

**INTERNATIONAL CIVIL AVIATION ORGANIZATION
NORTH AMERICAN, CENTRAL AMERICAN AND CARIBBEAN OFFICE**

SEVENTH MEVA NETWORK MEETING
(Grand Cayman, Cayman Islands 15-17 May 2000)

Agenda Item 4: Review of the Network service obligations and the implementation and operation status of MEVA Network

**DEFICIENCIES IN THE AERONAUTICAL FIXED SERVICE (AFS) OF THE
AFTN DATA TRANSMISSION CIRCUITS, THROUGH THE MEVA NETWORK**

(Presented by Cuba)

Summary

The deficiencies of the Havana MEVA VSAT AFTN link with the Atlanta Commutation Center are analyzed in this Working Paper.

1. Introduction

1.1 The MEVA Network was created to satisfy the ATS speech communication circuits among air traffic control units (ATC), according to the critical situation of the circuits implementation and functioning, as well as the for the AFTN data transmission circuits.

1.2 On December 1999 the data transmission channel was implemented with X.25 protocol, 4 800 Bd through the MEVA Network, from the Havana Messages Commutation Center, with the Atlanta Main Center, which provided improvement in the provision of those services. A platform for the development and migration of AFTN towards ATN, through the use of X.25 protocol, is also provided.

2. Discussion

2.1 The Havana VSAT station is working on a regular basis, and an updated register has been maintained to keep track on the incidents that have occurred since it started functioning in September 1999; based on an agreement between the Service Provider and the Client, the Station was temporarily accepted.

2.2 With the X.25 channel functioning in the Havana AFTN COM together with the Atlanta Main Center, the AFS has had remarkable improvement, mainly characterized by:

- increase in the link speed from 75Bd to 4 800 Bd, eliminating the congestion that AFTN messages used to have, and therefore allowing the effective functioning of the aeronautical applications that work with a GG priority, such as MET and AIS; this also improved the AFTN coordination in the Havana ACC;
- compatibility with the NADIN II Network, guaranteeing the functioning of the SFA during the Y2K transition, as well as the foreseen work in the Havana AFTN COM Centre;
- future migration towards the ATSMHS application of the ATN, according to the CAR/SAM Region Transition Plan.

2.3 Conclusion 9/6 of the CAR/SAM/3 RAN establishes that:

Conclusion 9/6 – Operational availability AFTN circuits

That States in the CAR/SAM Regions:

- a) be urged to take the necessary measures to ensure that end-to-end monthly operational availability of AFTN circuits does not fall below 98 per cent and, therefore, reliability and efficiency requirements for the provision of communication services to AIS, ATS, MET and SAR are met; and
- b) provide alternative measures to route AFTN during circuits outages.

2.4 A precise report is being prepared in the Havana AFTN COM Centre, this report keeps track of the operation availability of the Atlanta AFTN link, and records all service interruptions and its causes in order to make any necessary actions to guarantee a continuous availability.

2.4.1 The register of interruptions in the AFTN link during this year, is presented hereby:

	January	February	March	April	Four months
Number of interruptions	4	7	19	13	43
Duration of interruptions	5 hrs 50 min	70 hrs 56 min	50 hrs 48 min	34 hrs 53 min	162 hrs 45 min
Availability	99.1%	87.3%	93%	96.5%	94.4%

2.4.2 The analysis of reasons that might have caused these interruptions present a similar pattern which is expressed in:

- a) link losses that are reestablished with a reboot in the program sequence. All long-duration interruptions have occurred during evening hours and/or weekends;
- b) difficulty to coordinate the reestablishment of the service between the Havana AFTN COM Centre, the Opalocka Teleport, the Miami ARTCC and the Atlanta Main Center;
- c) the update of software in the Atlanta Main Center; and
- d) works in the Opalocka teleport which affect the proper functioning of the station.

2.4.3 Taking into account the importance and difficulty of the first two reasons for interruptions:

- a) Cuba has worked together with the Havana AFTN COM Center equipment provider, in order to monitor and study the sequence when rebooting the link programme; and
- b) this Working Paper urges the compliance of Conclusion 6/8 from the MEVA/6 Meeting, which establishes to apply the corrective failures procedures in the voice and data circuits of the MEVA Network; these corrective failure procedures indicate that the service provider will make an arrangement with the FAA circuits coordinator in the FAA Atlanta AFTN Office.

2.4.4 Furthermore, all service messages issued by the Atlanta Main Centre are received at the Havana AFTN COM Centre whenever there is a traffic interruption in other AFTN Centres that are attributed to the Atlanta Office; these messages inform of the interruptions in COM AFTN Centres that support the MEVA Network, therefore it is assumed that link problems in the data transmission channel are a common issue among the MEVA Network users.

2.5 The Service provider has not received through other means of communication, information regarding failure registry and MEVA Network traffic statistics; which is stated in Conclusion 6/4 from the MEVA/6 Meeting and which is intended for those MEVA Network users that do not have the capacity to access the MEVA Website.

2.6 The measures to fix the inadequate functioning of the MEVA Network are included in Conclusion 6/12 from the MEVA/6 Meeting, these measures are completely applicable to the contents of this Working Paper.

3. Suggested actions

3.1 The Meeting is invited to evaluate the information presented in this working paper and to consider pertinent actions by the States/Territories/International Organizations and by the Service Provider, in order to solve difficulties which impel the compliance of Conclusions 6/4, 6/8 and 6/12 from the MEVA/6 Meeting, as well as with Conclusion 9/6 from the CAR/SAM/3 RAN Meeting, as soon as possible.