International Civil Aviation Organization
CAR/SAM REGIONAL PLANNING AND IMPLEMENTATION GROUP
Sixth Meeting of the GREPECAS ATM/CNS Subgroup – CNS Committee (CNS/COMM/6)
Santo Domingo, Dominican Republic, 30 June to 4 July 2008

Agenda Item 1: Development of communication systems

1.3 **Follow up to the implementation of ATN and its applications**

REGIONAL ATN PLAN AND ITS APPLICATIONS

(Presented by the Secretariat)

SUMMARY

This working paper contains information about the follow up to the implementation of ATN and its applications in the CAR/SAM Regions, and about the status of the relevant ICAO SARPs and the updates of the Regional ATN Plan in Tables CNS 1Ba and 1Bb.

References:

- CAR/SAM Regional Air Navigation Plan, Doc 8733;
- Annex 10, Volume III;
- Report of the GREPECAS/13 meeting;
- Report of the GREPECAS/14 meeting;
- Report of the third meeting of the ATN Task Force of the CNS Committee of the ATM/CNS Subgroup
- Second meeting of the ACP Working Group (Montreal, 21-25 April 2008)
- Global Air Navigation Plan (Doc 9750 – AN/963).

Strategic Objectives:	*This working paper is related to Strategic objective D.*

1. Initial Considerations

1.1 The GREPECAS/13 meeting, held in Santiago, Chile on 14-18 November 2005, in relation to the revision of the regional ATN implementation plan, formulated Conclusion 13/74– *Proposal of amendment to the Regional ATN Plan*, which proposed amending FASID Table CNS 1B by replacing the format of this table by that of Tables CNS1Ba – *CAR/SAM Regional Plan for ATN Routers*, CNS 1Bb – *CAR/SAM Regional Plan for Ground-Ground Applications,* and CNS 1Bc – *CAR/SAM Regional Plan for Air-Ground Applications*.

1.2 The GREPECAS/14 meeting, held in San José, Costa Rica on 16-20 April 2007, in following up on GREPECAS Conclusion 13/75 - *Request for information on plans to implement ATN ground-ground applications*, was informed about the requirements and plans for implementing ATN ground-ground applications, such as AMHS and AIDC, by CAR/SAM States, Territories, and International Organisations.

1.3 In following up on Decision 13/76 – *Preparation of the regional AMHS addressing plan,* the GREPECAS 14 meeting was informed that an AMHS addressing plan had been prepared for the SAM Region and that the AMHS addressing plan for the CAR Region was being developed.

1.4 The GREPECAS 14 meeting, in keeping with the guidance provided by GREPECAS through Decision 13/77, prepared a draft table format for the regional ATN air-ground application plan.

1.5 Furthermore, based on the information received from States, Territories and International Organisations, an overview of AMHS implementation in the CAR/SAM Regions was presented at the GREPECAS/14 meeting in a follow up to Conclusion 13/79 *Develop national plans to prioritise the implementation of AMHS and AIDC, and contribute to ATM automation.*

Global Plan Initiatives

1.6 It was learned, in following up on Conclusion 5/2 of the ALLPIRG/5 meeting (Montreal 23-24 March 2006), that the plans for the implementation of ATN and its applications in the CAR/SAM Regions are in line with Global Plan Initiatives GPI-17 (*Implementation of data link applications)* and GPI-22 *(Communication infrastructure*).

Status of ICAO ATN SARPs

1.7 Under amendment 83 to Annex 10 Aeronautical Telecommunications, Vol. III, Parts I and III, effective on 20 November 2008, the technology of the Internet protocol suite (IPS) was introduced in the Aeronautical Telecommunication Network (ATN).

1.8 The amendment introduces IPS elements in Annex 10 that are essential for IPS-based ATN. The amendment makes reference to the standards developed by the Internet Engineering Task Force (IETF) under the sponsorship of the Internet Society (ISOC). These are open standards and can be obtained cost-free. Following IETF standards, provisions have been introduced into the amendment for the TCP (Transmission Control Protocol), UDP (User Datagram Protocol), and IPv6 BGP (Border Gateway Protocol).

1.9 The current ATN standards were revised and restructured as high-level, more functional standards with technical information that is provided only when required for ATN global interoperability. Information paper 2 of this Sixth Meeting of the CNS Committee contains amendment 83 to Annex 10, Volume III.

1.10 The detailed technical specifications will be incorporated into the new ATN/IPS Manual, document 9896, which is scheduled for publication in November 2008. At present, version 13f of the draft document is available. Within the Aeronautical Communications Panel, the Internet Protocol Suite Working Group (ACP/WG/I) is the team responsible for the development of Doc 9896. This document is divided into three parts: the first spells out the detailed technical specifications, the second covers IPS applications and the third contains the guidance material. Among the pending activities of the ACP/WG/1 is the preparation of the IPv6 Addressing Plan, the ATN/IPS requirements for VoIP and Mobility, ATN IPS Safety Material, and ATN/IPS adjustments for ATN applications.

2. **Analysis**

ATN router implementation plans

2.1 Table CNS1Ba formulated through GREPECAS conclusion 13/74 contains information about ATN routers: type of router, type of connection (regional or interregional), connected router, link protocol used, speed circuit, means of communication, and implementation date.

2.2 In follow up to the activities for completing the ATN router plan (Table CNS 1 Ba), a preliminary plan has been prepared in the CAR/SAM Regions, which is presented in **Appendices A and B**, CAR and SAM parts, respectively, to this working paper. The SAM part of this plan was presented during the COM/MET implementation meeting held in San Andrés, Colombia on 27-30 August 2007.

2.3 Table CNS1Ba shows that the routers are IP type, that there are interregional routers in Argentina, Brazil, Chile, Colombia and Venezuela, that the means of communication to be used are mainly the MEVA II and REDDIG networks, that the final link protocol will be IPv6, and that the estimated date for final router implementation is late 2015.

2.4 Based on the information presented about the ATN router implementation plan, the Meeting should review the architecture of the main support network for the CAR/SAM ATN, the outlines of which are to the found in **Appendix C** to this paper and which served as the basis for the development of the ATN requirements contained in FASID Table CNS 1B.

2.5 This Task Force is expected to present an update to this Router Plan (Table CNS 1Ba) and to the architecture of the CAR/SAM ATN network, as part of the tasks assigned to it.

Implementation plans for ATN ground-ground applications

2.6 As a result of the answers received and the follow up by the ICAO NACC and SAM Regional Offices to GREPECAS Conclusion 13/75 (requesting information about plans for implementing ATN ground-ground applications), the GREPECAS/14 meeting presented FASID Table CNS 1Bb updated with information about the implementation of ground-ground applications in the CAR and SAM Regions.

2.7 **Appendix D** presents updated information about the FASID Table CNS 1Bb for the CAR Region, which has been circulated to all of the States for the purpose of amending FASID Table CNS 1B, and **Appendix E** contains the updated CNS 1Bb table for the SAM Region.

2.8 The following can be noted from the information given in table CNS 1Bb for the CAR and SAM Regions:

a) AMHS implementation will be underway in most of the CAR/SAM States and Territories by 2015. In the case of AIDC, no implementation date has been set of yet.

b) the IP or the OSI over IP protocol is the standard apparently being used for ATN ground-ground applications. At present, the IP protocol version 4 is being used in the CAR/SAM Regions where AMHS systems are being implemented.

2.9 The preliminary approach to IP implementation for the CAR/SAM Regions was prepared at the third meeting of the ATN Task Force of the CNS Committee of the GREPECAS CNS/ATM Subgroup (Miami Florida, 20-23 March 2007) and essentially proposes the use of the Internet Protocol version 4 (IPv4) to accelerate AMHS implementation in the CAR/SAM Regions during the initial stage and then of the IPv6 protocol to establish interregional connectivity. A transition phase is also foreseen using a dual transition mechanism that would involve implementation of IPv4 and IPv6 in the AMHS systems and that would eventually lead to a network based only on IPv6, deactivating the IPv4.

2.10 Based on the information provided by the States/Territories/International Organisations at the NACC/WG meetings, AMHS systems have already been implemented in the CAR Region in COCESNA (Central American States), Atlanta (United States) and Puerto Rico; by the year 2008, AMHS implementation will be underway in the Dominican Republic and Jamaica (August) and by 2009 in Cuba, Haiti, Trinidad and Tobago and other countries. Plans have also been made for the possibility of implementing ATN communications through the MEVA II network.

2.11 In the SAM Region, in addition to the AMHS system installed in Argentina since 2006, an AMHS system was installed in Paraguay at the end of 2007 and a local AMHS system in Guayaquil, Ecuador. The implementation of AMHS systems is planned in Chile, Peru and Panama by the end of 2008. The first AMHS circuit in the SAM Region will be established between Asunción, Paraguay and Ezeiza, Argentina through the REDDIG.

Regional AMHS addressing plan

2.12 As a follow up to the ICAO State Letter contained in Circular Ref.: SP 54/1-03/39, dated 30 May 2003 and the answers received from some States, the ICAO Aeronautical Communications Panel (ACP) prepared the first draft of the Global AMHS Addressing Plan, which has been available since January 2007 and can be found at the ICAO ACP website www.icao.int/anb/panels/acp. In this connection and in keeping with GREPECAS Decision 13/76, an AMHS addressing plan has been prepared for the CAR/SAM Regions and is set out in **Appendix F** to this paper.

2.13 In accordance with the coordination between the CNS section and the ICAO Regional Offices, the Regional Offices will update the parts of the preliminary AMHS global addressing plan that correspond to each. Accordingly, the NACC and SAM Offices will update the parts corresponding to their respective Regions. ICAO will then publish the updated global AMHS addressing plan.

Regional ATN air-ground application plan

2.14 The regional ATN air-ground application plan will be completed once the ICAO SARPs on ATN IPS for ground-air applications have been completed.

Action plans for following up on and implementing ground-ground and air-ground applications

2.15 In follow up to and application of regional guidelines for the implementation of the systems, the NACC/WG/02 meeting agreed that, for this follow up and implementation, CAR/SAM States/Territories/International Organisations would use the form approved at the NACC/WG/01 meeting within the NAM/CAR Regional Implementation Plan.

3. **Suggested action**

3.1 The Region is invited to:

a) take note of the information contained in this working paper;

b) review the plans for implementation of ATN routers in the CAR and SAM Regions on the basis of the considerations contained in paragraphs 2.1 to 2.5, Appendices A and B, and the architecture of the CAR/SAM ATN main support network presented in Appendix C to this working paper, together with the results of the ATN task force on the matter;

c) review the CAR/SAM ATN ground-ground application plan on the basis of the considerations contained in paragraphs 2.6 to 2.11, Appendices D and E to this working paper, and the results of the ATN task force on the matter;

d) review the follow up to the preparation of the regional AMHS addressing plan in light of what is stated in paragraphs 2.12 to 2.13 and Appendix F to this paper; and

e) review and propose any other action it deems appropriate.

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TABLE/TABLA CNS 1Ba –ROUTERS REGIONAL PLAN / PLAN REGIONAL DE ENCAMINADORES
REGION CAR/ CAR REGION

Administration and Location/ Administración y Localidad	Type of Router / Tipo de Encaminador	Type of Interconnection/ Tipo de interconexión	Connected Router- Encaminador Conectado	Link Speed- Velocidad del enlace	Link Protocol- Protocolo del Enlace	Via Vía	Target Date / Fecha Meta	Remarks Observaciones
1	2	3	4	5	6	7	8	9
Anguilla	IP	Intra Regional	Trinidad and Tobago (Piarco)	TBD	IPv6	Eastern Caribbean Network	TBD	
Antigua	IP	Intra Regional	Trinidad and Tobago (Piarco)	TBD	IPv6	Eastern Caribbean Network	TBD	
Aruba	IP	Intra Regional	Jamaica (Kingston), Curacao	TBD	IPv6	MEVA	TBD	
Bahamas/ Nassau	IP	Intra Regional	Haiti (Port –of-Prince), USA (Miami)	TBD	IPv6	MEVA	TBD	
Barbados	IP	Intra Regional	Trinidad and Tobago (Piarco)	TBD	IPv6	Eastern Caribbean Network	TBD	
Belice/ Belice	IP	Intra Regional	Honduras – COCESNA (Tegucigalpa)	TBD	IPv6	CAMSAT	2008	
British Virgen Island (Tortola)	IP	Intra Regional	USA (Miami)	TBD	IPv6	MEVA	TBD	
Cayman I.	IP	Intra Regional	Jamaica (Kingston), Cuba (La Habana)	TBD	IPv6	MEVA	TBD	
Costa Rica/San José	IP	Intra Regional	Honduras – COCESNA (Tegucigalpa)	TBD	IPv6	CAMSAT	2008	
Cuba/La Habana	IP	Intra Regional	Haiti (Port –of-Prince), USA (Miami), Jamaica (Kingston), Cayman I., Honduras – COCESNA (Tegucigalpa)	TBD	IPv6	MEVA	TBD	
			Mexico	TBD	IPv6	TBD	TBD	
Curacao	IP	Intra Regional	Aruba, Dominican Republic (Sto. Domingo), Haiti (Port of Prince), Jamaica (Kingston), Puerto Rico (San Juan)	TBD	IPv6	MEVA	TBD	
Dominican Republic/Sto. Domingo	IP	Intra Regional	Haiti (Port of Prince), Puerto Rico (San Juan), Curacao	TBD	IPv6	MEVA	TBD	
El Salvador/San Salvador	IP	Intra Regional	Honduras – COCESNA (Tegucigalpa)	TBD	IPv6	CAMSAT	2008	

Administration and Location/ Administración y Localidad	Type of Router / Tipo de Encaminador	Type of Interconnection/ Tipo de interconexión	Connected Router- Encaminador Conectado	Link Speed- Velocidad del enlace	Link Protocol- Protocolo del Enlace	Via Vía	Target Date / Fecha Meta	Remarks Observaciones
1	2	3	4	5	6	7	8	9
French Antilles (Martinique) /Fort-au-France	IP	Intra Regional	Trinidad and Tobago (Piarco)	TBD	IPv6	Eastern Caribbean Network	TBD	
French Antilles (Guadalupe) /Point-a Pitre	IP	Intra Regional	Trinidad and Tobago (Piarco)	TBD	Ipv6	Eastern Caribbean Network	TBD	
Grenada	IP	Intra Regional	Trinidad and Tobago (Piarco)	TBD	Ipv6	Eastern Caribbean Network	TBD	
Guatemala/La Aurora	IP	Intra Regional	Honduras – COCESNA (Tegucigalpa)	TBD	Ipv6	CAMSAT	2008	
Haiti / raba f Prince	IP	Intra Regional	Bahamas, Cuba (La Habana), Curacao, Dominican Republic (Sto. Domingo), Jamaica (Kingston)	TBD	Ipv6	MEVA	TBD	
Honduras /Tegucigalpa COCESNA	IP	Intra Regional	Belice (Belice), Costa Rica (San Jose), Guatemala (La Aurora), Honduras (San Pedro Sula), Nicaragua (Managua),	TBD	Ipv6	CAMSAT	2008	
		Inter/ Intra Regional	Cuba (La Habana), NAM (Atlanta), Panama, USA (Miami)	TBD	Ipv6	MEVA	TBD	
		Intra Regional	Mexico,	TBD	Ipv6	TBD	TBD	
Honduras/ San Pedro Sula	IP	Intra Regional	Honduras – COCESNA (Tegucigalpa)	TBD	Ipv6	CAMSAT	2008	
Jamaica/Kingston	IP	Intra Regional	raba, Cayman I., Cuba (La Habana), Curacao, Haiti (Port of Prince).	TBD	Ipv6	MEVA	TBD	
Mexico	IP	Inter/ Intra Regional	Cuba (La Habana), Honduras (Tegucigalpa), NAM (Atlanta),	TBD	Ipv6	TBD	TBD	
Monserrat	IP	Intra Regional	Trinidad and Tobago (Piarco)	TBD	Ipv6	Eastern Caribbean Network	TBD	

Administration and Location/ Administración y Localidad	Type of Router / Tipo de Encaminador	Type of Interconnection/ Tipo de interconexión	Connected Router- Encaminador Conectado	Link Speed- Velocidad del enlace	Link Protocol- Protocolo del Enlace	Via Vía	Target Date / Fecha Meta	Remarks Observaciones
1	2	3	4	5	6	7	8	9
Nicaragua / Managua	IP	Intra Regional	Honduras – COCESNA (Tegucigalpa)	TBD	Ipv6	CAMSAT	2008	
Puerto Rico/ San Juan	IP	Inter/ Intra Regional	Curacao, Dominican republic (Sto. Domingo), USA (Miami).	TBD	Ipv6	MEVA	TBD	
			SAM (Caracas), Trinidad and Tobago (Piarco),	TBD	Ipv6	TBD	TBD	
St. Kitts & Nives	IP	Intra Regional	Trinidad and Tobago (Piarco)	TBD	Ipv6	Eastern Caribbean Network	TBD	
St. Lucia	IP	Intra Regional	Trinidad and Tobago (Piarco)	TBD	Ipv6	Eastern Caribbean Network	TBD	
St Marteen	IP	Intra Regional	USA (Miami)	TBD	IPv6	MEVA	TBD	
St. Vincent	IP	Intra Regional	Trinidad and Tobago (Piarco)	TBD	IPv6	Eastern Caribbean Network	TBD	
Turks & Caicos/ Grand Turk	IP	Intra Regional	USA (Miami)	TBD	IPv6	MEVA	TBD	
Trinidad and Tobago /Piarco	IP	Intra Regional	Angula, Antigua, Barbados, French Antilles (Fort-au-France, Point-a-Pitre), Grenada, Monserrat, St. Kitts & Nives, St. Lucia, St. Vincent.	TBD	IPv6	Eastern Caribbean Network	TBD	
		Intra Regional	Puerto Rico (San Juan)	TBD	IPv6	TBD	TBD	
		Inter Regional	EUR (Madrid),	TBD	IPv6	TBD	TBD	
		Inter Regional	SAM (Caracas)	TBD	IPv6	REDDIG	TBD	

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TABLE/TABLA CNS 1Ba –ROUTERS REGIONAL PLAN / PLAN REGIONAL DE ENCAMINADORES

Administration and Location/ Administración y Localidad	Type of Router / Tipo de Encaminador	Type of Interconnection/ Tipo de interconexión	Connected Router- Encaminador Conectado	Link Speed- Velocidad del enlace	Link Protocol- Protocolo del Enlace	Via Vía	Target Date / Fecha Meta	Remarks Observaciones
1	2	3	4	5	6	7	8	9
Argentina /Buenos Aires	IP	Inter/Intra Regional	AFI(Johannesburgo), Bolivia (La Paz) , Chile (Santiago de Chile) , Brasil(Brasilia), Paraguay (Asunción) , ´Perú (Lima) y Uruguay (Montevideo)	TBD	IPv6	CAFSAT REDDIG	2008	
Bolivia /La Paz	IP	Intra Regional	Argentina (Buenos Aires), Brasil (Brasilia)y Perú (Lima)	TBD	IPv6	REDDIG	2010	
Brasil /Manaus	IP	Intra Regional	Colombia (Bogotá),Guyana (Georgetown), Guyana Francesa (Cayena), Perú (Lima), Surinam(Paramaribo) y Venezuela (Caracas)	TBD		REDDIG	2009	
Brasil /Brasilia	IP	Inter/Intra Regional	AFI (Dakar),EUR(Madrid) NAM (Atlanta) via Bogotá, Argentina (Buenos Aires), Bolivia(La Paz), Paraguay(Asunción) y Uruguay (Montevideo)	TBD	IPv6	CAFSAT REDDIG	2009	
Chile/Santiago	IP	Inter/Intra Regional	PAC(Christchurch), Argentina (Buenos Aires) y Perú (Lima)	TBD	IPv6	PTT REDDIG	2008	
Colombia /Bogotá	IP	Inter/Intra Regional	NAM (Atlanta)*, Ecuador (Guayaquil), Brasil (Manaus) Perú (Lima), Venezuela (Caracas)	TBD	IPV6	*Interconexión MEVA II REDDIG REDDIG	2009	

Administration and Location/ Administración y Localidad	Type of Router / Tipo de Encaminador	Type of Interconnection/ Tipo de interconexión	Connected Router-Encaminador Conectado	Link Speed-Velocidad del enlace	Link Protocol-Protocolo del Enlace	Via Vía	Target Date / Fecha Meta	Remarks Observaciones
1	2	3	4	5	6	7	8	9
Ecuador/Guayaquil	IP	Intra Regional	Colombia (Bogotá) , Perú (Lima) y Venezuela (Caracas)	TBD	IPv6	REDDIG	2010	
Guyana Francesa	IP	Intra Regional	Brasil (Manaus) y Surinam (Paramaribo)	TBD	IPv6	REDDIG	2010	
Guyana	IP	Inter/Intra Regional	C-CAR (Piarco), Brasil (Manaos) , Surinam(Paramaribo) y Venezuela(Caracas)	TBD	IPv6	REDDIG	2010	
Paraguay/Asunción	IP	Intra Regional	Argentina (Buenos Aires) Brasil (Brasilia)	TBD	IPv6	REDDIG	2008	
Perú/Lima	IP	Inter/Intra Regional	NAM(Atlanta),,Argentina(BuenosAires),Bolivia (La Paz),Brasil (Manaos),Chile(Santiago),Colombia (Bogotá),Ecuador (Guayaquil y Venezuela (Caracas),	TBD	IPv6	REDDIG	2009	
Suriname/Paramaribo	IP	Inter Regional	Brasil (Manaos), Guyana Francesa(Cayena) y Venezuela (Caracas)	TBD	IPv6	REDDIG	2010	
Uruguay /Montevideo	IP	Intra Regional	Argentina(Buenos Aires), Brasil (Brasilia)	TBD	IPv6	REDDIG	2010	
Venezuela/Caracas	IP	Inter/Intra Regional	CAM (San Juan), EUR(Madrid), Brasil (Manaus), Colombia (Bogotá) ,Ecuador(Quito), Guyana(Georgetown), y Suriname (Paramaribo) y Trinidad&Tobago (Piarco)	TBD	IPv6	Interconexión MEVAII REDDIG PTT REDDIG	2009	

APPENDIX C / APÉNDICE C

DOMAINS AND BACKBONE OF THE CAR/SAM ATN NETWORK
DOMINIOS Y RED TRONCAL ATN CAR/SAM

Fig 1: CAR/SAM Domains of ATN Router
Dominios de Encaminamiento ATN CAR/SAM

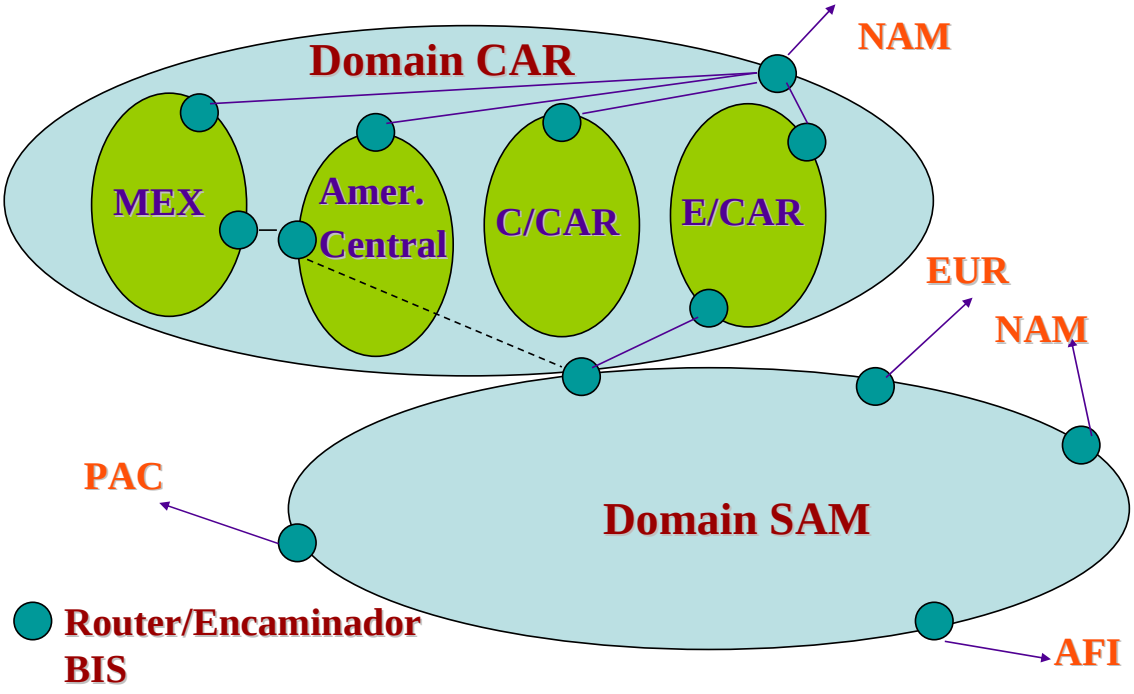


Fig 2: Backbone of Inter-network ATN Routers – CAR Region
Red Troncal de Encaminadores para la inter-red ATN - Región CAR

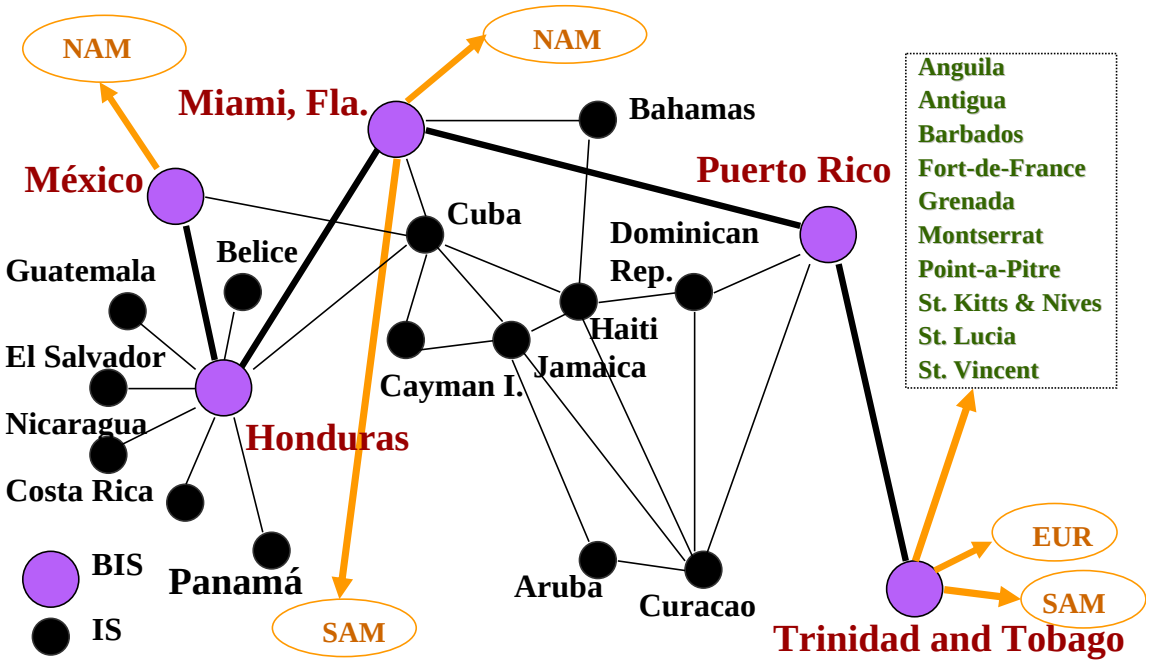
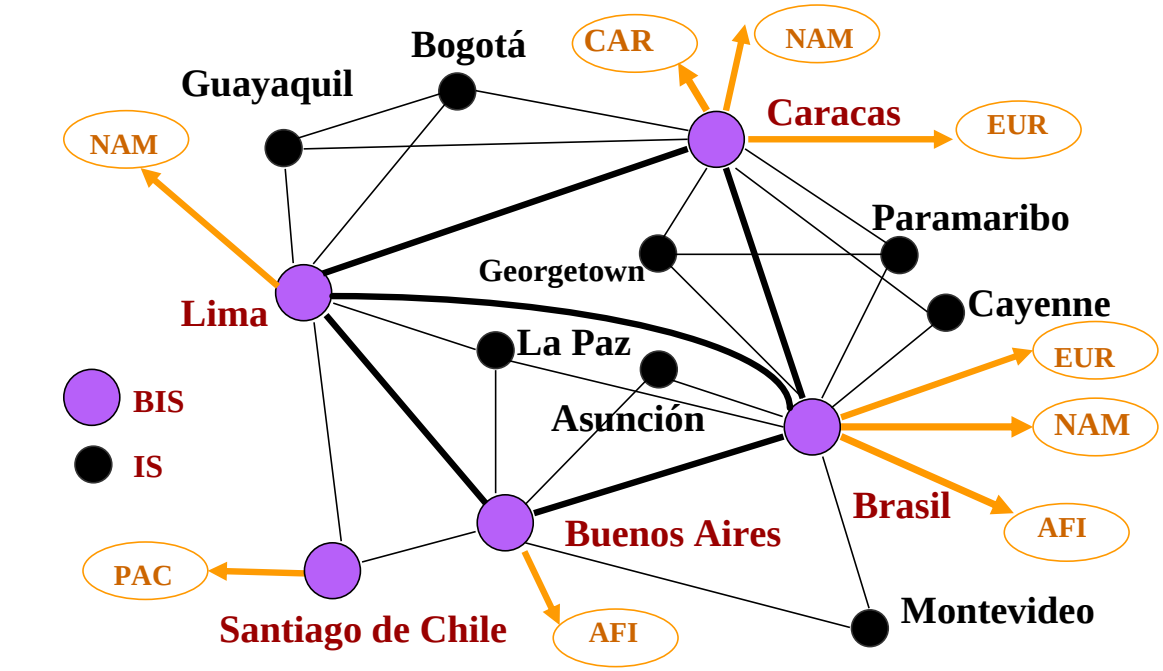


Fig. 3 – Backbone of Inter-network ATN Routers – SAM Region
Red Troncal de Encaminadores para la inter-red ATN - Región SAM



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APENDICE D / APPENDIX D

LISTA DE EQUIPAMIENTO PARA LA INTERCONEXION / LIST OF EQUIPMENT REQUIRED FOR THE INTERCONNECTION

LOCALIDAD / LOCATION	EQUIPO ADICIONAL/PARTES REQUERIDAS / ADDITIONAL EQUIPMENT/PARTS NEEDED	CANTIDAD / QUANTITY
COCESNA	Linkway 2100 with frame-relay card and V.35 cable	1
	Memotec DAV Card	1
	Memotec FXS SLIM LID	2
	Memotec V.35H Card	1
	2-port L-band Splitter	1
	2-port L-band Combiner	1
Curacao	Memotec DAV Card	1
	Memotec FXS SLIM LID	1
	Memotec V.24 Card	1
Caracas	Linkway 2100 with frame-relay card and V.35 cable	1
	Memotec DAV Card *(2 for MUX A, 2 for MUX B)*	4
	Memotec FXS SLIM LID *(3 for MUX A, 3 for MUX B)*	6
	2-port L-band Splitter	3
	2-port L-band Combiner	3
	Paradise 75W BUC	2
Bogota	Linkway 2100 with frame-relay card and V.35 cable	1
	Memotec V.35H Card	1
	Memotec E1 DIM *(1) for MPS A, (1) for MPS B to be installed in slot 2*	2
	2-port L-band Splitter	3
	2-port L-band Combiner	3
Jamaica	Memotec DAV Card	1
	Memotec FXS SLIM LID	1
Miami	Memotec 960e Chassis	1
	Memotec 960e CPU	1
	Memotec 960e Power Supply	1
	Universal I/O	1
Panama	Memotec DAV Card	1
	Memotec FXS SLIM LID	2
	Memotec Multi I/O card	1
San Juan	Memotec DAV Card	1
	Memotec FXS SLIM LID	1
	Memotec Multi I/O card	1
Ecuador	E-1 Daughter Card for Memotec A and Memotec B	2

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APPENDIX E / APENDICE E

TABLE CNS 1BB –GROUND-GROUND APPLICATIONS PLAN / TABLA CNS1 BB – PLAN DE APLICACIONES TIERRA-TIERRA (SAM REGION / REGIÓN SAM)

ATN GROUND-GROUND APPLICATIONS PLAN / PLAN DE APLICACIONES TIERRA-TIERRA					
Administration and Location/ Administración y localidad	**Application Type/ Tipo de Aplicación**	**Conneted with Administration & Location of/ Conectada con Administración y Localidad de.**	**Used Standard / Norma usada**	**Implementation Date/ Fecha de Implementación**	**Remarks/ Observaciones**
1	2	3	4	5	6
Argentina, Buenos Aires	AMHS	Bolivia, Brasil, Chile, Paraguay Perú, Uruguay y AFI	IP or OSI Over IP	2005	
	AIDC	Bolivia, Brasil, Chile, Paraguay Perú, Uruguay y AFI	IP or OSI Over IP	TBD /Por determinar	
Bolivia , La Paz	AMHS	Argentina , Brasil y Perú	IP or OSI Over IP	2008	
	AIDC	Argentina , Brasil y Perú	IP or OSI Over IP	TBD /Por determinar	
Brasil, Brasilia	AMHS	Argentina, Bolivia,Paraguay,Uruguay, NAM,EUR,AFI	IP or OSI Over IP	2008	
	AIDC	Argentina,Bolivia ,Paraguay,Uruguay, NAM,EUR,AFI	IP or OSI Over IP	TBD/ Por determinar	
Brasil Manaus	AMHS	Colombia, Guyana, Guyana Francesa, Perú , Surinam y Venezuela	IP or OSI Over IP	2008	
	AIDC	Colombia, Guyana, Guyana Francesa ,Perú , Surinam y Venezuela	IP or OSI Over IP	TBD/ Por determinar	
Chile, Santiago	AMHS	Argentina, Perú y PAC.	IP or OSI Over IP	2007	
	AIDC	Argentina, Perú y PAC.	IP or OSI Over IP	TBD/Por determinar	
Colombia , Bogotá	AMHS	Brasil , Ecuador, Perú y Venezuela	IP or OSI Over IP	2008	
	AIDC	Brasil, Ecuador,Perú y Venezuela	IP or OSI Over IP	TBD/Por determinar	
Ecuador ,Quito	AMHS	Colombia , Perú y Venezuela	IP or OSI Over IP	2009	
	AIDC	Colombia , Perú y Venezuela	IP or OSI Over IP	TBD/Por determinar	
French Guyana , Cayenne	AMHS	Brasil, Surinam y Venezuela	IP or OSI Over IP	2009	

ATN GROUND-GROUND APPLICATIONS PLAN / PLAN DE APLICACIONES TIERRA-TIERRA					
Administration and Location/ Administración y localidad	**Application Type/ Tipo de Aplicación**	**Conneted with Administration & Location of/ Conectada con Administración y Localidad de.**	**Used Standard / Norma usada**	**Implementation Date/ Fecha de Implementación**	**Remarks/ Observaciones**
1	2	3	4	5	6
	AIDC	Brasil, Surinam y Venezuela	IP or OSI Over IP	TBD/Por determinar	
Guyana, Georgetown	AMHS	Brasil, Trinidad Tobago y Venezuela	IP or OSI Over IP	2009	
	AIDC	Brasil, Trinidad Tobago y Venezuela	IP or OSI Over IP	TBD/Por determinar	
Paraguay, Asunción	AMHS	Argentina, Brasil	IP or OSI Over IP	2007	
	AIDC	Argentina, Brasil	IP or OSI Over IP	TBD/Por determinar	
Perú	AMHS	Argentina, Bolivia Brasil, Chile Colombia, Ecuador, Venezuela y NAM	IP or OSI Over IP	2007	
	AIDC	Argentina, Bolivia, Brasil, Chile Colombia, Ecuador Venezuela y NAM	IP or OSI Over IP	TBD/Por determinar	
Surinam	AMHS	Brasil, French Guyana y Venezuela	IP or OSI Over IP	2009	
	AIDC	Brasil, French Guyana y Venezuela	IP or OSI Over IP	TBD/Por determinar	
Uruguay	AMHS	Argentina, Brasil	IP or OSI Over IP	2008	
	AIDC	Argentina, Brasil	IP or OSI Over IP	TBD/Por determinar	
Venezuela	AMHS	Brasil, Colombia, Ecuador, Guyana, Guyana Francesa , Perú, Suriname, NAM, CAR y EUR	IP or OSI Over IP	2008	
	AIDC	Brasil, Colombia, Ecuador Guyana, Guyana Francesa , Perú, Suriname, NAM,CAR y EUR	IP or OSI Over IP	TBD/Por determinar	

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APPENDIX F / APÉNDICE F

AMHS MD REGISTER FOR CAR/NAM REGION / REGISTRO AMHS MD PARA LAS REGIONES CAR/NAM

http://www.icao.int/anb/panels/acp/amhs

State		AMHS Address Specification					
Nationality Letters	**Name**	**Country name (C)**	**ADMD name (A)**	**PRMD name (P)**	**Addressing scheme**	**Organization name (O*)**	**Remark**
TQ	Anguilla (U.K.)	XX	ICAO	TQ	XF	AFTN	
TA	Antigua and Barbuda	XX	ICAO	TA	XF	AFTN	
TB	Barbados	XX	ICAO	TB	CAAS	AFTN	State Letter Confirmed
TU	British Virgin Islands (U.K.)	XX	ICAO	TU	XF	AFTN	
TF	French Antilles	XX	ICAO	TF	XF	AFTN	State letter confirmed
TG	Grenada	XX	ICAO	TG	XF	AFTN	
TR	Montserrat (U.K.)	XX	ICAO	TR	XF	AFTN	
TK	Saint Kitts and Nevis	XX	ICAO	TK	XF	AFTN	
TL	Saint Lucia	XX	ICAO	TL	XF	AFTN	
TD	Dominica	XX	ICAO	TD	XF	AFTN	
TV	Saint Vincent and the Grenadines	XX	ICAO	TV	XF	AFTN	
TT	Trinidad and Tobago	XX	ICAO	TT	XF	AFTN	
TN	Netherlands Antilles	XX	ICAO	TN	XF	AFTN	
TNCA	Aruba	XX	ICAO	TNCA	XF	AFTN	
MY	Bahamas	XX	ICAO	MY	XF	AFTN	
MU	Cuba	XX	ICAO	MU	CAAS	MU	State letter confirmed
MT	Haiti	XX	ICAO	MT	XF	AFTN	
MW	Cayman Islands (U.K.)	XX	ICAO	MW	XF	AFTN	
MB	Turks and Caicos Islands (U.K.)	XX	ICAO	MB	XF	AFTN	
MK	Jamaica	XX	ICAO	MK	XF	AFTN	
MD	Dominican Republic	XX	ICAO	MD	XF	AFTN	
TI	Virgin Islands (U.S.)	XX	ICAO	TI	XF	AFTN	
MZ	Belize	XX	ICAO	MZ	XF	AFTN	
MR	Costa Rica	XX	ICAO	MR	XF	AFTN	
MS	El Salvador	XX	ICAO	MS	XF	AFTN	
MG	Guatemala	XX	ICAO	MG	XF	AFTN	
MH	Honduras	XX	ICAO	MH	XF	AFTN	
MN	Nicaragua	XX	ICAO	MN	XF	AFTN	
MM	Mexico	XX	ICAO	MM	CAAS	MM	State letter confirmed
TX	Bermuda (U.K.)	XX	ICAO	TX	XF	AFTN	
TJ	Puerto Rico	XX	ICAO	TJ	XF	AFTN	

State		AMHS Address Specification					
Nationality Letters	**Name**	**Country name (C)**	**ADMD name (A)**	**PRMD name (P)**	**Addressing scheme**	**Organization name (O*)**	**Remark**
C*	Canada	XX	ICAO	C	XF	AFTN	
K*	United States	XX	ICAO	USA	CAAS		State letter confirmed

Date: 25 March 2008

PROPOSED AMHS MD REGISTER FOR SAM REGION /
REGISTRO AMHS MD PARA LAS REGIONES SAM PROPUESTO

ESTADO	ESPECIFICACIONES DE DIRECCIONAMIENTO AMHS					
	NOMBRE ESTADO (C)	NOMBRE ADMD (A)	NOMBRE PRMD (P)	NOMBRE ORGANIZACIÓN (O) *	NOMBRE UNIDAD ORGANIZACIONAL (OUI)	NOMBRE COMUN (CN)
ARGENTINA	XX	ICAO	ARGENTINA	SAEZ	Todas las cuatro letras indicadas en el Documento 7910 de la OACI	Dirección AFTN (8 letras) de usuario
BOLIVIA	XX	ICAO	BOLIVIA	SLLF	Id	Id
BRASIL	XX	ICAO	BRASIL	SBBF	Id	Id
CHILE	XX	ICAO	CHILE	SCEZ	Id	Id
COLOMBIA	XX	ICAO	COLOMBIA	SKED	Id	Id
ECUADOR	XX	ICAO	ECUADOR	SEGU	Id	Id
GUYANA FRANCESA	XX	ICAO	GUYANA FRANCESA	SOCA	Id	Id
GUYANA	XX	ICAO	GUYANA	SYCJ	Id	Id
PANAMA	XX	ICAO	PANAMA	MPTO	Id	Id
PARAGUAY	XX	ICAO	PARAGUAY	SGAS	Id	Id
PERU	XX	ICAO	PERU	SPLI	Id	Id
SURINAME	XX	ICAO	SURINAME	SMPM	Id	Id
URUGUAY	XX	ICAO	URUGUAY	SUEO	Id	Id
VENEZUELA	XX	ICAO	VENEZUELA	SVZM	Id	Id

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- END / FIN -