



International Civil Aviation Organization

North American, Central American and Caribbean Office

**Special Eastern Caribbean Communication, Navigation and Surveillance Meeting
(S-E/CAR CNS)**

(Port of Spain, Trinidad and Tobago, 20 to 22 October 2004)

S-E/CAR CNS - WP/04

29/09/04

Agenda Item 2: Communication Developments
2.3 Development of ground-ground communications

**STATUS OF IMPLEMENTATION OF THE AFS COMMUNICATION REQUIREMENTS ESTABLISHED
BY THE FASID ANP CAR/SAM AND DEVELOPMENT OF GROUND-GROUND COMMUNICATION
IN THE EASTERN CARIBBEAN**

(Presented by the Secretariat)

SUMMARY

This working paper reviews the status of implementation of the Aeronautical Fixed Service, with special emphasis on the analysis of the ATS printed and voice communications requirements to be supported by the E/CAR AFS digital network and other networks at the boundaries of the CAR/SAM Regions within the area covered by this meeting. It is expected that the meeting will identify the requirements still not implemented in accordance with the plan and/or that are not being satisfactorily met by the current AFS networks. This paper also proposes to the meeting to suggest actions in order to develop the AFS communications towards the AMHS-ATN implementation.

References:

- Air Navigation Plan, Volume I - Basic ANP.
- Air Navigation Plan, Volume II, Facilities and Implementation Document (FASID).
- GREPECAS/10 AND GREPECAS/12 Reports.

1. Introduction

1.1 With respect to printed communications, they are normally met by the aeronautical fixed telecommunications network (AFTN) though, for the meteorological communications, the ISCS VSAT network is available and in certain cases, is the most important mean to exchange OPMET messages, in accordance with the FASID. Printed communication requirements are supported in a global manner.

1.2 The CAR/SAM AFTN Plan appears in the Air Navigation Plan, Volume II, FASID, Table CNS 1A and in Chart CNS 1 (Doc. 8733). The ATS Speech Circuits Plan is contained in the Table CNS 1C of the FASID.

1.3 The Second Meeting of the Informal Coordination Group of the Eastern Caribbean and North Eastern South American, held in Caracas, Venezuela, from 1 to 5 December 2003 formulated the Conclusion 2/10 recommending to Trinidad and Tobago that in order meet AFS service requirements between the Piarco

ACC and the Georgetown, Maiquetia, Paramaribo and Rochambeau should take the necessary steps to implement a REDDIG VSAT node in Piarco by last quarter of 2004.

1.4 The GREPECAS/12 meeting, held in Havana, Cuba, on 3-7 June 2004, through the Conclusion 11/41- *Review of the status of implementation of the AFTN plan and relevant amendments*, approved several amendments to the AFTN plan, including many AFTN circuit updates of the CAR/SAM Regions.

1.5 With the implementation and upgrade of the E/CAR AFS Digital Network, the deficiencies related to the implementation of AFTN circuits and ATS circuits in the Eastern Caribbean have been resolved, increasing transmission speeds and implementing X.25 protocols and IA-5 codes in the AFTN circuits, in compliance with the SARPs, the AFTN Regional Plan and GREPECAS conclusions.

1.6 The Conclusion 10/22 of GREPECAS urged the States/Territories/International Organizations to establish plans for the migration from the AFTN to AMHS in accordance with SARPs of the ATN-AMHS.

2. Analysis

Status of implementation of AFTN COM requirements

2.1 The Eastern Caribbean (E/CAR) States/Territories/International Organizations, taking advantage of the facilities offered by the new E/CAR AFS aeronautical communications digital network, have improved the AFTN circuits by connecting to the AFTN COM Center of Port of Spain, Trinidad and Tobago and increasing their speed to 1200 bps, installing the X.25 protocol and the IA-5 code. Furthermore, there are plans to increase circuit speed to 2400 bps in late 2004.

2.2 For the above, it may be noted that there has been a significant development in the AFTN circuits in the CAR/SAM Regions. **Appendix A** to this working paper contains Table CNS 1B – AFTN Plan FASID ANP CAR/SAM for the geographical area covered by the meeting and updated with the amendments approved by the GREPECAS/12 meeting, including new proposed amendments based on information available at ICAO Regional Offices.

2.3 Based on the information available in the Secretariat, the status of implementation of the AFTN Plan is the following:

- a) In relation to the required circuits by Trinidad and Tobago with the boundaries States of SAM Region, the trunk AFTN circuit Port-of-Spain/Caracas, Venezuela and Port of Spain/Georgetown, Guyana have some deficiencies, but the implementation of a REDDIG node in Piarco should bring a solution to these deficiencies. The AFTN automatic communication center is fully implemented.
- b) The Port of Spain AFTN COM center is currently being modernized by implementing a new AFTN switching equipment.
- c) Some AFTN circuit between Piarco, Trinidad and Tobago and other E/CAR States/Territories have some deficiencies. It is expected that by upgrading the E/CAR AFS Digital Network, these deficiencies will be resolved.

2.4 In view of the above, the **Appendix B** summarizes AFTN circuits and AFTN COM centers in the Eastern Caribbean where deficiencies have been detected, as well as some of the measures that have been recommended to solve these problems and to continue with the development of the said plan.

Review and updating of the AFTN Plan and its topology

2.5 **Appendix C** presents the Chart CNS 1 of the FASID (Rationalized AFTN Plan for CAR/SAM Regions) As is shown in the Chart CNS 1 of the FASID (Rationalized AFTN Plan for CAR/SAM Regions) the AFTN traffic in the Eastern Caribbean is depending of a main AFTN center (Piarco) and a main international AFTN circuit (AFTN circuit San Juan/Piarco), so a failure in the mentioned AFTN main center and AFTN international circuit could affect all E/CAR States/Territories. On the other hand, we should keep in mind that upgrading the E/CAR AFS Digital Network through the implementation of a frame relay, would help to improve the AFTN plan and its topology.

Implementation of AMHS

2.6 Bearing in mind these facts and considerations, it is suggested to the meeting to propose the appropriate actions to study the improvement of the AFTN Plan and its topology evolving toward the implementation of the AMHS-ATN. Furthermore, Eastern Caribbean aeronautical administrations should consider conducting studies to replace their AFTN switching centers with ATS message handling systems (AMHS) or implement directly AMHS servers.

2.7. It should be suggested that in accordance with the initial CAR/SAM ATM Transition Plan, the Boundary Intermediate System (BIS) routing connection be planned for its implementation between Port of Spain and San Juan by using X25 and 9.6 kbps protocol. The AFTN system should be interconnected to ATN through AMHS gateway before fully implementing AMHS.

Status of implementation of ATS speech circuits

2.8 The **Appendix D** presents the updated information of the Secretariat regarding the status of the planning and implementation of the ATS speech circuits for the geographical area covered by the meeting based on the planning contained in Tables CNS 1C of the FASID.

2.9 The meeting should thoroughly examine this information to determine whether the requirements are being met or will be adequately met once the installations foreseen in the CAR/SAM FASID are implemented.

2.10 It should also be noted that the AFS communications operational requirements are being supported by E/CAR AFS Digital Network or by communications systems leased to public/private providers. In this respect, dedicated and switched channels are being used within these networks. Likewise, it is important to observe that, within the switched speech channels, some administrations are using the public telephone system with international direct dialing for the establishment of speech communications for ATS coordination, as a primary as well as an alternate mean.

2.11 With respect to speech communications of ATS coordination, these are normally met through dedicated or switched circuits. According to the requirements and information of Appendix C and to the deficiencies detected in the Meeting coverage area, there are ATS/COM requirements among pairs of ACC/FIC units not implemented or presenting deficiencies in their operation. The information available in the Secretariat on this matter, is as follows:

- a) Piarco ACC has communications requirements with ACCs of Georgetown, Maiquetia, Paramaribo, Rochambeau and San Juan. Requirements with Georgetown and Maiquetia are met through dedicated systems through IDD with Paramaribo and Rochambeau and with San Juan ACC through a dedicated circuit.
- b) Some ATS speech circuits have some deficiencies.

3. Suggested Action

3.1 The meeting is invited to:

- a) take note of the information contained in this paper;
- b) carry out, within the area covered by the meeting, a detailed analysis of the AFTN communications requirements to be met by the AFS networks recommended by the CAR/SAM FASID ANP shown in Appendices A and C;
- c) determine the degree of implementation of the AFTN plan and of the ATS speech circuits required at the boundaries of the CAR/SAM Regions, contained in the Appendices D;
- d) identify the deficiencies of the AFS circuits that have not been satisfactorily implemented;
- e) review and suggest relevant actions to improve E/CAR AFTN circuits and AFTN COM centers, based on Appendix A to this paper;
- f) review and update the E/CAR AFTN Plan, based on the information contained in Appendix B and C to this paper, and review its topology evolving toward the implementation of the AMHS-ATN, based on the comments of the paragraphs 2.5 to 2.7 of this paper;
- g) suggest other actions that may be deemed necessary to continue improving the AFS and development of the ground – ground communication in the Eastern Caribbean.

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APPENDIX/APENDICE A**TABLE CNS 1A / TABLEAU CNS 1A / TABLA CNS 1A****AFTN PLAN / PLAN DU RSFTA / PLAN AFTN****EXPLANATION OF THE TABLE***Column*

1	<p>The AFTN Centres/Stations of each State are listed alphabetically. Each circuit appears twice in the table. The categories of these facilities are as follows:</p> <p>M C Main AFTN COM Centre T C Tributary AFTN COM Centre S C AFTN Station</p>
2	<p>Category of circuit:</p> <p>M C Main trunk circuit connecting Main AFTN communication centres. T C Tributary circuit connecting Main AFTN communication centre and Tributary AFTN Communications Centre. S C AFTN circuit connecting an AFTN Station to an AFTN Communication Centre.</p>
3 and 7	<p>Type of circuit provided:</p> <p>LTT/a C Landline teletypewriter, analogue (e.g. cable, microwave) LTT/d C Landline teletypewriter, digital (e.g. cable, microwave) LDD/a C Landline data circuit, analogue (e.g. cable, microwave) LDD/d C Landline data circuit, digital (e.g. cable, microwave) SAT/a/d C Satellite link, with /a for analogue or /d for digital</p>
4 and 8	Circuit signalling speed, current or planned in bits/s.
5 and 9	Circuit protocols, current or planned.
6 and 10	<p>Data transfer code (syntax), current or planned:</p> <p>ITA-2 C International Telegraph Alphabet No. 2 (5-unit Baudot code). IA-5 C International Alphabet No. 5 (ICAO 7-unit code). CBI C Code and Byte Independency (ATN compliant).</p>
11	<p>Target date of implementation</p> <p>TBD C To be determined</p>
12	Remarks

Note. C Due to loading factor considerations, 150 bits/s is required as minimum.

MEVA **C** Central Caribbean MEVA Satellite Digital Network
 E/CAR **C** Eastern Caribbean Digital Network
 REDDIG **C** SAM Digital Network

EXPLICATION DU TABLEAU

Colonne

- 1 Les centres et les stations RSFTA de chaque État sont énumérés dans l'ordre alphabétique. Chaque circuit figure deux fois dans le tableau. La catégorie des installations est indiquée comme suit:
- M **C** Centre COM principal du RSFTA
 T **C** Centre COM tributaire du RSFTA
 S **C** Station du RSFTA
- 2 Catégorie de circuit:
- M **C** Circuit principal reliant les centres COM principaux du RSFTA
 T **C** Circuit tributaire reliant un centre COM principal et un centre COM tributaire du RSFTA
 S **C** Circuit du RSFTA reliant une station du RSFTA à un centre COM du RSFTA
- 3 et 7 Type de circuit:
- LTT/a **C** Téléimprimeur par fil, analogique (par exemple câble, micro-ondes)
 LTT/d **C** Téléimprimeur par fil, numérique (par exemple câble, micro-ondes)
 LDD/a **C** Circuit de données par fil, analogique (par exemple câble, micro-ondes)
 LDD/d **C** Circuit de données par fil, numérique (par exemple câble, micro-ondes)
 SAT/a/d **C** Liaison par satellite (/a pour analogique ou /d pour numérique)
- 4 et 8 Débit de signalisation de circuit, actuel ou prévu, en bits/s
- 5 et 9 Protocoles de circuit, actuels ou prévus
- 6 et 10 Code (syntaxe) de transfert de données, actuel ou prévu
- ITA-2 **C** Alphabet télégraphique international n° 2 (code Baudot à 5 chiffres)
 IA-5 **C** Alphabet international n° 5 (code OACI à 7 chiffres)
 CBI **C** Indépendance par rapport aux codes et aux multiplets (compatible ATN)
- 11 Date cible de mise en œuvre
 TBD **C** À déterminer
- 12 Remarques
- Note.* **C** En raison de considérations concernant le coefficient d'occupation de circuit, le débit de données minimal requis est de 150 bits/s.
- MEVA **C** Réseau numérique par satellite MEVA, Caraïbes centrales
 E/CAR **C** Réseau numérique des Caraïbes orientales
 REDDIG **C** Réseau numérique SAM

EXPLICACIÓN DE LA TABLA*Columna*

- 1 Los centros/estaciones AFTN de cada Estado aparecen en orden alfabético. Cada circuito aparece dos veces en la Tabla. Las categorías de estas instalaciones y servicios son las siguientes:
- M C** Centro principal AFTN COM
T C Centro tributario AFTN COM
S C Estación AFTN
- 2 Categoría del circuito:
- M C** Circuito troncal principal conectando los centros principales de comunicaciones AFTN.
T C Circuito tributario que conecta un centro principal de comunicaciones AFTN con un centro tributario.
S C Circuito AFTN que conecta una estación AFTN con un centro de comunicaciones AFTN.
- 3 y 7 Tipo de circuito proporcionado:
- LTT/a C** Circuito telegráfico terrestre, analógico (p. ej., cable, microonda)
LTT/d C Circuito telegráfico terrestre, digital (p. ej., cable, microonda)
LDD/a C Circuito de datos terrestre, analógico (p. ej., cable, microonda)
LDD/d C Circuito de datos terrestre, digital (p. ej., cable, microonda)
SAT/a/d C Enlace por satélite: a **C** analógico; d **C** digital.
- 4 y 8 Velocidad de señalización del circuito, actual o planificado en bits/s.
- 5 y 9 Protocolos de los circuitos, actuales o planificados.
- 6 y 10 Código de transferencia de datos (sintaxis) actual o planificado:
- ITA-2 C** Alfabeto Telegráfico Internacional Núm. 2 (Código Baudot de 5 unidades).
IA-5 C Alfabeto Internacional Núm. 5 **C** Código OACI de 7 unidades).
CBI C Procedimiento independiente de códigos y multietos (cumple con la ATN).
- 11 Fecha de implantación
- TBD **C** Queda por determinar
- 12 Observaciones
- Nota. C Por razones de factor de carga se requiere un mínimo de 150 bits/s.*
- MEVA C** Red digital satelital MEVA del Caribe central
E/CAR C Red digital del Caribe oriental
REDDIG C Red digital SAM

[illegible]

State/Station État/Station Estado/Estación	Category Catégorie Categoría	Current Actuel Actual				Planned Prévu Planificado				Target date implementation Date cible de mise en œuvre Fecha de implantación	Remarks Remarques Observaciones
		Type Tipo	Signalling speed Débit de signalisation Velocidad señalización	Protocol Protocole Protocolo	Code Código	Type Tipo	Signalling speed Débit de signalisation Velocidad señalización	Protocol Protocole Protocolo	Code Código		
1 Port of Spain	M	LTT/d	1200	X.25	IA-5		2400			12/04	E/CAR
SAINT VINCENT AND THE GRENADINES Saint Vincent -S Port of Spain	M	LTT/d	1200	X.25	IA-5		2400			12/04	E/CAR
SAINT MAARTEN Saint Maarten -S United States	M	SAT/d	2400	X25	IA-5						MEVA
TORTOLA Tortola United States	M					LTT	2400	X25	IA-5	TBD	
TRINIDAD AND TOBAGO Port of Spain-M											
Anguilla	S	LTT/d	1200	X.25	IA-5		2400			12/04	E/CAR
Antigua	S	LTT/d	1200	X.25	IA-5		2400			12/04	E/CAR
Barbados	S	LTT/d	1200	X.25	IA-5		2400			12/04	E/CAR
Caracas	M	LTT/a	300	None	ITA-2	LTT/d	2400	X25	IA-5	TBD	
Dominica	S	LTT/d	1200	X.25	IA-5		2400			12/04	E/CAR
Fort-de-France	S	LTT/d	1200	X.25	IA-5		2400			12/04	E/CAR
Georgetown	S	LTT/a	1200	None	ITA-2		2400	X25	IA-5	TBD	E/CAR
Grenada	S	LTT/d	1200	X.25	IA-5		2400			12/04	E/CAR
Montserrat	S	LTT/d	1200	X.25	IA-5		2400			12/04	E/CAR
Pointe-à-Pitre	S	LTT/d	1200	X.25	IA-5		2400			12/04	E/CAR
Saint Kitts and Nevis	S	LTT/d	1200	X.25	IA-5		2400			12/04	E/CAR
Saint Lucia	S	LTT/d	1200	X.25	IA-5		2400			12/04	E/CAR
Saint Vincent	S	LTT/d	1200	X.25	IA-5		2400			12/04	E/CAR
United States	M	LTT/d	2400	X.25	IA-5						
TURKS AND CAICOS ISLANDS Grand Turk-T United States	M	LLT/d	2400	X25	IA-5						
UNITED STATES United States-M											
Grand Turk	T	LLT/d	2400	X25	IA-5						
Port of Spain	M	LTT	2400	X.25	IA-5						
Saint Maarten	S	SAT/d	2400	X25	IA-5						MEVA
Tortola	S					LTT/d	2400	X25	IA-5	TBD	E/CAR

State/Station État/Station Estado/Estación		Current Actuel Actual				Planned Prévu Planificado					Remarks Remarques Observaciones
	Category Catégorie Categoría	Type Tipo	Signalling speed Débit de signalisation Velocidad señalización	Procotol Protocole Protocolo	Code Código	Type Tipo	Signalling speed Débit de signalisation Velocidad señalización	Protocol Protocole Protocolo	Code Código	Target date implementation Date cible de mise en œuvre Fecha de implantación	
1 VIRGIN ISLANDS Tortola-S United States	2 M	3	4	5	6	7	8 2400	9 X25	10 IA-5	11 TBD	12 E/CAR

- - - - -

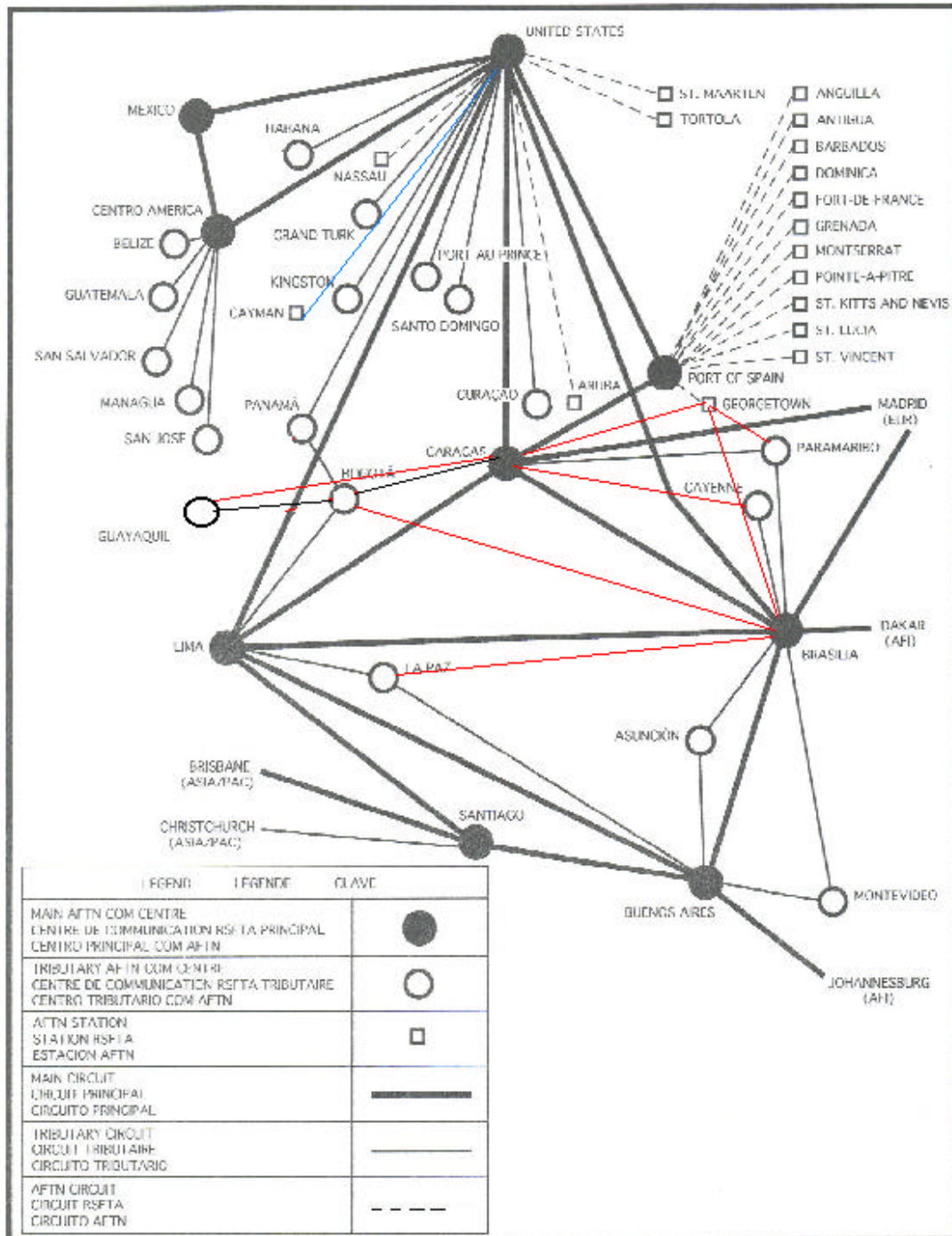
APPENDIX B

AFTN CIRCUITS AND CENTRES IN THE CAR/SAM REGIONS THAT NEED TO BE IMPLEMENTED OR IMPROVED TO COMPLY WITH THE AFTN PLAN

States/International Organizations	AFTN Circuits or AFTN Centre	Remarks/Solution
Trinidad and Tobago/ Venezuela	Port of Spain (M) – Caracas (M)	It is implemented at 300 baud, IAT-2, it presents low availability and problems in the software. The implementation of a REDDIG VSAT station in Piarco, Port of Spain that will be connected through the REDDIG is foreseen by the end of 2004.
Trinidad and Tobago/ Guyana	Port of Spain (M) – Georgetown (S)	It is out of service due to failure in the commercial line of AFTN circuit. The implementation of a RADDIG VSAT station in Piarco will resolved the deficiency. The AFTN traffic was temporary rerouted through Caracas.
Trinidad and Tobago	Port of Spain COM AFTN Center (M)	This Center will be updated during 2004 by the implementation of a new AFTN automatic switch.

APPENDIX C

RATIONALIZED AFTN PLAN FOR CAR/SAM REGIONS



APPENDIX D

CNS

IV-CNS 1C-5

ATS requirements for speech communications Besoins de HATS en communications vocales Requisitos ATS para comunicaciones orales			Circuit Circuito			Status of implementation État de mise en œuvre Estado de implantación	Remarks Remarques Observaciones
Terminal I Tête de ligne I	Terminal II Tête de ligne II	Type Tipo	Service Servicio	D/S	To be switched via/ Commutation via/ A ser conmutado vía		
1	2	3	4	5	6	7	8
ANGUILLA (United Kingdom)							
Anguilla TWR	Juliana APP	A	LTF	D		I	
ANTIGUA AND BARBUDA							
V.C. Bird APP	Blackburne TWR	A	LTF	S	E/CAR	I	
	Golden Rock TWR	A	LTF	S	E/CAR	I	
	Juliana APP	A	LTF	S	E/CAR	I	
	Piarco ACC	A	LTF	S	E/CAR	I	
	Pointe-a-Pitre APP	D	LTF	D		I	
	San Juan ACC	A	LTF	S	E/CAR	I	
BARBADOS							
Grantley Adams APP	E.T. Joshua TWR	A	LTF	S	E/CAR	I	
	Fort-de-France APP	D	LTF	D		I	
	Piarco ACC	D	LTF	D		I	
	Saint Lucia APP	A	LTF	S	E/CAR	I	
DOMINICA (Non-Contracting State)							
Canefield TWR	Pointe-a-Pitre APP	A	LTF	D		I	
Melville Hall TWR	Pointe-a-Pitre APP	A	LTF	D		I	
FRENCH ANTILLES (France)							
Fort-de-France APP	George Charles TWR	D	LTF	D			
	Grantley Adams APP	D	LTF	D		I	E/CAR
	Piarco ACC	D	LTF	D		I	E/CAR
	Pointe-a-Pitre APP	D	LTF	D		I	E/CAR
	Saint Lucia APP	D	LTF	D		I	E/CAR
Pointe-à-Pitre APP	Canefield TWR	A	LTF	D		I	E/CAR
	Fort-de-France APP	D	LTF	D		I	
	Melville Hall TWR	A	LTF	D		I	E/CAR
	Piarco ACC	D	LTF	D		I	E/CAR
	San Juan ACC	D	LTF	D		I	E/CAR
	V.C. Bird APP	D	LTF	D		I	E/CAR
Saint Barthelemy AFIS	Juliana APP	A	LTF	D		I	E/CAR
Saint Martin Grand Case AFIS	Juliana APP	A	LTF	D		I	E/CAR
GRENADA							
Pointe Salines APP	Piarco ACC	A	LTF	D		I	E/CAR
MONTSERRAT (United Kingdom)							

ATS requirements for speech communications Besoins de HATS en communications vocales Requisitos ATS para comunicaciones orales			Circuit Circuito			Status of implementation État de mise en œuvre Estado de implantación	Remarks Remarques Observaciones
Terminal I Tête de ligne I	Terminal II Tête de ligne II	Type Tipo	Service Servicio	D/S	To be switched via/ Commutation via/ A ser conmutado via		
1	2	3	4	5	6	7	8
Blackburne TWR	V.C. Bird APP	A	LTF	D		I	
NETHERLANDS ANTILLES (Netherlands)							
Juliana APP	Anguilla TWR	A	LTF	D		I	
	Golden Rock TWR	A	LTF	D		I	
	St. Barthelemy AFIS	A	LTF	D			
	San Juan ACC	A	LTF	D		I	
	Saint Martin Grand case AFIS	A	LTF				
	V.C. Bird APP	A	LTF	D		I	
PUERTO RICO (United States)							
San Juan ACC	Beef Island TWR	A	LTF	D		I	
	Curacaon ACC	A	LTF	S	MEVA	I	
	Golden Rock TWR	A	LTF	D		I	
	Juliana APP	D	LTF	D		I	
	Maigueta ACC	A	LTF	D		I	
	Miami ACC	D	LTF	D	MEVA	I	
	New York ACC	D	LTF	D		I	
	Piarco ACC	A	LTF	D		I/P	E/CAR
	Pointe-a-Pitre APP	D	LTF	D		I	MEVA
	Santo Domingo ACC	D	LTF	D		I	
	V.C. Bird APP	A	LTF	D			
SAINT KITTS AND NEVIS (Non-Contracting State)							
Golden Rock TWR	Juliana APP	A	LTF	D		I	
	San Juan ACC	A	LTF	D		I	
	V.C. Bird APP	A	LTF	D		I	
SAINT LUCIA							
George Charles TWR	Fort-de-France APP	D	LTF	D		I	E/CAR
Saint Lucia APP	E.T. Joshua APP	A	LTF	D		I	E/CAR
	Fort-de-France APP	D	LTF	D		I	E/CAR
	Grantley Adams APP	A	LTF	D		I	E/CAR
	Piarco ACC	D	LTF	D		I	E/CAR
SAINT VINCENT AND THE GRENADINES							
E.T. Joshua APP	Grantley Adams APP	A	LTF	D		I	
	Piarco ACC	A	LTF	D		I	
	Saint Lucia APP	A	LTF	D		I	
TRINIDAD AND TOBAGO							
Piarco ACC	E.T. Joshua APP	A	LTF	D		I	E/CAR
	Fort-de-France APP	D	LTF	D		I	E/CAR
	Georgetown ACC	A	LTF	D		I	E/CAR
	Grantley Adams APP	D	LTF	D		I	E/CAR

-D3-

CNS

IV-CNS 1C-7

ATS requirements for speech communications Besoins de ATS en communications vocales Requisitos ATS para comunicaciones orales			Circuit Circuito			Status of implementation Etat de mise en œuvre Estado de implantación	Remarks Remarques Observaciones
Terminal I Tête de ligne I	Terminal II Tête de ligne II	Type Tipo	Service Servicio	D/S	To be switched via/ Commutation via/ A ser conmutado via		
1	2	3	4	5	6	7	8
	Maquetia ACC New York ACC Paramaribo ACC Pointe-a-Pitre APP Pointe Salines APP Rochambeau ACC Saint Lucia APP San Juan ACC Santa Maria ACC V.C. Bird APP	A A A D A A D A A A A	LTF LTF LTF LTF LTF LTF LTF LTF LTF LTF LTF	D D D D D IDD D D D D D		I I I I I I I I I	E/CAR E/CAR E/CAR E/CAR E/CAR E/CAR E/CAR
TURKS AND CAICOS ISLANDS (United Kingdom)							
Providenciales TWR	Miami ACC	A	LTF	D		I	
UNITED STATES							
Miami ACC	Grand Turk TWR Habana ACC Nassau ACC New York ACC Port-au-Prince ACC San Juan ACC Santo Domingo ACC	A D D D A D D	LTF LTF LTF LTF LTF LTF LTF	D 2D/1S 2D/1S D S S S	MEVA MEVA MEVA MEVA MEVA	I I I I I I I	MEVA MEVA
New York ACC	Miami ACC Piarco ACC San Juan ACC	D A D	LTF LTF LTF	D D D		I I I	
VIRGIN ISLANDS (United Kingdom)							
Beef Island TWR	San Juan ACC	A	LTF	D		I	