



International Civil Aviation Organization

NORTH AMERICAN, CENTRAL AMERICAN AND CARIBBEAN OFFICE

Thirtieth Eastern Caribbean Working Group Meeting (30 E/CAR WG)

Castries, Saint Lucia, 7-11 August 2006

30 E/CAR WG – IP/08

21/07/06

Agenda Item 4: Specific Air Navigation Activities and Developments
4.5: Communications, Navigation and Surveillance (CNS)

**CURRENT STATUS OF THE FEDERAL AVIATION ADMINISTRATION
TELECOMMUNICATIONS PROGRAMS**

(Presented by the United States)

This Paper presents information on the current status of the Federal Aviation Administration (FAA) National Airspace Data Interchange (NADIN) Message Switch Network (MSN), Automatic Message Handling System (AMHS) Programs and interconnection activities with Eastern Caribbean Network.

1. Introduction

1.1 The Federal Aviation Administration is in the midst of a reorganization of its telecommunication resources to streamline and make a more efficient use of assets. This Information Paper presents a synopsis of the current status of the FAA's NADIN MSN and AMHS Programs and interconnection activities with Eastern Caribbean Network.

2. NADIN MSN Rehost.

2.1 The NADIN MSN is the FAA interface for the world-wide Aeronautical Fixed Telecommunications Network (AFTN) used for interchange of aircraft movement flight plans, weather, and NOTAM messages between the U.S. and other nations. The NADIN MSN is an essential part of the AFTN and provides communications not only between the United States and its connected foreign partners, but also between foreign countries as a pass through data service in accordance with ICAO agreements.

2.2 The NADIN-I switches are in the process of being re-hosted to newer fault-tolerant hardware as part of the FAA's NADIN MSN Rehost (NMR) project. When the NMR System has full functionality the legacy system will be decommissioned. The NMR System has connectivity into the X.25 network thereby supporting the ability of the X.25 users to be switched seamlessly off the legacy system and over to the NMR System.

2.3 In addition, the NMR System will provide AFTN services over IP-based solutions utilizing the FTI IP network. This will enable new users to connect to NADIN via IP, and allow existing X.25 users to migrate to the IP services. The NMR system also enables AFTN traffic to be sent from an X.25-based user to an IP-based user, and vice versa.

2.4 The NADIN Program Office is in the process of updating the Request For Service (RFS) form that is used for collecting technical information required for testing the equipment to include TCP/IP protocol. Also, has provided Trinidad & Tobago with a copy of the document for NADIN-I Message Switch Network (MSN) Internet Protocol (IP)-based Services Interface Control Document (ICD).

3. AMHS Implementation

3.1 FAA has an Automatic Message Handling System (AMHS) prototype installed in Salt Lake City, Utah, which has been operational since 2005. For the long-term solution FAA is working closely with EUROCONTROL and will implement AMHS in the NADIN Network that will support OSI for upper layers and TCP-IP using RFC 1006 for lower layers in the summer of 2007.

3.2 The intent of this project is to integrate the AMHS Gateway function into the NADIN-I Message Switch Network (MSN) Rehost (NMR) system in accordance with the ICAO Standards and Recommended Practices (SARPS), Edition 2, Sub-Volume III for Ground-to-Ground Applications. This AMHS Gateway function will be added to, and become part of, the NMR software and will operate logically as another front-end process.

4. Eastern Caribbean Interconnection

4.1 The Trinidad and Tobago Civil Aviation Authority and United States Federal Aviation Administration have begun a project to reconfigure the Aeronautical Fixed Telecommunications Network (AFTN) between the two countries.

4.2 The first phase of the process will remove the X.25 protocol Packet Assembler Disassembler (PAD) that is currently in front of the Trinidad Thales AFTN Switch. Once this PAD is removed the switch in Trinidad will communicate with the FAA NADIN Network through the legacy telecommunications connectivity.

4.3 The second phase of the process will begin in late 2006 and will consist of a change from X.25 protocol to Transmission Control Protocol / Internet Protocol (TCP/IP) and will terminate at the new US FAA NADIN MSN which is also multi-protocol capable. This phase is in the engineering and planning stage, and the telecommunications path has not been determined at this time.

5. Conclusion

5.1 The FAA is actively involved in the CAR/SAM Region and supports the proliferation of new technology that can improve the existing telecommunication systems in support of Air Traffic Services.