Q3 2015 AMHS connection between New Zealand and USA would be established and it will be put into operation by the end of 2015. Airways has upgraded its whole network infrastructure to an IP-based MPLS network which enabled the number of X.25-based AFTN connections to be reduced to a minimum and will facilitate connectivity to the planned APAC CRV Network.

2.12 New Zealand has operationally commissioned a new AIM system which interconnects with the Airways Message Switching System using both AMHS and AFTN connections. The use of an AMHS connection will allow the exchange of messages with content other than just a restricted AFTN character set e.g. XML-formatted data and graphical data such as MET charts.

2.13 A Web Service interface is also used to allow external systems to query the AIM system e.g. to obtain pre-Flight Briefings. Rather than developing functionality for accessing Web Services on a number of legacy systems which previously used AFTN in order to query the previous AIS system, an Airway Query Converter (AQC) System has been developed which accepts queries from these systems either via AFTN or FTP. The AQC system then submits Web Service requests to the AIM system and returns a formatted response to the system which submitted the request.

2.14 VSAT connectivity to a number of Pacific Islands States is planned which will support IP-based AFTN/AMHS connections and voice. Various bodies are funding these connections. The meeting was also informed that the he World Bank had issued a tender which would fund the installation of VSAT connections at following locations:

- Vava'u (Tonga) [In addition to the existing VSAT connection mentioned above]
- Tarawara (Kiribati)
- Kiritimati Island a.k.a. Christmas Island (Kiribati)
- Funifuti (Tuvalu)
- Faleolo (Samoa)
- Vanuatu

2.15 The New Zealand Ministry of Foreign Affairs and Trade (MFAT) are expected to fund similar VSAT connections to:

- Rarotonga (Cook Islands – two links as includes Aitutaki)
- Niue

2.16 Nauru may use a VSAT connection in the future, with separate funding.

2.17 It was encouraging to note that a number of new operational AMHS had been put into operation in the end of 2014 and beginning of 2015 in the Region. Some more TMC between States/Administration were being discussed and/or signed to progress the implementation of AMHS between States/Administrations and much more planned implementation will take place in 2016. The meeting expressed appreciation to those States/Administrations that made efforts in implementation of AMHS since ACSICG/1 meeting.

### **Updates on the AMHS Implementation Status and Planner**

2.18 Based on the planning and implementation information presented, the meeting reviewed and updated the Regional ATN/AMHS implementation Status Table and the AMHS

implementation planner. The implementation status table was further updated by AIDC Task Force meeting held in June 2015.

### **ICAO Doc7910 and Doc 8585 Update**

2.19 At ACSICG/2, USA conveyed the concerns from the European Aeronautical Fixed Services Group (AFSG) regarding the need to timely update ICAO Documents 7910 and 8585.

2.20 With the increased worldwide transition from AFTN to AMHS, a substantial number of messages have been found to contain originator or recipient addresses which are not compliant with ICAO Doc7910 (Location Indicators) and/or 8585 (Designators for Aircraft Operating Agencies, Aeronautical Authorities and Services). These non-compliances typically present themselves in the following manner:

- The address's 4-character location indicator is not present in Document 7910, and/or
- The address's 3-character designator is not present in Document 8585

2.21 The AFSG noted that it is the responsibility of each ICAO member State to ensure that addresses within their responsibility be aligned with ICAO Documents 7910 and 8585. The AFSG also proposed that ICAO ask states to designate national focal points responsible for their respective entries of updates to these ICAO Documents.

2.22 The meeting was informed that the procedure for updating the information in these documents are clearly specified in the forward of each Document.

### **Revised AMHS Naming Plan**

2.23 Thailand and Hong Kong China presented a revised AMHS Naming Plan which provides planning and technical guidance on the naming convention for the transition of ground Aeronautical Fixed Telecommunication Network (AFTN) services to the ATS Message Handling System (AMHS) within the ASIA/PAC Region. Based upon the ATN SARPs as published in ICAO Annex 10 and updated ICAO Doc. 9880, naming and addressing plans are required to be developed by ICAO regions concerned.

2.24 The revised *AMHS Naming* Plan will provide guidance to States/Administrations in the assignment and registration of addresses and names to be used for the Aeronautical Telecommunication Network (ATN) with a view to ensure its consistency with the latest EUROCONTROL AMC documentary and database requirements. The updated sections in the revised document for the naming assignment conventions for allocating Originator/Recipient (O/R) names are highlighted as follows:

- a) The references / documents / definitions / abbreviations concerned. (1.3-1.5)
- b) AMHS addressing scheme with wildcard (3.2)
- c) Defining Organization-name and Organization-unit-name-1 for CAAS (5)
- d) Table 1a: PRMD-name values of the AMHS MD in ASIA/PAC region  
Information from EUROCONTROL AMC Database
- e) Table 1b: Suggested PRMD-name values of the AMHS MD in ASIA/PAC region

for states/ATSO which have not registered to AMC assuming all States/ATSOs using CAAS

2.25 In this connection, the ACSICG/2 meeting appreciated the work done by Thailand and Hong Kong China and formulated following draft Conclusion for consideration by this meeting:

**Draft Conclusion 2/1 – Revised AMHS Naming Plan**

That, the revised AMHS Naming Plan provided in **Appendix E** to the report be adopted.

**Updates on EDS**

2.26 A presentation on the development of the European Directory Service (EDS) for AMHS system was provided to the meeting by COMSOFT on behalf of EUROCONTROL. The concept of EDS and its relation, integration and synchronization cycle with AMC was introduced. The operational concept of EDS had included in the EUR AMHS Manual. The EDS located Eurocontrol became operation since April 2015. There are three methods to access the EDS including on-line, indirect and off-line. NATS United Kingdom would use EDS through on-line access and DFS Germany will use indirect method to access EDS. During the discussion, COMSOFT remarked that Eurocontrol had stated that AMHS is core component of SWIM.

**Updates on MEVA III Project**

2.27 COMSOFT provided updates on MEVA III project in the North America and Caribbean Region. The network was put into operation in the last week of March 2015. The VSAT network uses both PAMA and DAMA technology to meet requirements for both voice and data communication. It was informed that parallel operation for MEVA III and MEVA II were maintained during the transition period at beginning of this year and COMSOFT will provide 5 years operational support for this project from 1 April 2015 according to the contract.

**Report of CRV TF/4**

2.28 The ACSICG/2 meeting reviewed the report of CRVTF/4 meeting and took following actions.

2.29 The meeting noted the following decisions made by the CRV Task Force for providing guidance to the internal future work process.

***Decision 4/1 – Request for Information for the provision of the Common Regional VPN (CRV)***

*That, the Final Report on the Evaluation of the Request for Information - RFI for the provision of the common Regional VPN (CRV) be adopted.*

*Note: the Final Report is available on the secure portal as “APAC CRV - RFI Evaluation report - final 30 Mar. 15.”*

***Decision 4/3 - CRV preliminary Safety Analysis***

*That, the CRV preliminary Safety Analysis v1.0 be adopted and form the basis of the safety requirements for the CRV procurement process.*

***Decision 4/5 – CRV-OG as an APANPIRG contributory body***

*That, if the CRV-OG creation is confirmed, the establishment be done under APANPIRG umbrella.*

***Decision CRV 4/6 - 2 Extension of deadline for payment of CRV stage 1***

*That, the deadline for payment of the USD 10,000 to ICAO be changed from 22 May 15 to the day before the task 47-i (i) carry out a pre-evaluation and evaluation meeting starts.*

2.30 The meeting noted work on updating the CBA based on the second iteration and noted a number recommendations had been developed on the CBA. Based on the report, the meeting endorsed the following draft Conclusion formulated by the CRV Task Force for consideration by this meeting (the Document will be further modified by the Chair of CRV TF – removal of vendors specific information as these are sensitive information):

**Draft Conclusion 2/2 – Second Iteration of CRV Cost Benefit Analysis  
(based on RFI)**

That the second iteration of the CRV Cost Benefit Analysis provided in **Appendix F** (with password to access) be adopted and distributed to States/Administrations for their reference.

2.31 The following draft Conclusion formulated by the CRV Task Force was also endorsed by ACSICG for consideration by this meeting:

**Draft Conclusion 2/3 - CRV preliminary Safety Analysis Follow-up**

That, CRV Participating States/Administrations be urged to consider the CRV safety requirements specified in the CRV Preliminary Safety Analysis v1.0 as a basis for their local safety case, perform their local safety case, and report to APANPIRG through the appropriate body.

*Note: to support the local safety case, a template will be provided, as well as educational material on the safety case.*

2.32 The meeting further discussed the cost arrangements between Administrations. In order to facilitate Administrations with negative CBA value to implement CRV project to achieve common benefits, the meeting encourage those Administrations in a position to do so, to work out cost arrangements with their counter parts. In view of the foregoing, the ACSICG/2 meeting formulated following Draft Conclusion for consideration by CNS SG:

### **Draft Conclusion 2/4 – CRV Cost Arrangement Framework**

That, noting that cost arrangements on current telecommunications exist between some States/Administrations and considering the result of the second iteration of the CRV Cost Benefit Analysis,

APAC States/Administrations be advised to:

- make their own local Cost benefit analysis as needed;
- start discussions of possible new or improved cost arrangement frameworks with other ICAO Member State(s)/Administration(s), based on the Request For Information results; and
- endeavor to establish arrangements for mid 2016.

### **Inter-regional Connection issues**

2.33 USA presented a working paper highlighted the need to replace existing International Private Line (IPL) between Air Navigation Service Providers (ANSPs) with common network using standard Internet Protocol (IP) interface. The meeting was informed that a common IP network provider, Pan-European Network Service (PENS), has been used in the European region, and FAA Telecommunication Infrastructure (FTI) has also been in extensive operation in Canada and USA.

2.34 The Asia/Pacific region was making efforts to implement a common IP network service i.e. Common Regional Virtual Private Network (CRV) in the region which is planned for contract award by 2016.

2.35 However, it was pointed out that replace existing IPLs between ICAO regions. The equipment to support IPL service is obsolete and has been difficult to maintain as spare part inventory is depleting and many parts are no longer manufactured.

2.36 ANSPs in the Asia/Pacific region who have IPLs with other ICAO regions should consider the following options to replace their existing IPLs:

- 1) Invite counterparts in other ICAO regions to join CRV or
- 2) Join the respective ICAO regional IP network (e.g. PENS) or
- 3) Establish a bi-lateral agreement for a single telecommunication network vendor

2.37 It is expected that data communication, the entry points between ANSPs is still governed by Air Traffic Service Message Handling System (AMHS) routing policy.

2.38 The meeting invited States with inter-regional entry/exit points including Australia, China, India, Japan, Singapore and Thailand to provide addresses and contact points of their counterparts in the other Regions so the potential service providers may be requested to provide quotation on the options for including those circuits in the CRV project proposal.

### **System Wide Information Management (SWIM)**

2.39 Japan made a presentation on their information management in CARATS project associated with SWIM concept. JCAB intended to convey the importance to increase common awareness among concerned members through active discussions.

### **Utilizing existing Infrastructure to Support SWIM**

2.40 In following up one of the action items agreed the first meeting of the ACSICG, USA presented an information paper on the Federal Aviation Administration operational and implementation analysis to support SWIM environment between Air Navigation Service Providers (ANSPs) utilizing existing infrastructure. The existing internal infrastructure of each ANSP is different from one another. Thus, it's impossible to recommend a common SWIM access point or gateway.

2.41 The Air Traffic Services Message Handling System (AMHS) has been standardized and could allow a common access to both existing interface and to SWIM with each individual ANSP's specific SWIM gateway. The FAA is investigating development of a FAA SWIM gateway that could interface to AMHS, AFTN or both to support interface with other ANSPs or organizations. The SWIM Gateway is planned to provide conversion between AMHS based messages to other FAA applications/systems seamlessly. Several issues and comments regarding requirements, architecture, governance and management were consolidated in a table attached to the paper which is kept for information only. It was recommended to consider such information to support SWIM transition. Some issues would also be required to be discussed at the proposed SWIM workshop in 2016.

### **SWIM Seminar/Workshop in 2016**

2.42 In order to follow up APANPIRG Conclusion 25/43 - Promote understanding of SWIM in APAC Region with focus on both technical and operational aspects for SWIM development, Secretariat proposed to organize a seminar/workshop during April-June 2016. The meeting briefly discussed the topics, audience, partnerships, expertise and demonstrations possibilities for the event.

2.43 States/Administrations were invited to support the event by providing SME. In particular from those Administrations participated in the Mini Global Demonstration on SWIM during APANPIRG/25 meeting. USA, China, Japan expressed their willingness to support the event. Australia, Republic of Korea, Singapore and Thailand will confirm their support later after the meeting.

2.44 USA recommended to organize a workshop rather than a seminar so some issues may be discussed with experts. Australia recommended conducting the workshop in conjunction with other associated meeting like the SWIM seminar conducted in Chiangmai back to back with an ATNICG meeting so approval of travel for participants from States would be justified.

2.45 The meeting was informed that ICAO Europe Office had a plan to organize a Seminar/Workshop on IWXXM in 2016 and the second Mini Global Demonstration on SWIM was also scheduled for 2016.

### **Proposed joint action by the ATFM/SG**

2.46 The Secretariat presented outcomes of the Asia/Pacific Air Traffic Flow Management Steering Group (ATFM/SG), related to the development of an interface control document (ICD) for the proposed regional ATFM network.



2.47 ATFM/SG/5 held in Bangkok from 30 March to 3 April 2015 produced the final draft version of the *Asia/Pacific Region Framework for Collaborative Air Traffic Flow Management*, which will be presented to APANPIRG/26 through the ATM Sub-Group of APANPIRG this year.

2.48 ATFM/SG/5 discussed the need for development of an operational requirements document for the exchange of ATFM information, and an ICD for technical ATFM communications solutions. The ATFM/SG/5 meeting made the following decision:

***Decision ATFM/SG/5-1 – ATFM Information Requirements Small Working Group (ATFM/IR/SWG)***

*That, recognizing the need for the development of operational and technical requirements for the exchange of ATFM information in the cross-border, multi-nodal ATFM network, a small working group comprised of China, Hong Kong China, India, Indonesia, Japan, Singapore, Thailand and ICAO, be established to draft:*

1. *An Operational Requirements document for the exchange of and interaction with ATFM information; and*
2. *A technical interface control document (ICD) in accordance with the terms of reference at **Attachment B**.*

2.49 The meeting was informed that the composition of the SWG is currently being finalized. It was envisaged that its initial work, commencing in the near future, will include inter-alia the drafting of a skeletal ICD based on templates used for Asia/Pacific Region ICDs.

2.50 The meeting also noted the TOR of ATFM/IR/SWG. As result of discussions, the meeting agreed to the following:

- a) Member States/Administrations for the ATFM/IR/SWG be encouraged to nominate additional telecommunication subject experts (nominated for ACSICG) in addition to the ATFM expert for joint development of the ICD;
- b) Agreed to provide the current ICD for all applications using IP to ATFM/IR/SWG for their reference in developing the ICD for ATFM;
- c) ATFM/IR/SWG or ATFM SG is requested to provide the draft ATFM ICD to the ACSICG for review and comments once it is ready.

**Update the work programme for ACSICG**

2.51 The meeting is invited to note the work programme for ACSICG provided in **Appendix G** to ACSICG/2 meeting Report.

**VHF Data Link System Implementation in ROK**

2.52 The ACSICG/2 meeting noted the implementation status of VHF DATA LINK System. in particular for VDL M2 for the period from Oct. 2014 through Dec. 2015 in Republic of Korea.

**Next meeting of the Group**

2.53 The ACSICG/3 meeting is scheduled for early May 2016 for a period of 3 or 4 days starting 17/18-20 May 2016 at ICAO Regional Office, Bangkok, Thailand. The exact dates of the meeting would be confirmed by APANPIRG/26 meeting in September 2015.

**3. ACTION BY THE MEETING**

3.1 The meeting is invited to:

- a) note the information contained in this paper;
- b) Consider 4 draft Conclusions; and
- c) discuss any relevant matters as appropriate.

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