International Civil Aviation Organization

THE TWELFTH WORKING GROUP MEETING OF AERONAUTICAL TELECOMMUNICATION NETWORK (ATN) IMPLEMENTATION CO-ORDINATION GROUP OF APANPIRG (ATNICG WG/12)

5 – 8 August, Renton, WA, USA

Agenda Item 3:   Review ACP WG I/M Outcomes

REPORT OF THE OUTCOME OF ACP WORKING GROUPS I/M

(Presented by USA)

SUMMARY

This paper presents the outcome of the Aeronautical Communication Panel (ACP) Working Group I/16 and M/20 held in Montreal, Canada from 28 January to 1 February 2013

1.   INTRODUCTION

1.1   The ACP WG I/16 was held in Montreal, Canada from 28-30 January 2013. The primary objective of the WG I is to update the ICAO Doc. 9896, Aeronautical Telecommunication Network Internet Protocol Suite (ATN IPS) Technical Manual

1.2   A joint meeting was held on Monday 28 January with the Unmanned Aircraft Systems Study Group (UASSG). UASSG is a study group of ICAO which consisted of about 100 experts who mainly belong to operational background. UASSG needs the technical guidance from ACP to define operational requirements for Unmanned Aircraft Systems.

1.3   Seven working papers, four information papers and five flimsy were presented at the meeting. These papers are available on the ACP website (www.icao.int/anb/panels/acp)

1.4   The ACP WG M/20 was held from 30 January to 1 February 2013 in Montreal, Canada. The primary function of the WG M is to maintain the ICAO Doc. 9880, ATN Open System Interface (OSI). All papers can be found at the ACP website indicated above.

2.   DISCUSSION

2.1   The following actions that's applicable to ATNICG was discussed and status of the tasks are provided below:

1. ICAO Secretariat to obtain IPV6 address blocks for the Regions (Open-ICAO)

2. Develop justification for a block of address /16 (Open-ICAO)

3. Develop transition guideline for IP v4/6 (Open-FAA)

4. Develop SWIM Operational Concept (AN-Conf/12 to set priority)

2.2   The WG M/20 identified the need to establish of a Cyber Security Task Force within ACP to address security threat and prevention.

2.3   Administrative Domains that use private AS numbers shall follow the AS numbering plan as specified in ICAO Doc. 9896 should be updated to reflect the formation of Administrative Domains among States that will result in unused AS numbering and some States might need additional AS numbering

2.4   ICAO Doc. 9896 Sections 2.4.1.1 and 2.4.2.1 were proposed to change as follow to clarify that "Host" may not need both TCP and UDP:

Section 2.4.1.1 IPS hosts requiring connection-oriented transport service shall implement the Transmission Control Protocol (TCP) as specified in RFC 793;

Section 2.4.2.1 IPS hosts requiring connectionless transport service shall implement the User Data Gram Protocol (UDP) as specified in RFC 768.

2.5   Eurocontrol presented the main goal of Project 15.02.10 is to verify and demonstrate the suitability of PENS as the IP network backbone infrastructure for ATM environment. The project tasks included the following:

- Evaluation of suitability of end-to-end PENS performances;

- Establishment of a Security Policy;

- Verification of surveillance IP Multicast applications on PENS; and

- Verification of VoIP for G/G and ground segment of A/G Communications on PENS.

2.6   The following deliverables were related to the Security tasks:

- Security Risk Assessment (SRA) which had been completed for the following applications: FMTP, AMHS, VoIP, LARA & Network Elements

- Security System Specification:
  - Development of Security System Model
  - Security System Model Testing
  - Vulnerability tests and Test Bed tools
  - Tests including civil/military interoperability

- SWIM Backbone Security Management
  - Final Security Risk Assessment & Security Model

2.7   SESAR P 15.2.10 deliverables on security will be finalised before the next WG-I meeting in November 2013. They could become relevant inputs for the development of Security implementation guidance for IPS. ICAO and EUROCONTROL will ask SESAR JU approval for making these deliverables available to ACP WG-I.

2.8   WG M/20 presented a recommendation to AFTN SVC Processing in AFTN-AMHS Gateway. This paper address will be presented in ATNICG WG12 as a separated paper due to its impact to AMHS operation.

2.9   AGENDA ITEM 3(b) – ATN/OSI Document Update Status – AHMS *(WP8, WP9, WP10, WP11, WP16, IP06, IP07 and later WP21)*

2.9.1   Mr. Jean-Marc Vacher presented WP8. This paper reported to ACP WG-M about the work performed by ICAO AFSG in Europe regarding transfer of binary data in AMHS using File Transfer Body Parts (FTBP).

2.9.2   File Transfer Body Part (FTBP) is specified as the preferred means for transfer of binary data in AMHS. Support of FTBP by AMHS UAs is mandated in Europe, as per EUR AMHS Manual Appendix B. However, effective use of FTBP is likely to generate a number of questions with regard to the interpretation of Doc 9880 and of EUR AMHS Manual.

2.9.3   Most of the questions identified during this EUR ICAO activity are likely to also appear in other ICAO Regions, as soon as AMHS is considered for transfer of messages other than those currently exchanged in AFTN. Therefore the AFSG/PG-49 meeting (held in Madrid, December 2012) agreed that this topic should be brought to the attention of ACP WGM for information and feedback as appropriate.

2.9.4   The paper considered three issues:

   a)   the number of "body parts" contained in the most basic message elements;

   b)   priority and filing time for a basic message containing an FTBP; and

   c)   the use of FTBP for character-oriented messages.

2.9.5   EUR ICAO had considered these for a number of reasons, including the need to accommodate yet undefined data types in AIXM and WXXM and legacy issues.

3.   ACTION BY THE MEETING

3.1   The meeting is invited to:

   a)   note the information contained in this paper; and

   b)   discuss any relevant matters as appropriate.

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