AERONAUTICAL TELECOMMUNICATIONS NETWORK PANEL(ATNP)

WG 3 - APPLICATIONS AND UPPER LAYERS – 17TH MEETING

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Status report about the draft SARPs for the Extended ATS Message Service

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Summary
This paper identifies the level of progress achieved in the specification of the Extended ATS Message Service, which is one of the major WG3/SG1 deliverables to ATNP/3.

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1. INTRODUCTION

The goal of this paper is to provide the Working Group with a view about the progress of the Draft SARPs for the Extended ATS Message Service, which is part of the Subgroup 1 list of deliverables to WG3 and WGW in preparation for the ATNP/3 meeting.

2. BACKGROUND

The Proposed SG1 Work Program, as endorsed by the WG3 in its Langen meeting (June 1997), included under the overall title D1 « Draft SARPs for the Extended ATS Message Service » a number of subdeliverables identified as follows :

D11   Specification of the security features pertaining to the Extended ATS Message Service ;

D12   Specification of the message contents supported in the Extended ATS Message Service ;

D13   Specification of the systems management features pertaining to the Extended ATS Message Service ;

D14   Specification of the directory functionalities pertaining to the Extended ATS Message Service ;

D15   Specification of the CIDIN/ATN Gateway ;

D16   Consolidation of the specified SARPs elements into an [ICAO Document 9705] Amendment proposal, including subsetting rules clarifying the Basic vs. Extended ATS Message Service relationship.

3. GENERAL RESULTS AND CONSIDERATIONS

The Extended ATS Message Service has been specified as part of the existing SARPs. It is therefore described as an additional level of functionality, which can be supported or not by each AMHS system, and its specification is totally embedded in the former specification for the Basic ATS Message Service.

A potential issue is the use of the latest (yet unpublished) version of the MHS base standards and of the ISO ISPs. These have been put together by the ISO MHS Editor. However the approval process is still unclear at this stage. ICAO member States and ATNP participants are invited to liaise with their national standardisation body (e.g. BSI, DIN, ANSI, etc.) to generate support for the progress of these MHS standard versions within ISO.

Notes and Editor's Notes are still very numerous in the text of the draft SARPs for the Extended ATS Message Service. A final review is expected to take place, in order to restrict this to the minimum required and to move the rest of the material to the CAMAL.

4. PROGRESS FOR EACH "COMPONENT" OF THE EXTENDED ATS MESSAGE SERVICE

4.1 AMHS Security

4.1.1 Tasks performed

In this area, the main results are as follows :

- A risk analysis has been produced,

- A security-class (S0) defined in the MHS ISPs has been selected as an appropriate set of counter-measures against the identified risks,

- The compability with the overall ATN Security has been looked for and achieved at a maximum level : the intention is to use part of the same cryptographic system (namely, the Elliptic Curve Digital Signature Algorithm ECDSA) and the same Public Key Infrastructure as the other ATN applications,

- The specification has been included in the Draft SARPs in a preliminary form,

- Backwards compatibility with systems implementing only the Basic ATS Message Service is foreseen and should be confirmed soon.

4.1.2 Items remaining for study / production

The following subjects are expected to be addressed by the forthcoming WG3/SG1 meeting(s), and in relation with WG1/SG2 :

- Determination of an appropriate security policy for AMHS Gateways (what is the use made of security by AMHS Gateways),

- Determination of the level of protection to be used for each message category, and of the general policy to be applied in this area : should this be specified in the SARPs, as a requirement placed on users, or should be specified at the level of implementation groups, e.g. ICAO Regions, or should it be left open to the decision of individual users ?

- Finalisation of the SARPs in view of the elements above and of the detailed information to be provided by WG1/SG2.

4.2 Message contents in the Extended ATS Message Service

4.2.1 Tasks performed

In this area, the main results are as follows :

- A preliminary selection of IPM body-parts in support of CIDIN applications has been made,

- The use of IPM heading extensions (the so-called « Business-Class » extensions) has been specified as a replacement of the ATS-Message-Header mechanism,

- Backwards compatibility requirements and mechanisms have been taken into account in the SARPs. This relies heavily upon the ATN Directory Services to obtain information about recipients capabilities.

4.2.2 Items remaining for study / production

The topics which need to be addressed in this area are rather limited and are as follows:

- Confirmation of the body-part selection for the support of the CIDIN OPMET application,

- Drafting of the guidance material clarifying the use of Directory to determine remote user's capabilities,

- Finalisation (in the draft Sub-Volume 7, in co-ordination with WG3/SG3) of the specification of the *amhs-user* object-class.

4.3 Systems Management

Work related to AMHS Systems Management has been limited to the scope of Sub-Volume 6 :

- Standard MHS Managed Objects have been selected and simplified for inclusion in the ATN XMIB,

- Specific AMHS Managed Objects have been grossly specified for the same purpose. This remains to be completed.

- The relationship to Sub-Volume 6 still needs to be inserted in the Draft SARPs for the Extended ATS Message Service where Systems Management considerations have not been modified with respect to those included for the Basic ATS Message Service.

4.4 Use of Directory

4.4.1 Tasks performed

In this area, the main results are as follows :

- The AMHS requirements for Directory Services have been identified ;

- Standard Directory Object-Classes and Attributes have been selected and adapted where necessary for the support of AMHS (this remains to be finalised) ;

- The use of Directory in support of AMHS has been specified in the Draft SARPs, usually by general clauses cross-referencing to Sub-Volume 7.

4.4.2 Items remaining for study / production

The Draft SARPs for the Extended ATS Message Service include a minimal number of clauses related to the ATN Directory, and this is considered to be practically completed. Other significant items remaining to be performed are :

- The Directory Object-Classes and Attributes need to be finalised ;

- Comprehensive Guidance Material might be required to cover interactions between the ATS Message Service and the ATN Directory, most of these being implementation dependent.

4.5 CIDIN/ATN Gateway

This subject has been progressed in co-ordination with the work on the Extended ATS Message Service. It is the subject of separate working papers and will not be further discussed here.

4.6 Consolidation into a Document 9705 Amendment proposal

The change pages resulting from the work above are attached as an Appendix to this paper. This engineering version is a Version 0.2 which cannot be considered as a final Draft. It will be reviewed and upgraded during the forthcoming WG3/SG1. However there is a high level of confidence that the final Draft will be produced for the December WG3 and WGW meetings, if not before.

5. RECOMMENDATION

The Working Group is invited to note the work completed and to comment, as appropriate, the additions proposed to ICAO Sub-Volume 3 for the specification of the Extended ATS Message Service.

The Working Group is also invited to note the WG3/SG1 intention to deliver at the earliest opportunity (and in any case by the WG3 December meeting) a final Draft of this specification.