

ATNP/WG3

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**AERONAUTICAL TELECOMMUNICATIONS NETWORK PANEL(ATNP)**

**WORKING GROUP 3 - APPLICATIONS AND UPPER LAYERS**

Gran Canaria, 27<sup>th</sup> September – 1<sup>st</sup> October 1999 (seventeenth meeting)

Agenda Item 5.1 : Ground-Ground Applications

Chairman's report, Working Group 3 Subgroup 1

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**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 16th WG3 meeting in Naples.

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## **1. INTRODUCTION**

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

## **2. MEETINGS**

The subgroup has held its 18th meeting in Naples from 25th to 28th May 1999.

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**

There has been no specific maintenance activity concerning ATSMHS SARPs.

#### **3.1.2 AIDC**

Two AIDC PDRs have been submitted, due to a new implementation project starting at CENA. These PDRs are currently underway at CCB.

One PDR is related to the AIDC state machine and appears to be a SARPs misinterpretation; as such the PDR has been proposed for rejection. The other PDR is related to parameter values in abort indication primitives and is proposed for acceptance by CCB. This second PDR does not affect interoperability between implementations.

### **3.2 Work part of the SG1 Work Programme**

#### **3.2.1 Extended ATS Message Service**

The work concerning the Extended ATS Message Service has significantly progressed over the past time period. A first draft of the CNS/ATM-2 ATSMHS SARPs (Draft SARPs for the Extended ATS Message Service) has been presented and discussed by the subgroup. This draft did not include the incorporation of the clauses regarding the support by an AFTN/AMHS Gateway of the Extended ATS Message Service.

A further version (0.2) of the Draft SARPs for the Extended ATS Message Service has been produced and is tabled in this WG3 meeting. It is not yet considered a final draft, but it is well advanced and will reach completion by the December round of ATN Panel meetings. This version 0.2 will be analysed and discussed by the forthcoming WG3/SG1 meeting.

#### **AMHS Security**

There has been work co-ordination with WG1/SG2 (through Mike Bigelow) on AMHS Security in the context of the Extended ATS Message Service. There is an agreement to use only asymmetrical digital signature mechanisms, using an algorithm (ECDSA) and a Public Key Infrastructure common to the overall ATN and to the AMHS, as announced earlier.

In summary the AMHS will align with those parts of the Overall ATN Security Approach that are necessary as counter-measures to identified threats.

### **3.2.2 CIDIN/ATN Gateway**

The work already in progress for the production of SARPs text and Guidance Material for the CIDIN/AMHS Gateway has been continued and has advanced a lot.

An ad-hoc drafting group session has taken place. It has allowed to perform a line by line review of the existing material, and to establish principles which will be the basis for the further drafting of the specification. This drafting group meeting has also ensured proper co-ordination between the CIDIN/AMHS Gateway SARPs and the SARPs for the Extended ATS Message Service, which are closely related. The subgroup will review the material available as the outcome of this ad-hoc meeting.

At least one additional drafting group meeting is expected to take place between the 17<sup>th</sup> and the 18<sup>th</sup> WG3 meetings. The work remaining to do is significant in volume but will highly benefit of the specification techniques (and even of the some of the text itself) already used for the AFTN/AMHS Gateway.

### **3.2.3 Directory**

The work concerning the AMHS use of Directory has been progressed further and is now nearing completion. It has been provided to WG3/SG3 for inclusion in the draft Sub-Volume 7, and co-ordination with this subgroup has proven successful in the sense that the material provided by SG1 has been incorporated in the ATN Directory SARPs.

A review of Sub-Volume 7 will now be performed by WG3/SG1 to check the overall ATN/AMHS Directory consistency. Minor additions are also expected in support of AMHS Gateways. This will be performed during the forthcoming SG1 meeting.

It has been noted that the co-operation of the AMHS and of the ATN Directory will in many instances be a matter of implementation, subject mostly to Guidance Material rather than SARPs. Such material remains to be developed.

### **3.2.4 AMHS Systems Management**

There has been co-ordination and exchange of papers with the Systems management Joint Subgroup (JSG). AMHS Managed Object Classes are included in the overall ATN Managed Objects (specified in Sub-Volume 6).

These object classes are derived from the X.400 Management base standards, for some of them, or they are specific to the AMHS, in particular for the AMHS Gateways (CIDIN or AFTN).

The basis for the development of these System Management considerations has been the informal knowledge and experience of systems management in a store-and-forward messaging environment, i.e. the practical experience of AFTN or CIDIN management. Guidance Material will be necessary to document these views.

### **3.2.5 Conclusions on the Extended ATS Message Service**

The draft SARPs for the Extended ATS Message Service are now well advanced and should be completed for the December round of meetings.

Additionally, the need for Guidance Material has been identified at several occasions, and the development of such material, which could be inserted in the CAMAL, still needs to be performed. However some building blocks

already exist in the form of Notes or Editor's Notes in the specification of the CIDIN/AMHS Gateway or of the Extended ATS Message Service .

### **3.3 AIDC PICS/OICS proforma**

AIDC PICS/OICS proforma have been developed, in line with the format adopted for Air-ground application PICS proforma.

This document will be reviewed during the forthcoming meeting. It is expected that very few changes should be necessary to produce a final version.

## **4. CO-ORDINATION WITH OTHER GROUPS OR BODIES**

This section describes the work which has been done in conjunction with the subgroups of the EUR AFS Group, in reply to the ICAO request for a revision of the existing material about the Aeronautical Fixed Service (Annex 10, Volume II considerations related to the AFS, Annex 10 considerations related to the CIDIN, and EUR CIDIN Manual)

### **4.1 Review of Annex 10, Volume II**

This work has been started in the framework of an AFSG subgroup meeting. The intention is to introduce all applications and messaging networks contributing to the Aeronautical Fixed Service, at the beginning of Annex 10, Volume II.

### **4.2 Review of ICAO CIDIN Material**

The intention to extensively review the ICAO documents related to CIDIN (Annex 10 and EUR CIDIN Manual) has received a strong support from the ICAO European AFSG and its subgroups.

This work has been started and the outcome should be a consistent set of documents, while many inconsistencies had been observed until now in the existing material; This should represent a significant improvement of these documents which play a major role at present in ground-ground communications, in Europe and in some other regions.

## **5. FUTURE MEETINGS**

The subgroup will meet in Gran Canaria from 4<sup>th</sup> to 7<sup>th</sup> October 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  | <del>20%</del><br>60%  |
|    |                              | D114 | Analysis of backwards compatibility against the Basic ATS Message Service  | <del>33%</del><br>70%  |
|    |                              | 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   | <del>90%</del><br>40%  |
|    |                              | D123 | Analysis of suitability of IPM Business Class Messaging Extensions for the support of ATS Message Service parameters   | <del>100%</del><br>75% |
|    |                              | D124 | Specification of the related SARPs elements  | <del>95%</del><br>20%  |
|    |                              | 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   | <del>50%</del><br>33%  |
|    |                              | D132 | General specification of the AMHS management concepts  | <del>50%</del><br>33%  |
|    |                              | D133 | Specification of the appropriate SARPs material for AMHS Systems Management  | <del>50%</del><br>N/A  |

|    |  |   |  |                              |
|----|--|---|--|------------------------------|
|    |  | D14   | Directory Functionalities for the ATS Message Service  |                              |
|    |  | D141  | Analysis of the AMHS requirements for Directory Services   | <u>95%</u><br><del>75%</del> |
|    |  | D142  | Analysis of the relevance of the Use of Directory OFG and of the FD12 (MHS use of Directory) ISP to meet the AMHS requirements | <u>95%</u><br><del>75%</del> |
|    |  | D143  | Specification of the related SARPs elements  | <u>80%</u><br><del>50%</del> |
|    |  | D144  | Analysis of backwards compatibility against the Basic ATS Message Service  |                              |
|    |  | D15   | CIDIN/ATN Gateway  |                              |
|    |  | D151  | General principles for the gateway   | <u>90%</u><br><del>75%</del> |
|    |  | D152  | Specification of the related SARPs elements  | 50%                          |
| D4 | Guidance Material for AMHS Deployment  | (taking the form of an addition/amendment proposal to the CAMAL)      |  | 25%                          |
| D5 | PICS proforma for the AIDC application   |   |  | 90%                          |
| D6 | Review of Annex 10, Vol. II, to incorporate provisions to AMHS and AIDC in the Aeronautical Fixed Service procedures | (taking the form of an Amendment proposal to ICAO Annex 10 Volume II) |  | 33%                          |

**8. APPENDIX B : LIST OF MEETING PARTICIPANTS**

18th meeting, Naples, 25-28 May 1999:

|                  |                                    |             |
|------------------|------------------------------------|-------------|
| Manuel GARCIA    | (Aena, Spain)                      |             |
| Claude LECLERC   | (Eurocontrol)                      |             |
| Jack McCONNELL   | (Lockeed Martin for FAA, U.S.A.)   |             |
| Tetsuo MIZOGUCHI | (supporting JCAB, Japan)           |             |
| Manfred OKLE     | (Frequentis for DFS, Germany)      |             |
| Masoud PAYDAR    | ICAO ATN Panel Secretary           | (part time) |
| Jean-Yves PIRAM  | (STNA, France)                     |             |
| Jean-Marc VACHER | (ON-X Consulting for STNA, France) |             |