AERONAUTICAL TELECOMMUNICATIONS NETWORK PANEL
SECOND MEETING

Montreal 4th - 15th November 1996

Agenda Item 3: Development of the CNS/ATM-1 Package (SARPs and Guidance Material)

Proposed Guidance Material for the Internet Communications Service draft SARPs

(Presented by ATNP WG2 Rapporteur)

WORKING PAPER

SUMMARY

This paper briefly outlines the development of the Guidance Material for the ATN Internet Communications Service draft SARPs that has taken place since ATNP/1. The work was based on the proposed Second Edition of the ATN Manual as presented at ATNP/1. It recommends that the attached material be adopted by the ATNP as proposed green pages.

REFERENCES

ATNP/2-WP/4   CNS/ATM-1 Package

1.   Introduction

1.1   This Working Paper introduces and recommends the adoption of the proposed Guidance Material for the Internet Communications Service draft SARPs (Appendix A).

2.   Background

2.1   At ATNP/1 WG2 was tasked with the development of draft SARPs and guidance material for the "CNS/ATM-1" Package based upon its terms of reference as reproduced below:

7.3.3   ***ATN Internet Working Group***

> *7.3.3.1   The ATN Internet Working Group (WG/2) would conduct the following activities, in a manner consistent with the working strategy defined above:*
>
> *a)   development of draft SARPs and guidance material for the ATN Internet (i.e. the network and transport layers of the ATN) to support both fixed and mobile aeronautical data communications;*
>
> *b)   development of draft SARPs and guidance material for the ATN Internet management features, including the definition of lower layers (up through transport) managed objects (already contained in the ATN Manual), within the framework of the systems management concepts defined by the Working Group 1;*
>
> *c)   development of draft SARPs and guidance material for the ATN Internet security features within the framework of the security concepts defined by the Working Group 1;*
>
> *d)   over-all assessment of the on-going activities supporting the validation of the ATN Manual, second edition (i.e. ATN Internet draft SARPs); and*
>
> *e)   development and validation of draft SARPs for encoding rules and data compression functions, where appropriate.*

2.2   Since ATNP/1 the WG has focused efforts on:

* item a) above (*i.e. "draft SARPs and guidance material for the ATN Internet ,.,"*) and
* item d) (i.e. *"overall-assessment of the on-going activities supporting the validation of the .. ,.,."*).

2.3   The development of the proposed guidance material for the ATN Internet, i.e. the Internet Communications Service draft SARPs, has been based upon the proposed Second Edition of the ATN Manual as presented at ATNP/1 as a Working Paper. Section 3 of this paper provides an overview of the guidance material in terms of structure and high level content. The proposed guidance material is at Appendix A to this paper.

3.   Discussion

3.1   The proposed Second Edition of the ATN Manual was structured into "Chapters" and "Appendices" with the former containing guidance material and the latter draft SARPs type material. In its development of the draft guidance material the working group agreed to relocate all Chapters (i.e. guidance) into a separate guidance material document. The material has been expanded to clarify and explain the additional requirements introduced

into the draft SARPs as well as addressing issues arising out of validation initiatives that have concluded additional guidance be developed.

3.2   The draft guidance material is structured as follows:

Chapter 1 provides introductory material in terms of (1) Background (2) Scope (3) Purpose and (4) Document overview.

Chapter 2 provides high level introductory guidance material on the ATN Concept. In particular, the Chapter addresses the (1) technical benefits of the ATN, (2) issues related to the construction of the ATN, (3) the Users Perspective, (4) Policy Based Routing, (5) ATN Protocol Architecture and (6) ATN Addressing.

Chapter 3 provides detailed guidance on the subject of ATN Addressing in terms of the (1) Addressing Plan, (2) Naming and Addressing Authorities, (3) Name and Address Allocation, (4) Address Administration and Registration and (5) Planning issues related to Address allocation and administration.

Chapter 4 provides detailed guidance on the ATN Protocols and Functions in terms of (1) the Transport Layer and associated protools and (2) the Network Layer and associated protocols.

Chapter 5 provides detailed guidance on ATN Routing in terms of (1) the ATN Routing Architecture (2) associated routing information exchange protocols (e.g. IDRP), (3) the concept of routing to aircraft, (4) the concept of ATN Islands and Homes and (5) the ATN Routing Policy requirements defined in the draft SARPs.

Chapter 6 provides detailed guidance on the Congestion Avoidance mechanisms defined in the SARPs.

Chapter 7 provides detailed guidance on ATN subnetworks in terms of (1) General Characteristics (2) VHF Data Link (Mode 1 and Mode 2) (3) AMSS (4) Mode S and (5) Ground/Ground subnetworks.

4. Recommendation

It is recommended that the ATN Panel accept the proposed guidance material as proposed green page material for the ATN Internet Communications Service draft SARPs.