International Civil Aviation Organization
NORTH AMERICAN, CENTRAL AMERICAN AND CARIBBEAN OFFICE
Twenty-Eighth Eastern Caribbean Working Group Meeting (28 E/CAR WG)
Montserrat, 26 to 30 April 2004

Agenda Item 2: **General Air Navigation Matters**
2.2 **Deficiencies**

**CNS DEFICIENCIES IN THE EASTERN CARIBBEAN REGION
AERONAUTICAL FIXED TELECOMMUNICATIONS NETWORK (AFTN)**

(Presented by Trinidad and Tobago)

SUMMARY
This working paper advises the E/CAR IWG of the work being progressed by Trinidad and Tobago with regards to resolution of the CNS AFTN deficiencies within the E/CAR
References:
• Summary of Discussions and Conclusions, 27th Eastern Caribbean Informal Working Group, Antigua 2003 • 26th E/CAR IWG Conclusion 26/8 and 26/9 • 25th E/CAR IWG Conclusion 25/14 • ATM/CNS/SG/1 California, July 2001, on CNS shortcomings and deficiencies in the CAR/SAM Regions • E/CAR ATM/CNS Transition Plan

1. **Introduction**

1.1   In keeping with the E/CAR ATM/CNS Transition plan for improved and increased AFTN system functionalities with modern connectivity protocol, Trinidad and Tobago is committed to meeting its responsibilities for the Aeronautical Information Service (AIS) at the International NOTAM Office (NOF) within the Piarco Flight Information Region (FIR), the French Territories and two stations of the British Virgin Islands outside the Piarco FIR and as the appointed and mandated AFTN Switching Centre within the Piarco FIR including the French Territories.

1.2   Towards this goal, a contract was signed between the successful tenderer and ICAO Technical Corporation Bureau on behalf of Trinidad and Tobago in December 2003 for the design, supply, installation and commissioning of an Automatic Message Switching System (AMSS) for Aeronautical Fixed Telecommunications Network (AFTN) with AMHS (Automatic Message Handling System) gateway services, complete with ATN connectivity and a NOTAM database processing package with a commissioning date not to exceed 9 months.

2. Discussion

2.1 Trinidad and Tobago, with responsibility for NOTAM and AFTN Switching services within the Piarco Flight Information Region, French Territories and two stations outside the FIR is committed to the provision of new and expanded capabilities via AFTN equipment within the last quarter of 2004.

2.2 A technical representative of the supplier met with the TTCAA in March 2004 for the purposes of a weeklong meeting towards mutual understanding of the intent and operational aspects specific to the Piarco FIR and finalizing the System Design Documentation after review of the System Development Plan and the Functional Specifications.

2.3 The equipment comprises of AFTN and AIS functionalities. The AFTN component is described as the AFTN Message Switching System (referred to as AMS) and is intended to process AFTN traffic within Piarco's AIS area of responsibility. The AMS uses a TCP/IP network infrastructure for the domestic circuit connections and supports X.25 communication protocol for connectivity with international circuits and to the E/CAR. The AMS incorporates an AMHS gateway that is compatible with ATN to facilitate eventual transition/connectivity to an adjacent AMHS system. The AMS will also support the eventual E/CAR digital network transition to frame relay and IP protocols. The AMS provides functions of message analysis and correction, routing and storage and configuration management and connectivity to Europe via CIDIN.

2.4 The contract also supplies a GPS clock to the Piarco LAN with extended connections of other devices to provide a single referenced time stamp.

2.5 The AIS component handles NOTAM and MET data and supplies a Pre-flight Information Briefing (PIB) service to airlines and pilots in keeping with ICAO Annex 15 and AIS Manual of Operations Doc. 8126. Expanded functionalities include the transmission of fax messages and transmission and reception of email messages, automatic management of RQN and RQM through the AFTN.

2.6 The AMHS Gateway provides full operational capabilities in an X400 software environment capable of X400 Message transfer, Message store, AFTN to/from X400 address conversion and telecommunication protocols of TCP, X25 and ATN gateway.

3. Conclusion

3.1 Trinidad and Tobago fully understands and accepts the responsibility entrusted as provider of a safe and reliable AFTN service within the AIS area of responsibility and as such has made a firm commitment by investing a significant sum of money in new and improved replacement equipment to fulfil its mandate.

4. Suggested action

4.1 The meeting is invited to take note of the contents of this Working Paper.

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