

ATNP/WG3

WP/10-15

17/06/97

AERONAUTICAL TELECOMMUNICATIONS NETWORK PANEL(ATNP)

WORKING GROUP 3 - APPLICATIONS AND UPPER LAYERS

Langen, 23-26 June 1997 (tenth meeting)

Agenda Item 8 : Planning for Future Work Program

WP/10-15 : Proposed SG1 Future Work Program

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Summary

This paper proposes a list of SG1 deliverables which need to be developed by SG1 as part of the future WG3 work programme endorsed by the ATNP/2 meeting.

The paper also proposes a work breakdown structure to identify tasks and sub-deliverables allowing to meet the overall delivery objective for ATNP/3.

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REFERENCES

- [1] ATNP/2 report on Agenda Item 5
- [2] ATNP/2 report on Agenda Item 6

1. INTRODUCTION

The objective of this WP is to propose a structured set of tasks to be performed by SG1 in order to achieve the work programme assigned by ATNP/2 to WG3, as far as ground-ground applications are concerned.

The completion of Guidance Material for the initial set of ATN ground-ground application SARPs is a well-defined SG1 work item, which should be completed by ATNP WG3/2; i.e. well before ATNP/3. It is not further mentioned in this WP.

2. BACKGROUND

2.1 WG3 Work Programme

2.1.1 General

The ATNP future work programme resulting from the ATNP/2 meeting is outlined in two separate parts of the ATNP/2 report:

- at the highest level, the work programme and the work items are summarized in the ATNP/2 report on Agenda Item 6 (future work programme);
- from a more technical perspective, details about a specific item of this work programme are given in the ATNP/2 report on Agenda Item 5 (preparation of future CNS/ATM Packages (SARPs and GM) and other ATN-related documents).

2.1.2 Work items

The ATNP work items which are relevant to WG3 are as follows:

CNS-9403	Define the technical specification for the interface between CIDIN and ATN, and develop appropriate SARPs and GM.
CNS-8101	Monitor the implementation of AFTN, CIDIN and ATN and address questions related to the transition to ATN. Develop solutions to related issues.
CNS-9403	Develop Draft SARPs and GM for network, transport and upper layers of the ATN in compliance with the OSI reference model for the support of a final package of ATM applications, taking into account new technologies.
"	Define a mechanism and technical specifications for ATN Security and Systems Management. Develop appropriate SARPs and GM.

2.1.3 Refinement into WG3 tasks

The general task descriptions above are then refined as follows in the report on Agenda Item 5, as far as SG1 is concerned (see section 5.3.1.3.1 of [1], "work items associated with ground-ground applications"):

- "l) provisions for extended message handling system (MHS) consistent with the facilities defined by ISO and ITU-T;

- m) investigation of the development of additional categories of services, such as electronic data interchange messaging system (EDIMS);
- n) provision of X.500 directory Services integrated with other ATN applications including CM and ATSMHS;
- o) investigation of the use of inter-personal message (IPM) heading field for convergence of ATSMHS parameters; and
- p) development of SARPs and Guidance Material for CIDIN/ATN operation."

2.2 Sources of information on requirements

The SG1 deliverables resulting from the work programme above should take into account documents which are varied in nature and source. The following documents have been identified as potential sources of information on requirements upon which the SG1 deliverables can be elaborated:

- the concepts developed by WG1 in its pre-ATNP/2 work programme which include:
 - the ATN naming, addressing and registration concept included as Appendix A to the report on ATNP/2 Agenda Item 4;
 - the overall security concept presented as an Appendix to ATNP/2 WP/25;
 - the overall systems management concept presented as an Appendix to ATNP/2 WP/26;
- the ADSP documents which describe operational requirements for ATN applications:
 - the ADSP Manual on data link applications;
 - any other ADSP documentation as appropriate;
- regional plans developed by ICAO Regional Groups (technical and operational), which may describe the intentions of States and Organizations as far as implementation is concerned, and which may identify areas for co-ordination with ATNP Working Groups;
- any other as appropriate.

3. PROPOSED SG1 LIST OF DELIVERABLES

The following is the proposed high level list of SG1 deliverables, incorporating the different work items listed in section 2.1:

- D1 Draft SARPs for the Extended ATS Message Service;
- D2 Draft SARPs for Inter-Centre Communications (including a set of operational services which extends beyond AIDC);
- D3 Draft SARPs for the Directory Service;
- D4 Guidance Material for AMHS deployment.

4. PROPOSED SG1 WORK BREAKDOWN STRUCTURE

A set of sub-deliverables may be associated to each of the deliverables identified above, some of them corresponding to interim results necessary for the proper progress of the tasks.

These are detailed in the following sections.

4.1 Extended ATS Message Service

It is expected that the following tasks will be performed, and the following documents will be produced, in the overall context of the production of deliverable D1 (Draft SARPs for the Extended ATS Message Service):

- D11 Specification of the security features pertaining to the Extended ATS Message Service:
 - D111 Analysis of risks and threats against the ATS Message Service;
 - D112 Selection of a security (SEC) Optional Functional Group among the definitions of the MHS Profiles, offering an appropriate protection against the identified risks;
 - D113 Specification of the related SARPs elements;
 - D114 Analysis of backwards compatibility against the Basic ATS Message Service;
- D12 Specification of the message contents supported in the Extended ATS Message Service:
 - D121 Analysis of potential requirements for the support of EDI Messaging (EDIMG) and EDIMG content type;
 - D122 Analysis of potential requirements for the support of IPM bodyparts other than those currently specified;
 - D123 Analysis of the relevance of IPM business heading-extensions to support the conveyance of the parameters currently included in the ATS-Message-Header;
 - D124 Specification of the related SARPs elements;
 - D125 Analysis of backwards compatibility against the Basic ATS Message Service;
- D13 Specification of the systems management features pertaining to the Extended ATS Message Service:
 - D131 Analysis of the AMHS requirements for systems management;
 - D132 General specification of the AMHS management concepts;
 - D133 Specification of the appropriate SARPs material for AMHS Systems Management;
- D14 Specification of the directory functionalities pertaining to the Extended ATS Message Service:
 - D141 Analysis of the AMHS requirements for Directory services;

- D142 Analysis of the relevance of the Use of Directory (DIR) Optional Functional Group defined in the MHS Profiles, and of the FD12 (MHS Use of Directory) ISP to meet the AMHS requirements for Directory Services;
- D143 Specification of the related SARPs elements;
- D144 Analysis of backwards compatibility against the Basic ATS Message Service;
- D15 Specification of the CIDIN/ATN Gateway:
 - D151 General principles for the gateway;
 - D152 Specification of the related SARPs elements;
- D16 Consolidation of the specified SARPs elements into an Annex 10 Amendment proposal, including subsetting rules clarifying the Basic vs. Extended ATS Message Service relationship;
- D17 Validation exercises and report for the Extended ATS Message Service;
- D18 Guidance Material for the Extended ATS Message Service.

4.2 Inter-Centre Communications

It is expected that the following tasks will be performed, and the following documents will be produced, in the overall context of the production of deliverable D2 (Draft SARPs for Inter-Centre Communications extending beyond AIDC):

- D21 Specification of the additional operational services supported in ICC:
 - D211 Identification of ADSP documents (existing or forthcoming) which are relevant to the future work of SG1, and of current tasks of ADSP Working Groups A and B which may impact the future work;
 - D212 Analysis of the operational requirements to be fulfilled by the ICC SARPs (if any) as identified in the documentation of ADSP and of ICAO Regional bodies;
 - D213 Specification of the related SARPs elements;
 - D214 Analysis of backwards compatibility against the ICC application implementing only the AIDC services;
- D22 Consolidation (if appropriate) of Inter-Centre Communications and of the Ground-Ground segment of Air-Ground Applications;
 - D221 Analysis of the overall operational concept in which such communications take place;
 - D222 Analysis of the relevance of such consolidation for ground forwarding of ADS messages and of CM messages;
 - D223 Specification of the related SARPs elements (if required);

- D224 Analysis of backwards compatibility (if any change) against the ICC application implementing only the AIDC services and against the "Package-1" Air-Ground application SARPs;
- D23 Incorporation of the use of ACSE Edition 3 in the AIDC/ICC SARPs;
- D231 Analysis of the impact of ACSE Ed. 3 on the AIDC SARPs, relationship with the ATN Upper Layer Communication Services;
- D232 Specification of the related SARPs elements;
- D233 Analysis of backwards compatibility against the AIDC SARPs using ACSE Ed. 2;
- D24 Consolidation of the specified SARPs elements into an Annex 10 Amendment proposal, including subsetting rules clarifying the AIDC vs. ICC relationship;
- D25 Validation exercises and report for the ICC SARPs extending beyond AIDC;
- D26 Guidance Material for Inter-Centre Communications;

4.3 Directory Service

It is expected that the following tasks will be performed, and the following documents will be produced, in the overall context of the production of deliverable D3 (Draft SARPs for the Directory Service):

- D31 Scope of the Directory Service:
 - D311 Analysis of the service and information to be provided in support of ATSMHS;
 - D312 Analysis of the service and information to be potentially provided in support of other applications;
 - D313 Analysis of the relationship with CM;
 - D314 Consolidation into a document defining the scope of the Directory Service, which could be either an ATSMHS Directory Service or an ATN Directory Service;
- D32 Definition of the Directory Information Tree (DIT) and Directory Schema;
- D33 Specification of the related SARPs elements in the form of an Annex 10 Amendment proposal;
- D34 Analysis of backwards compatibility with the CM application;
- D35 Validation exercises and report for the Directory Service;
- D36 Guidance Material for the Directory Service.

4.4 Guidance Material for ATSMHS Deployment

This deliverable D4 comes as an answer to the potential requirement of ICAO Regional Groups, or more generally of user communities, which may need guidance concerning technical, operational, organisational or institutional considerations. This may include guidance on:

- 1) AMHS organisation in Management Domains, addressing and routing;
- 2) transition from the ATN Pass-Through Service to the ATS Message Service (AMHS);
- 3) transition strategy from AFTN and CIDIN environments to AMHS.

It is expected that the following tasks will be performed, and the following documents will be produced, in the overall context of the production of deliverable D4 (Draft SARPs for AMHS deployment):

- D41 Analysis of the institutional framework as defined by WG1;
- D42 Analysis of areas where guidance is expected by States and Organizations;
- D43 Development of deployment Guidance Material.

The form of deliverable D4 is yet undetermined. This may be additional material to the Guidance Material defined in conjunction with the initial ATN SARPs, which are expected to be more implementor/developer oriented, or this may be subject to the production of separate documents, if appropriate.

5. RECOMMENDATION

The meeting is invited to endorse the proposed list of SG1 deliverables, and the proposed SG1 work breakdown structure, as the future work programme of its ground applications subgroup between now and the ATNP/3 meeting.