ATNP/WG3

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AERONAUTICAL TELECOMMUNICATIONS NETWORK PANEL(ATNP)

WORKING GROUP 3 - APPLICATIONS AND UPPER LAYERS

Honolulu, 19 January - 22 January 1999 (fifteenth meeting)

Agenda Item 5.1 : Ground-Ground Applications

Chairman's report, Working Group 3 Subgroup 1

Presented by Jean-Yves Piram

Summary

This paper aims at reporting to the ATNP Working Group 3 about the progress achieved by WG3/SG1 in its Work Programme, since the 14th WG3 meeting in Bordeaux.

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1. INTRODUCTION

This paper aims at reporting to the working group the work achieved by SG1 since the Bordeaux WG3 meeting.

2. MEETINGS

The subgroup has held its 16th meeting in Bordeaux from 5th to 8th October 1998.

There were 8 participants. The list is given in Appendix B.

3. WORK PROGRESS

3.1 Maintenance of CNS/ATM-1 Package SARPs

3.1.1 ATSMHS

An issue concerning the relationship between Distribution Lists (DLs) and Receipt Notifications (RNs) had been identified in the Rio WG3/SG1 meeting. In summary terms, the identified issue was that the MHS base standards specify that a receiving UA will not generate a RN for a subject message, even if requested by a receipt-notification-request in the subject message, if the subject message has been subject to DL-expansion prior to delivery to the considered UA.

In this context, the question to be addressed was whether or not it was likely, from an operational viewpoint, that a SS message (either AFTN or AMHS) would ever be sent to Distribution Lists.

The subgroup has agreed to progress in this area by a combination of the two following approaches:

a) go to operational experts and ask them whether or not it is there may be, in certain operation circumstances, a requirement to send AFTN SS messages to collective AFTN addresses (known as PDAIs, pre-determined addressee indicators); and

b) analyse AFTN long-term traffic logs kept by existing AFTN communication centres, where possible.

3.1.2 AIDC

A recent PDR (98090006, AIDC UCF) has been withdrawn by J. Moulton.

3.2 Work part of the SG1 Work Programme

3.2.1 Extended ATS Message Service

The following has been agreed by the subgroup concerning the Extended ATS Message Service:

Business Extensions

For the Extended ATS Message Service, the study of Business-Class Messaging Extensions to IPM in support of the parameters currently conveyed in the ATS-Message-Header has been continued. The subgroup has agreed the following:

- the information contained in the ATS-Message-Header (AFTN priority and filing time) is critical for the transparency of the AMHS to the conveyance of messages in a AFTN to AMHS to AFTN configuration;

- the only acceptable approach for Business Class extensions (although complex) is the combined use of Directory and of Business Class extensions, where the Directory would be used as a repository of which version (Basic ATS Message Service or Extended ATS Message Service) is supported by a given AMHS user.

Systems Management

A discussion has taken place about the role of the subgroup in this area. The subgroup considered that its role, as an ATN application subgroup, is to provide the Joint Systems Management Subgroup with the Management requirements associated with ground-ground applications, including specific requirements, if any. The subgroup agreed that papers to the JSG relating to ground-ground applications should preferably be to discussed before in WG3/SG1, so as to obtain a consolidated support by the subgroup. This was to guarantee a view on Systems Management agreed by the ground subgroup rather than the views of single individuals.

A preliminary WP on requirements and MO selection for AMHS Management was discussed by the subgroup. The subgroup agreed to pass the paper to the JSG, as the first contribution from WG3/SG1 for future inclusion in SV6, after comments by the JSG as appropriate. The JSG should also be informed that SG1 is still working on this document and that this is still subject to potential changes, but not major ones in the scope of the paper. Also additional MOs will certainly be required for the MTCUs.

This has been done immediately after presentation of the paper in WG3/SG1, i.e. in the Bordeaux 9th JSG meeting, and the paper has been very positively received by the JSG.

The subgroup also agreed that WG3/SG1 should continue investigating the issue to provide a final version of the document.

Concerning the ATN Systems Management CONOPS, it was agreed that the way in which applications are addressed in the ATN CONOPS should be analysed by the subgroup, to see how it applies to the AMHS and whether or not it should be complemented for the support of AMHS. In such a case, the subgroup will provide a basis to the JSG.

Security

The selection of a Security-Class for the SEC Functional Group of the ISP was further discussed by the subgroup.

The subgroup noted that a requirement associated with security class S1, that peer-entity authentication should be used in strictly all information exchanges, was a major drawback against backwards compatibility. After further analysis of S0 (based on end-to-end UA-to-UA message origin authentication, by means of digital signatures), the subgroup proposed to retain S0 as a provisional choice for AMHS security. Any party which would request more security functions to be provided, either by means of S1 or of any other approach, would need to come to WG3/SG1 with a justification for these additional requirements.

It was emphasised that this proposal would allow to use the same public key infrastructure and the same algorithms as other ATN applications, in full consistency with the general ATN security architecture as designed by WG1/SG2.

It was further agreed that this selection of S0 should be reported to WG1/SG2, together with the presented material. This has been done by J.M. Vacher in the 10th WG1/SG2 meeting (Phoenix, December 1998). The WG3/SG1 proposal has then been endorsed by WG1/SG2, also with the provision that any party requesting more security functions to be provided, was invited to submit a justification for these additional requirements

3.2.2 CIDIN/ATN Gateway

A first portion of SARPs text and Guidance Material for the CIDIN/AMHS Gateway has been provided.

The subgroup has agreed that detailed technical reviews of the submitted material will be performed by a special drafting group. It is intended that only the outcome of such drafting group meetings be presented in WG3 for approval. Some more material still needs to be produced before the drafting group meets.

3.2.3 Directory

The work concerning the AMHS use of Directory has been progressed. More specifically, an analysis of the object classes and attribute types has been performed, looking at whether or not such items should be made mandatory in the SARPs.

This is based on the preliminary DIT structure proposed by J. Moulton in the 15th WG3/SG1 meeting (Toulouse, September 1998) and on earlier work by WG3/SG1.

Considering this in-depth work, it has been agreed to give some time to subgroup members for review of the document, before a conclusion is made. However this forms a very good basis and a conclusion on the proposed specification should made in the forthcoming WG3/SG1 meeting.

4. GACS

The subject of the Generic ATN Communication Service (GACS) was discussed in the subgroup. The general view of the subgroup was that despite the intent of the application, which is considered to be mostly for AOC purposes, the current draft specification refers frequently to services which are already existing in the Aeronautical Fixed Service (AFS) or in the AFTN, and which are likely to be conveyed in the AMHS in the context of ATN.

Each subgroup member has been invited to make a detailed reading of the specification, and to provide comments if felt appropriate.

The subgroup agreed to request clarification from WG3 about this overlapping between GACS and existing ATN ground-ground applications, and to ask that such references to services which are part of the Aeronautical Fixed Service be removed from GACS, so as to avoid confusion for readers of the SARPs.

5. FUTURE MEETINGS

The subgroup will meet in Honolulu from 25th to 28th January 1999.

6. RECOMMENDATION

The working group is invited to note the progress achieved by the subgroup.

7. APPENDIX A: STATUS OF WORK ACHIEVED BY THE SUBGROUP

	Main Deliverable		Subdeliverable	Progress
D1	Extended ATS Message Service	D11	Security functionalities for the AMHS	
		D111	Analysis of risks and threats against the ATS Message Service	100%
		D112	Selection of a security (SEC) Optional Functional Group among the definitions of the MHS Profiles, offering an appropriate protection against the identified risks	100%
		D113	Specification of the related SARPs elements	to be started
		D114	Analysis of backwards compatibility against the Basic ATS Message Service	33%
		D12	Message Contents in support of the Extended ATS Message Service	
		D122	Analysis of potential requirements for the support of IPM bodyparts other than those currently specified	20%
		D123	Analysis of suitability of IPM Business Class Messaging Extensions for the support of ATS Message Service parameters	75%
		D124	Specification of the related SARPs elements	to be started
		D125	Compatibility of Extended ATS Message Service (use of Business Class Messaging Extensions) with the Basic ATS Message Service	80%
		D13	Systems Management functionalities for the AMHS	
		D131	Analysis of the AMHS requirements for Systems management	33%
		D132	General specification of the AMHS management concepts	33%
		D133	Specification of the appropriate SARPs material for AMHS Systems Management	N/A

		D14	Directory Functionalities for the ATS Message Service	
		D141	Analysis of the AMHS requirements for Directory Services	75%
		D142	Analysis of the relevance of the Use of Directory OFG and of the FD12 (MHS use of Directory) ISP to meetthe AMHS requirements	75%
		D143	Specification of the related SARPs elements	10%
		D144	Analysis of backwards compatibility against the Basic ATS Message Service	
		D15	CIDIN/ATN Gateway	
		D151	General principles for the gateway	75%
		D152	Specification of the related SARPs elements	20%

8. APPENDIX B : LIST OF MEETING PARTICIPANTS

16th meeting, Bordeaux, 5-8 October 1998:

John Antonucci	(advisor for FAA)	
Thomas Belitz	(DFS)	
Manuel Garcia	(Aena)	
Jim Moulton	(ONS for FAA)	(part time)
Manfred Okle	(Frequentis for DFS)	
Jean-Yves Piram	(STNA)	
Hoang Tran	(FAA)	(part time)
Jean-Marc Vacher	(ON-X Consulting for STNA)	