

ATNP/WG3

WP/8-3

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AERONAUTICAL TELECOMMUNICATIONS NETWORK PANEL(ATNP)

WORKING GROUP 3 - APPLICATIONS AND UPPER LAYERS

Alexandria, 7-15 October 1996 (eighth meeting)

Agenda Item 5 : Subgroup Reports

WP/8-3 : Chairman's report on SG1 progress

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Summary

This working paper aims at reporting to WG3 the progress of the Ground Applications Subgroup (SG1).

It includes the work realized by the subgroup between the Munich and Alexandria WG3 meetings.

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References

- [1] Draft SARPs for ATS Message Handling Services (ATSMHS), version 2.0a
- [2] Draft SARPs for Inter-Centre Communications (ICC), version 2.0

1. Introduction

The goal of this working paper is to report to WG3 about the tasks performed and the results achieved by the Ground Applications Subgroup (SG1), since the Munich WG3 meeting.

2. Way of working and meetings

The subgroup has held one meeting since the Munich WG3 meeting :

- ninth meeting : 23-26 September 1996, Toulouse.

The meeting has included a co-ordination session with experts of the ADS Panel, just after completion of the ADSP/4 full panel meeting. The meeting date had been fixed with this objective, so as to allow SG1 to be informed of the outcome of ADSP/4, and to make it possible to take into account this outcome in the work about ICC SARPs.

Electronic co-ordination has also been performed concerning the ATSMHS SARPs, during this timeperiod, this has allowed to solve a significant number of comments on the ATN Pass-Through Service specification, without need for a specific meeting.

3. Work progress

As planned in the Munich meeting, SG1 has been progressing in the production of its deliverables concerning the defined ATN ground-ground applications, the ATS Message Handling Services (ATSMHS) and the Inter-Centre Communications (ICC).

3.1. ATS Message Handling Services (ATSMHS)

3.1.1. Draft SARPs

3.1.1.1. Production of the ICAO baseline version (2.0a)

Following the WG3 Munich meeting, the agreed changes have been taken into account to produce version 2.0a. A few additional comments on Chapter 3.1.3 (ATN Pass-Through Service) were also introduced and discussed electronically, most of them being resolved prior to the distribution of Version 2.0a to the WG3 participants. The same version was sent to the ad-hoc editorial group performing the Word6 to WordPerfect conversion, before delivery of the SARPs to ICAO.

The outcome of this work was Version 2.0a, dated 4th July 1996, which is the version transmitted to ICAO for presentation at ATNP/2 (see [1]).

3.1.1.2. Defect Reports

A few more comments were made on Version 2.0a, in addition to those unresolved prior to distribution of version 2.0a, resulting in approximately 20 pending comments before the 9th SG1 meeting. Two or three more comments also arrived after the SG1 meeting.

Among these comments, some were recognized as being purely matters of English and supposed to be corrected by the ICAO Secretariat. One of them was discussed and rejected by the subgroup, on the reason that the comment was based on assumptions in contradiction with the ATSMHS SARP's background (e.g. use of non-default values at the AFTN/AMHS Gateway). The remaining comments were summarised in 17 defect reports, some of them with an impact on several SARP's sections or clauses.

SARP's amendments were proposed and adopted by the subgroup to solve 16 of the pending defects. The full description of these is proposed for approval by WG3/8, presented as a separate WP including the defect reports and the associated SARP's change proposals (see WP/8-4).

This description has also been included in the Draft Validation Report for the ATSMHS SARP's (see 3.1.3).

3.1.2. Guidance Material

The Draft Guidance Material for ATSMHS has been progressed to its version 0.3, taking into account a number of comments, most of them being editorial, made since the Brussels SG1 meeting and the Munich WG3 meeting.

3.1.3. Validation Report

The first version of the ATSMHS Validation Report, numbered 0.1, was approved by SG1 for presentation to WG3. Its structure is aligned on the structure adopted by SG2 for the ADS Validation Report (and for other ATN air-ground applications), and very close to the standard structure proposed in WG3 WP7-37.

This validation report gives an overview of the validation exercises carried out by a number of States, Organisations and companies. It includes the defect reports identified in the validation process (mostly through inspection and analysis). It finally describes the level of validation which is considered to have been reached to date, with respect to each validation objective (VO).

This Validation Report relies strongly on the existence of off-the-shelf MHS software products which provide an almost complete basis for two types of specified systems, the ATS Message Server and the ATS Message User Agent.

Its attachments include the a print-out of the ATSMHS validation database (« shall » database), information papers dedicated to the presentation of certain validation exercises, and the full list of comments against the ATSMHS SARP's since its proposed version 1.0. This document is presented as WP/8-5.

3.2. Inter Centre-Communications

3.2.1. Draft SARP's

3.2.1.1. Production of the ICAO baseline version (2.0)

Following the WG3 Munich meeting, the agreed changes have been taken into account to produce version 2.0. This version was sent at the same time to the WG3 participants and to the ad-hoc editorial group performing the Word6 to WordPerfect conversion, before delivery of the SARP's to ICAO.

The outcome of this work was Version 2.0, dated 1st July 1996, which is the version transmitted to ICAO for presentation at ATNP/2.

3.2.1.2. Defect Reports

A few more comments were made on Version 2.0, internally to SG1, resulting in 17 pending comments before the 9th SG1 meeting.

Additionally, the Drafting Session with ADSP participants highlighted:

- a) a few changes in Part 6 of the ADSP Manual, to be taken into account in the AIDC SARPs (e.g. change of classification of certain parameters from mandatory to optional);
- b) an additional operational requirement (OR), which was not correctly captured yet, concerning the requirement to exchange certain types of AIDC messages having no correlation with a phase of flight, i.e. before any Association between the corresponding ATSUs is made.

A few concerns were expressed by certain ADSP participants, which may be summarised as follows:

- a) the enforcing of message sequencing should not be performed in the AIDC application itself but should be left open to the application user;
- b) the high number of transport connections, resulting from the need to establish one transport connection between two centres for each active flight, was considered as a potential drawback;
- c) a potential performance issue could arise due to the number of connections mentioned above.

It was agreed that the message sequencing issue could be solved adequately when the additional OR is properly integrated in the SARPs. Concerning the number of transport connections, it was recognized that this issue should be solved in the CNS/ATM-2 Package when the Upper Layer Communication Services include ACSE Edition 3 (also known as A2CSE).

SARPs amendments were proposed and adopted by the subgroup to solve the pending defect reports. The full description of these is proposed for approval by WG3/8, presented as a separate WP including the defect reports and the associated SARPs change pages. It may be noted that the inclusion of the additional OR has a significant impact in terms of modified pages.

This description has also been included in the Draft Validation Report for the ICC SARPs (see 3.2.3).

3.2.1.3. AIDC/ICC Relationship

The need for a cover sheet in the ICC SARPs, clarifying that in the CNS/ATM-1 Package the AIDC is the only standardized ICC application, was also discussed in the subgroup.

SG1 agreed that the right place to describe this relationship was the ATNP/2 presentation WP for the ICC SARPs. The subgroup agreed to propose WP/131 to WG3 for this purpose, on the basis of the initial presentation WP. This WP will be separately submitted to WG3 as WP8-10.

3.2.2. Guidance Material

A first version of the Draft Guidance Material for ICC has been drafted, and is proposed to WG3 as Version 0.1 of the AIDC Guidance Material (see WP8-9).

3.2.3. Validation Report

The first version of the ICC Validation Report, numbered 0.1, has been produced subsequent to the SG1 meeting, and is presented to WG3 as WP/8-8.

SG1 agreed that its structure should be aligned on the structure adopted for the ATSMHS Validation Report, which is very close to the standard structure proposed in WG3 WP7-37.

The fact that only a limited number of AIDC SARPs validation exercises has been performed to date, was noted by the subgroup. This includes mostly inspection and analysis, some modelling tasks as reported by Eurocontrol, concerning the modelling of an OLDI C-ATSU and an AIDC D-ATSU gateway in terms of message sequencing and timers, and a first run of ASN.1 compiler on the message description. The modelling exercise has raised confidence in the feasibility of a gateway function between implementations of OLDI and AIDC.

The validation report gives an overview of the validation exercises carried out by States, Organisations and companies. It includes the defect reports identified in the validation process. It finally describes the level of validation which is considered to have been reached to date, with respect to each validation objective (VO).

4. Future Work Programme

4.1. Future work programme on ATSMHS

Concerning ATSMHS, SG1 agreed to propose to WG3 the inclusion of the following items in the ATNP future Work Programme:

- a) to further enhance the ATSMHS SARPs, by the development of the Extended ATS Message Service specification. These enhancements should be based on needs and requirements which have already been identified in the course of the ATNP WG3 and SG1 discussions. The Extended ATS Message Service specification, to be inserted in the next issue of the ATSMHS SARPs, should include:
 - 1) an upgraded P2 heading specification, taking benefit of IPM-heading-fields extensions to include the parameters currently specified as being part of the ATS-Message-Header;
 - 2) security functionalities based on the use of the SEC functional groups defined in the MHS ISPs;
 - 3) MHS management functionalities, in a manner consistent with the general ATNP strategy for systems management;
 - 4) MHS directory functionalities, in a manner consistent with the general ATNP strategy for directory functions;

- b) to analyse the potential requirements for inclusion of new content elements in the scope of the Extended ATS Message Service, and to derive technical specifications to be included in the SARPs as appropriate. The following should specifically be considered:
- 1) content types other than those currently specified (EDI Messaging);
 - 2) IPM body parts other than those currently specified;
- c) to provide support and guidance, in the form of appropriate ICAO documents, to the ICAO bodies involved in the planning and deployment of ATSMHS, concerning:
- 1) AMHS organisation in Management Domains, addressing and routing;
 - 2) transition from the ATN Pass-Through Service to the ATS Message Service (AMHS);
 - 3) to consider the transition to AMHS from environments other than the AFTN, and to determine whether this is relevant to panel activities or to regional bodies.

4.2. Future work programme on ICC

The lack of a formal expression of operational requirements for ICC applications other than AIDC (e.g. Flight Planning Service) was recognized by the subgroup as a serious drawback to the further expansion of ICC SARPs.

The subgroup agreed to invite WG3 to report to ATNP/2 that, if other ICC ground-ground applications are to be included in SARPs, an operational concept and a description of operational requirements should first be developed by the appropriate ICAO body (ADS Panel or other).

Due to this situation, no specific work item other than AIDC SARPs evolution and maintenance was mentioned for the Future work programme on ICC.

4.3. Working organisation

SG1 agreed to draw WG3's attention on the need to define, at ATNP level, an appropriate working structure, or to pro-rogate the existing one, for the execution of the post ATNP/2 work programme.

5. Recommendations

The Working Group is invited to note the information included in the present report, and to endorse the work achieved by the subgroup.

The Working Group is also invited to report to ATNP/2 on the specific items and issues proposed in this paper for input to the ATNP/2.

Appendix A : List of SG1 meeting participants (9th meeting)

The participants were :

Peter Bailey	EUROCONTROL (ICC Drafting Group with ADSP participants only)
Eivan Cerasi	EUROCONTROL
Robert Chouraqui	DGAC (ICC Drafting Group with ADSP participants only)
Efifiom Edem	SITA
Anne Frisch	DGAC (ICC Drafting Group with ADSP participants only)
Manuel García	AENA
Jean-François Grout	DGAC (ICC Drafting Group with ADSP participants only)
Claude Leclerc	EUROCONTROL
Tetsuo Mizoguchi	MELCO
Jim Moulton	ONS
Manfred Okle	DORNIER
Stephen Pearce	AIRSERVICES AUSTRALIA
Jean-Yves Piram	DGAC
Ricardo Porras	ISDEFE
Mamadou Traoré	ASECNA
Jean-Marc Vacher	ON-X
Gordon Wilks	NATS