

International Civil Aviation Organization



**THE FIRST MEETING OF AERONAUTICAL
COMMUNICATION SERVICE (ACS)
IMPLEMENTATION CO-ORDINATION GROUP
OF APANPIRG (ACSICG/1)**



Seoul, Republic of Korea, 13 - 16 May 2014

Agenda Item 4: Review State's ATN/AMHS Implementation Status, Transition and Operational Issues

AMHS IMPLEMENTATION STATUS OF NEW ZEALAND

(Presented by New Zealand)

SUMMARY

This paper presents a summary of the current AMHS implementation status in New Zealand. It also presents other associated developments in New Zealand:

- 1) Implementation of an MPLS Network;
- 2) Planned AMHS interface to a new AIM system; and
- 3) Development of a Query Converter to provide a query interface between existing legacy systems and the new AIM system.

1. Introduction

1.1 New Zealand installed and operationally commissioned an AMHS system in 2012. To date, this system has been run primarily in AFTN mode with only a few AMHS User Agents being operated internally within Airways in order to keep staff familiar with the operation of the UAs.

2. Discussion

2.1 Airways is currently upgrading its whole network infrastructure to an IP-based MPLS network. This network will:

- a) Enable the existing X25-based AFTN User Terminals in all ATC Towers to be replaced with IP-based AMHS User Agents by Q2 2015; and
- b) Facilitate connectivity to the planned Asia-Pacific CRV Network.

2.2 The New Zealand AIS system has reached its end of life and will be replaced with an AIM system, scheduled for operational commissioning in Q1 2015. The primary messaging interface to the AIM system will be an AMHS connection which will allow the exchange of messages with content other than just a restricted AFTN character set e.g. XML-formatted data and graphical data such as MET charts. A secondary AFTN interface to the AIM system will be available purely for backup purposes.

2.3 A Web Service interface will be used to allow external systems to query the AIM system e.g. to obtain pre-Flight Briefings and access individual NOTAM and MET reports.

2.4 A number of systems query the existing AIS system via AFTN. Rather than developing functionality for accessing Web Services for all of these systems, Airways is developing a Query Converter System which will accept queries from these systems either via AFTN or FTP. It will convert these queries to Web Service requests which it will then submit to the AIM system. The Query converter will process the AIM system's responses to the Web Service requests in order to provide the output of the queries in a format that the querying systems can consume via AFTN or FTP.

2.5 IP-based AFTN connections will be implemented using ADSL modems to the following locations by the end of Q2 2014:

- Rarotonga (Cook Islands)
- Samoa

2.6 These IP-based connections are being established as an interim replacement for existing X.25 circuits which are being discontinued by the telecommunications service provider.

2.7 It is anticipated that in the near future, the World Bank will fund the installation of VSAT connections into the following locations:

- Vava'u (Tonga)
- Tarawara (Kiribati)
- Kiritimati Island a.k.a. Christmas Island (Kiribati)
- Funifuti (Tuvalu)

These VSAT connections will support IP-based AFTN/AMHS connections and voice.

2.8 The New Zealand Ministry of Foreign Affairs and Trade (MFAT) are expected to fund similar VSAT connections to:

- Rarotonga (Cook Islands)
- Niue

3. Action by the Meeting

3.1 The meeting is invited to:

- a) note the information contained in this paper; and
- b) discuss any relevant matters as appropriate.
