

ATNP/WG3

WP/4-9

13.10.95

AERONAUTICAL TELECOMMUNICATIONS NETWORK PANEL(ATNP)

WORKING GROUP 3 - APPLICATIONS AND UPPER LAYERS

Banff, 16-20 October 1995 (fourth meeting)

Agenda Item 5 : Ground Applications SARPs

WP/4-9 : Draft SARPs on Message Handling Services over the ATN

(Version 0.2 (provisional) of SG1 SD01)

Presented by the SD01 Editor

Summary

The goal of this working paper is to provide WG3 with a provisional text for Draft SARPs for Message Handling Services over the ATN, which is version 0.2 (provisional) of the standing document SD01 on Message Handling Services over the ATN. The WP also includes with general comments about the changes made and on the work which still needs to be performed.

The proposed text is not considered as mature SARPs material, however it is the basis of SG1 and of the MHS drafting group for the Draft SARPs SARPs for Message Handling Services over the ATN which will be produced for the next WG3 meeting.

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References

- [1] SG1 Standing Document SD01 on Message Handling Services over the ATN, version 0.1 (Approved)
- [2] Draft Minutes of the fourth SG1 meeting (Brussels, 7-9 June 1995)
- [3] Draft Minutes of the Fair Oaks WG3 meeting - limited scope (Fair Oaks, Va., May 1995)
- [4] Definition of the Basic ATS Message Service and Impact on parts 1,2 and 3 of SD01, WP/42 of the Brussels ATNP/WG3/SG1 meeting - J.M. Vacher
- [5] Management Domains in the AMHS, WP/63 of the Banff ATNP/WG3/SG1 meeting - J.M. Vacher
- [6] Editing Updates to Sections 1,2 and 4 of the Manual on ATS Message Handling over the ATN, WP/61 of the Banff ATNP/WG3/SG1 meeting - G. White
- [7] Structure of Draft SARPs for Message Handling Services over the ATN, WP/70 of the Banff ATNP/WG3/SG1 meeting - J.Y. Piram

1. Introduction

1.1 Objective of the WP

The production of draft SARPs and GM for Message Handling Services over the ATN, in support of CNS/ATM-1 Package, is included in the Terms of Reference of the WG3 Ground Applications Subgroup (SG1).

This has been progressed until now in the form of SD01, which is the SG1 standing document on Message Handling Services over the ATN, the latest version of which is version 0.1 (approved) (ref. [1]).

SD01 was initially based on the Draft Manual on ATS Message Handling over the ATN, as endorsed by the ATNP/1 meeting. This applied to both the contents and structure. However SD01 is the support of the work produced by SG1 with the goal of producing Draft SARPs and GM.

A general structure for the CNS/ATM-1 Package SARPs has now been decided (see [3]), into which these SARPs are to be included in Part III. In parallel, a lot of work has been done between some SG1 members in order to clarify the respective roles and places of the Type A and Type B ATS Message Protocol Stacks which are defined in SD01.

The goal of the present version 0.2 (provisional) is to take these changes into account, together with a set of technical changes and refinements which had been identified as necessary in the previous work of SG1.

The goal of this WP is to provide WG3 with this version of SD01, in association with some explanations on the changes made and on the work which still needs to be performed.

1.2 Contents of the WP

This working paper is composed of :

- the present introduction,
- a presentation of the main changes made, including the justification of these,
- an identification of the main changes and refinements which are still to be performed,
- a list of the main conclusions of the Banff SG1 meeting concerning this document,
- a recommendation to WG3.

Version 0.2 of the standing document itself is presented in Appendix 1 to the present WP.

2. Changes made in Version 0.2

2.1. Overall Structure

Due to the need to insert the SARPs for Message Handling Services over the ATN into the overall SARPs document, it was necessary to gather on the one hand the SARPs material, previously included in the Appendices, and on the other hand the Guidance Material, previously included in the Sections.

Furthermore, the main focus had been previously on the Sections, with the background idea that once the framework is set, drafting the SARPs themselves could be done rapidly. However, the need to produce the SARPs within a short timeframe has now placed the emphasis on what used to be the Appendices.

The consequence of this situation is that there is no Guidance Material in Version 0.2 (Provisional). It is likely that GM will be developed later on, based on the previous text of the Sections, when the SARPs Part is ready for validation.

2.2. Detailed Structure

Document [7] identifies the need to clearly separate the "Type A environment" from the "Type B environment".

This has been done in the present version within the following framework, which adopts the terminology proposed in WP/42 ([4]) :

- | | |
|---|---|
| - Part 1 : Terms and Scope
(common to Type A and B), | previous Appendix 1, some elements of
Appendix 2 |
| - Part 2 : ATS Message Service
(Type B environment) | main part of previous Appendices 2 and 3,
Appendix 5, and part of Appendices 6 and 7 |
| - Part 3 : ATN Pass-Through Func-
tionality (Type A environment) | some Elements of Appendix 2, Appendix 4,
and part of Appendix 6 |

2.3. Changes in the Type B environment

The following changes and refinements have been made :

- adoption of the AFTN/AMHS terminology for the AFTN/ATN Type B Gateway. This change is important and it is in line with the change of structure described in 2.2 because it changes

one basic assumption, which was that each AFTN/ATN Gateway would implement both Type A and Type B. This assumption now appears unrealistic;

- clarification of the systems supported in the Basic ATS Message Service,
- inclusion of the changes proposed in WP/63 ([5]) for the AMHS organization, where each ATS Messaging Organization shall be a MHS Management Domain,
- inclusion of the EoS classification, together with requirements on the dynamic behaviour in the context of the Basic ATS Message Service,
- inclusion of part of the PRLs (AMH21 profile), still to be completed,
- split in the AFTN/ATN Gateway specification to isolate that part of the specification which is relevant to a Type B gateway only.

2.4. Changes in the Type A environment

The following changes and refinements have been made :

- refinement of the definition of the ATN Pass-Through Functionality,
- inclusion of the architecture recommended by SG3 for the Type A Protocol Stack, still to be completed,
- split in the AFTN/ATN Gateway specification to isolate that part of the specification which is relevant to a Type A gateway only,
- addition of a placeholder for Type A / Type B transition provisions (to address the need for a Type A / Type B .Gateway in order to avoid isolation of two non-communicating islands).

2.5. Editorial changes

A number of editorial changes have been made to enhance the consistency of the document. Some necessary changes previously identified by grey areas and references to previous WPs have also been addressed in the course of the drafting of this version. However some of them are still to be done.

From a purely formal viewpoint, the following practices have been adopted by the Editor in order to produce a legible document, while keeping some track of the changes done :

- the standard practice has been to use revision marks and grey areas when modifying the document, in line with the methodology defined at the Toulouse SG1 meeting,

- there are cases where revision marks have not been used, for the sake of legibility : when changing characters from lower to upper case, when cutting and pasting sections in the Document (wherever they come from in version 0.1),
- due to the high number of changes, it has not been possible to always maintain a clear emphasis on the references to sources for changes. This has been done as much as possible but it is likely that the pointer to some changes identified or closed in this version might have been lost. This will need to be upgraded in due time. However, a full review of the document is necessary from this version, due to the split between Type A and Type B which alters some of the basic concepts.

3. Amendments which are still to be performed

3.1. Changes in the Type B environment

The following changes and refinements are still to be made :

- inclusion of a new AMHS addressing structure which solves the deficiencies already identified,
- completion of the PRLs (completion of AMH21 profile and inclusion of AMH22/AMH11),
- completion of the mapping principles for the AFTN/AMHS Gateway concerning AFTN parameters which do not have a direct MHS equivalent,
- completion of the gateway specification, including the principles mentioned above and an appropriate error handling,
- inclusion of the management provisions.

3.2. Changes in the Type A environment

The following changes and refinements are still to be made :

- completion of the Type A Protocol Stack specification,
- revision of the AFTN/ATN Type A Gateway specification in line with the specification above,
- inclusion of Type A / Type B transition provisions.

4. Summary of main changes adopted during Banff SG1 meeting

The terminology of SD01 was reviewed and amended as follows :

- Messaging Applications shall become Messaging Services,
- the ATN Pass-Through Functionality shall become the ATN Pass-Through Service,
- the term ATS Message Exchange Service (MXS) shall be replaced by the ATN Pass-Through Service.

In summary, and for a better understanding of SD01, the main concepts used for Messaging Handling Services over the ATN are depicted in the Table below.

Name of service	ATS Message Service	ATN Pass-Through Service
scope of use	long-term solution	short-term transitional purpose
transmission mode	store-and-forward	direct point-to-point
ATN End Systems implementing the service	- ATS Message Server - AFTN/AMHS Gateway	AFTN/ATN Type A Gateway
protocol stack	ATS Message Protocol Stack Type B	ATS Message Protocol Stack Type A
Architecture	ISO MHS (ISPs for ISO 10021)	SG3 Upper Layer Architecture (ACSE Ed.2 over Fast Byte)

5. Recommendation

The working group is invited to take note of the information in the present document, to review the version 0.2 of SG1 Standing Document SD01 on Message Handling Services over the ATN, and to forward any comment to the SD01 Editor for processing by the MHS drafting group designated by SG1.

Appendix A : Version 0.2 (Provisional) of
SG1 Standing Document SD01