
**REPORT ON THE ACCOMPLISHMENTS OF AFS REQUIREMENTS ESTABLISHED BY THE
CAR/SAM 3 RAN MEETING AT THE BOUNDARIES OF THE CAR/SAM REGIONS.**

1 AFTN Plan

1.1 In reference to the aeronautical fixed telecommunications network (AFTN), according to the FASID and in the area covered by the meeting, there are two AFTN circuits not yet implemented (Bogotá/Panama and Brazil/Paramaribo). Since the requirements for printed communications are considered in a global manner, the analysis was made by each State/Organization. The results regarding the status of implementation of the AFTN are the following:

Central America: Two recommended circuits and interchanges information through AFTN by means of these two circuits, one established on the MEVA Network (Central America-United States) and the other with Mexico (Central America-Mexico). The latter uses a voice and data multiplex system. It appears that the quality of the circuits is satisfactory to meet requirements; the AFTN automated centre was implemented and is located at Tegucigalpa.

Panama: Two recommended circuits and information exchange by the AFTN through dedicated circuits (Panama-United States). The other circuit (Panama-Bogotá) is not yet implemented and its implementation is unscheduled. It appears to be that for still unclear reasons, there are message exchange problems with Colombia. These problems would be solved when the Panama-Bogota circuit is implemented. The Panama-United States circuit will be established in the MEVA Network. The AFTN automatic centre is implemented and located in Panama City.

Jamaica: Two recommended circuits and information exchange through AFTN by means of these two circuits, one established on the MEVA Network (Kingston-United States) and the other with Cayman Islands (Cayman-Kingston). Seemingly, according to requirements, the quality and capacity of the circuits are satisfactory. The automatic AFTN centre is implemented and located at Kingston.

Ecuador: Two recommended circuits (Guayaquil-Lima and Guayaquil-Bogota) and information exchange through AFTN. Possible PTT problems in Ecuador led to considerable loss during a few months of operational availability of these circuits; this problem was observed during the first quarter of year 2000. The Meeting was informed that the Guayaquil- Bogota circuit's availability is satisfactory. In the Guayaquil-Bogotá circuit, based on the Colombia-Ecuador bilateral agreement and in the availability of appropriate communication channels, the speed will be increased, initially, to 300 bauds, and later with X.25 protocol to 9200 bps. These two circuits are implemented as part of analogue voice plus data multiplexed circuits. The Automatic AFTN centre is implemented and located at Quito.

Colombia: Four recommended circuits and information exchanges through AFTN by means of three of them (Bogota/Lima, Bogota/Caracas and Bogotá/Guayaquil), the Bogotá/Panama circuit has not been implemented. It was informed that in the current analogue circuit, which connects Panama ACC to the Bogota ATS voice switch, it was not possible to implement a voice plus data circuit, apparently because of problems found in the last mile from Panama PTT. During the year's first quarter, the Bogota - Guayaquil presents the lowest availability of the three. In the Guayaquil-Bogotá circuit, based on the Colombia-Ecuador bilateral agreement and in the availability of appropriate communication channels, its speed will be increased, initially, to 300 bauds and later with X.25 protocol to 9200 bps. The Bogotá/Lima circuit's operation seemed satisfactory and the Bogota/Caracas is implemented with low speed. Delegates from Venezuela and Colombia informed that the provider for the AFTN system was the

same for both States. Considering the advantage they are making arrangements in order to increase transmission speed in the circuit. The three implemented circuits are part of the analogical multiplexed circuits in voice plus data circuits. The AFTN centre was implemented and is located at Bogotá.

Netherlands Antilles: Two recommended circuits and information exchanges through the AFTN by means of these two circuits, one connected to the MEVA Network (Curaçao/United States) and the other with Aruba Island (Curaçao/Aruba). Apparently, the quality and capacity of circuits are in accordance to requirements. Besides the plan, they keep an AFTN circuit link with Caracas. The AFTN centre is mechanical and implemented.

Venezuela: Five trunk circuits (Caracas/Lima, Caracas/United States, Caracas/Port-of-Spain, Caracas/Brazil and Caracas/Madrid and two tributary circuits: Caracas/Bogota, and Caracas/Paramaribo) were recommended. Messages are exchanged through all circuits. Except for the Caracas/Paramaribo and Caracas/Bogota circuits, operational availability has been acceptable in the rest and seems to meet operational requirements. The Caracas/Port-of-Spain and Caracas/Brazil circuits are analogue multiplexed voice plus data circuits. Agreements between Venezuela and Trinidad Tobago to implement the digital connection Caracas /Trinidad as foreseen in the E/CAR network plan have not been reached. The Caracas/United States is a multiplex digital circuit forming part with the Caracas/San Juan ATS speech channel. The Caracas/Lima circuit is a 9.6 kbps digital circuit. The Caracas/Madrid and Caracas/Paramaribo's are telegraph circuits at 1200 and 75 kbps, respectively. It is expected that taking into account the characteristics of the new Caracas automatic system the Caracas/Madrid circuit will be upgraded to 9.6 kbps. Automatic AFTN centre at Maiquetía. Venezuela's delegate informed of the planned installation a digital communication network using VSAT technology and fiber optics. Four nodes are planned to be implemented.

Trinidad and Tobago: Two trunk circuits (Port-of-Spain/Caracas and Port-of-Spain/United States, a tributary circuit [Port-of-Spain/George Town] and circuits between Port-of Spain and different AFTN stations along the Eastern Caribbean were recommended. Messages are exchanged through these circuits. The Port-of-Spain/United States trunk circuit and connections to AFTN stations along the Eastern Caribbean belong to the CAR Region and are within the E-CAR digital network. As for the circuits in the boundaries of the CAR/SAM Regions, comments have been made about the Port-of-Spain/Caracas' circuit. On the other hand, the Port-of-Spain/Georgetown circuit, which remained out of service for a long time, was recently put into operation and is operating well. Apparently, circuits are to meet operational requirements satisfactorily. AFTN automatic communication centre fully implemented.

Guyana: One circuit (Port-of-Spain/Georgetown) was recommended and exchange traffic through this circuit. The circuit meets operational requirements. As an alternative circuit, a connection to the Paramaribo AFTN communications' centre is being considered. The Georgetown AFTN centre can currently be considered as an origin/destination AFTN communication station.

Suriname: Two recommended circuits (Caracas/Paramaribo and Brazil/Paramaribo) and exchange messages through the circuit connected to Caracas, since the other is not yet implemented. The circuit under operation had low availability during the last quarter. The Paramaribo AFTN communications centre is automatic and located in Zanderij.

French Guyana: One recommended circuit (Brazil/Cayenne) and information exchanges through this circuit, which has high availability percentage and meets operational requirements. There is an alternative circuit, not considered within the plan, with Martinique but it would not be an efficient means. As for this, the need of a more adequate alternative circuit seems necessary. It has an AFTN Communication centre implemented and located at Rochambeau airport.

2. ATS Speech Circuits Plan

2.1 Regarding the speech communication for ATS coordination they are commonly met through dedicated and switched circuits. According to the FASID, and within the area being covered by the meeting, ATS/COM requirements between pair of ACC/FIC dependencies have not been implemented or show deficiencies. The FIR information on this issue is presented as follows:

Bogotá FIR: The Bogotá ACC has communications' requirements with the domestic ACCs of Barranquilla, Cali and Medellín, which are met through Colombian VSAT network. Likewise, the Bogotá ACC also has communications' requirements that are met through the Bogotá voice switching system with the ACCs CENAMER, Guayaquil, Maiquetía and Panama. With International ACCs and in the event of failure of the primary means public telephone international direct dialling (IDD) is used as an alternate.

Barranquilla FIR: In addition to Bogotá ACC, Barranquilla ACC has other communication requirements with the ACCs of Curacao, Kingston, Maiquetía, and Panama which are met through the Bogotá voice switching system. When the primary means fail, international direct dialling (IDD) is used. Improvements have been performed in the speech circuit ATS Barranquilla ACC - Kingston ACC, but the circuit is implemented through Montreal, Canada and for Colombia it represents monthly cost of \$ 9000 U.S. Dollars, which is considered a high price. As for the Panama ACC - San Andres APP circuits have been implemented through Bogotá's switching system but it does not yet meet operation requirements as established in the FASID.

Central America FIR: Cenamer ACC has Cenamer ACC/Bogotá ACC, Cenamer ACC/Guayaquil ACC and Cenamer ACC/Panama ACC communication requirements. The first two are met through the connection of the Cenamer ACC to the Bogotá ATS voice switch circuits. The Cenamer ACC/Panama ACC requirement is met through a dedicated circuit through the MEVA network.

Guayaquil FIR: The Guayaquil ACC has communications requirements with Bogotá, Cali and Cenamer ACCs using the Bogotá voice switch.

FIR Rochambeau: The Rochambeau ACC has communications requirements with the Paramaribo and Piarco ACCs. This requirements are met through IDD.

FIR Georgetown: The Georgetown ACC has communications' requirements with ACCs at Maiquetía, Paramaribo and Piarco which are met through dedicated circuits.

FIR Kingston: The Kingston ACC has communication requirements with the ACCs at Barranquilla, Cenamer, Curacao and Panama. The requisite at Barranquilla is met through the Bogotá voice switch and there are problems with the availability of the service. It communicates with other ACCs through the MEVA network.

FIR Panama: Panama ACC has communication requirements with Colombian ACCs at Barranquilla, Bogotá, Cali, Medellin and the San Andres APP. Seemingly these requirements are met through the Bogotá voice switching system. Panama's ACC also has requirements with Cenamer ACC and Kingston ACC which are served through a dedicated channel in the MEVA network respectively. The IDD is used intensely in Panama as an alternative.

FIR Paramaribo: Paramaribo ACC has communications' requirements with ACCs at Georgetown, Piarco and Rochambeau. Requirements with Georgetown are met through a dedicated circuit and IDD is used to communicate Piarco and Rochambeau.

FIR Piarco: Piarco ACC has communications requirements with ACCs at Georgetown, Maiquetía, Paramaribo, Rochambeau and San Juan. Requirements with Georgetown and Maiquetía are met through dedicated systems. Through IDD with Paramaribo and Rochambeau and with San Juan with a dedicated circuit of the E/CAR network.

FIR Maiquetía: Maiquetía ACC has communications' requirements with Barranquilla, Bogotá, Curacao, Georgetown, Piarco and San Juan ACCs. Requirements with ACCs at Barranquilla and Bogotá are met through commuting services at the Bogotá voice switch. With other ACCs through dedicated circuits. Maiquetía is part of the E/CAR Network. It was taken note that the Maiquetía ACC could access the ACC Caracas, through the Bogotá voice switching system.