



International Civil Aviation Organisation

Fourth ATN Transition Task Force Meeting

Mumbai, India, 8 - 12 April 2002

Agenda Item 5: Review status of implementation of AFTN plan and evaluate circuit capacity.

DELIVERY OF AFTN TRAFFIC OVER THE INTERNET

(Presented by Australia)

SUMMARY

This Working Paper presents the use of the Internet for AFTN connectivity using a gateway (AGATE) designed and built by Airservices Australia to interface to the AFTN. Endorsement of the use of this medium (the Internet) using built in safeguards is requested for AFTN.

1. Introduction

1.1 The purpose of the AFTN Gateway (AGATE) system is to provide an alternative communications medium for AFTN connectivity to sites of low traffic requirements. The system provides for email delivery of traffic to users and provides a WEB based tool for input. The system may be accessed from anywhere in the world that has an ISP (Internet Service Provider) connection and has entered into an arrangement with Airservices Australia for AGATE access. This gateway could also be implemented as an attachment to any AFTN Switch enhancing its connectivity.

2. Background

2.1 Australia has a number of neighbouring countries for which the use of dedicated AFTN facilities are either not available or are uneconomical to provide or maintain. Current alternative methods to provide AFTN traffic to these countries have been via the use of manual faxing or telephone.

2.2 Within Airservices there are a number of users for which this Internet type of service delivery is more convenient and economical.

2.3 The drive to implement an Internet type (AGATE) service was brought about by telecommunications service providers closing all telegraphic and analogue connectivity in many of the Asia/Pacific areas. Replacement with dedicated digital connections required leasing bandwidth (from International public carriers) far in excess of requirements made many of these services uneconomical to provide the standard AFTN service to. The passage of AFTN traffic in these high cost areas has resorted to fax and telephone.

3. Discussion

3.1 The AGATE system creates a common workstation based within a server for all users who communicate with it using the Internet backbone. The server communicates with the existing AFTN switch, which provides for normal distribution of data over the AFTN network.

3.2 The system as implemented in Australia consists of a software application which operates on a standard PC under Windows NT. The application interfaces to the AFTN Switch physically at V24 level providing further isolation from hacking and operates utilising standard AFTN procedures. Messages directed to the gateway from the AFTN Switch are converted to email for delivery.

3.3 Configuration management is provided via a windows interface on the gateway PC and also via a supervisory logon session on the Airservices intranet. This access is restricted to appropriate Airservices Maintenance personnel. This interface provides for Internet/AFTN route mapping and for user access control.

3.4 Security: Access for data input is via a Web page utilising a URL which is not published and incorporates SSL encryption. Using this screen requires access to a user logon/password.

3.5 Security of the system is maintained by the use of firewalls and encryption. Each user to this service has their own sequence numbering for messages and optional 20 minute check messages. An optional feature allows for traffic entered by a user to be emailed back to the user as further confirmation of delivery. The AGATE system provides for full logging of all transactions by or for users for 30days.

3.6 Templates are provided with inbuilt help that assists in the creation of Flight Notifications, CHG, DEP, ARR CNL, DLA, EST and Notams as well as plain text.

3.7 Implementation was carried out after conducting a Safety Hazard analysis and implementing recommended safety changes.

3.8 Service availability and reliability is limited by external service providers and response times are as for standard email and Web access to sites. The typical response time is on average far less than that of previous telegraph circuits (usually only seconds). The service has been in use at a number of international sites with no major problems having been encountered so far.

3.9 Current international users are:

	<u>Date Service Began</u>
Honiara (Solomon Is)	March 2001
East Timor (6 sites)	February 2002
Diego Garcia	November 2001
Naru (on trial)	February 2002

There are also a number of domestic users such as airlines within Australia using the service.

A schematic diagram of the AGATE system is provided at the end of this paper.

4. Further Information

Further information or queries on the AGATE system or information on the Safety Hazard Analysis can be directed to Mr Chris Nurser at (chris.nurser@airservices.gov.au).

5. Action by the Meeting

The meeting is requested to:

- a) Comment on the use of the Internet as another alternative means to deliver AFTN traffic to sites; and
- b) If agreed by the meeting, to formulate a decision that endorses the requirement that the Internet can be used as another alternative means to deliver AFTN Traffic to sites where traffic density and costs prove to be more economical to do so.

Schematic Diagram of the AGATE System

