



ICAO

International Civil Aviation Organization
North American, Central American and Caribbean Office

THIRD NAM/CAR AIR NAVIGATION IMPLEMENTATION WORKING GROUP MEETING

(ANI/WG/3)

FINAL REPORT

MEXICO CITY, MEXICO, 4 TO 6 APRIL 2016

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HISTORICAL

ii.1 Place and Date of the Meeting

The Third NAM/CAR Air Navigation Implementation Working Group Meeting (ANI/WG/3) was held at the ICAO NACC Regional Office in Mexico City, Mexico, from 4 to 6 April 2016.

ii.2 Opening Ceremony

Mr. Julio César Siu, Deputy Regional Director of the North American, Central American and Caribbean (NACC) Regional Office of the International Civil Aviation Organization (ICAO), provided opening remarks highlighting the importance of this meeting for the follow-up of the air navigation targets of the *Port-of-Spain Declaration* and the NAM/CAR Regional Performance-Based Air Navigation Implementation Plan (RPBANIP), for which the implementation progress report, operation improvement identification, targets review, the adjustment and new targets formulation should be the primary subject of this meeting. Likewise, the events planned for 2016 originated from the ANI/WG recommendations were emphasized and that all this effort is in line with the ICAO NACC Regional Office “No Country Left Behind” (NCLB) strategy. Mr. Julio C. Mejía Alcántara, ANI/WG Chairperson, commented on the important work of the ANI/WG in the harmonization of air navigation for the NAM/CAR Regions; welcomed the participants to Mexico and officially opened the meeting.

ii.3 Officers of the Meeting

The ANI/WG/3 Meeting was chaired by, Mr. Julio C. Mejía Alcántara who presided the meeting as a whole. Mr. Raúl Martínez, Regional Officer, Aeronautical Information Management of the ICAO NACC Regional Office, served as Secretary of the Meeting, assisted by Mr. Victor Hernández, Regional Officer, Air Traffic Management and Search and Rescue (ATM/SAR), from the ICAO NACC Regional Office

ii.4 Working Languages

The working languages of the Meeting were English and Spanish. The working papers, information papers and report of the meeting were available to participants in both languages. Discussion Papers were presented only in English.

ii.5 Schedule and Working Arrangements

It was agreed that the working hours for the sessions of the meeting would be from 09:00 to 16:30 hours daily with adequate breaks. Ad hoc Groups were created during the Meeting to carry out further work on specific items of the Agenda.

ii.6 Agenda

Agenda Item 1: Review and Approval of the Agenda, Working Method and Schedule of the Meeting

Agenda Item 2: Review and Follow-up to Relevant and Valid Conclusions/Decisions of ANI/WG/2 Meeting and Conclusions from the E/CAR/CATG/2, and GREPECAS, PPRC/3 Meetings

Agenda Item 3: Global/Regional Air Navigation Developments

- 3.1 Implementation of the ICAO NACC Regional Office No Country Left Behind (NCLB) Strategy
- 3.2 Relevant updates of ICAO Standards and Recommended Practices (SARPs)
- 3.3 Regional Electronic Air Navigation Plan (eANP) implementation
- 3.4 Other Global/Regional Air Navigation Developments
 - 3.4.1 Review of Regional Supplementary Procedures (*Doc 7030*)
 - 3.4.2 Results of the ITU World Radiocommunication Conference 2015 (WRC-15)

Agenda Item 4: Follow-up, Performance Evaluation and Monitoring of the NAM/CAR Regional Performance Based Air Navigation Implementation Plan (NAM/CAR RPBANIP) Targets

- 4.1 Progress Reports of the Task Forces and the ANI/WG
- 4.2 Evaluation of the Progress Implementation on *Port-of-Spain Declaration* and RPBANIP Targets
- 4.3 Progress Report by States of Adopted Aviation System Block Upgrades (ASBU) B0 Modules
- 4.4 CAR RLA/09/801 Project Outcomes in Support to RPBANIP Targets
- 4.5 ICAO Monitoring Programme

Agenda Item 5: Training Issues

Agenda Item 6: Other Business

ii.7 Attendance

The Meeting was attended by 14 States/Territories from the NAM/CAR Regions and 3 International Organizations, totalling 51 delegates as indicated in the list of participants.

ii.8 Draft Conclusions and Decisions

The Meeting recorded its activities as Draft Conclusions and Decisions as follows:

DRAFT

CONCLUSIONS: Activities requiring endorsement by the Directors of Civil Aviation of North America, Central America and Caribbean (NACC/DCA).

DECISIONS: Internal activities of the NAM/CAR Air Navigation Implementation Working Group (ANI/WG).

An executive summary of these conclusions/decisions is presented in **Appendix A** to this report.

List of Draft Conclusions

Number	Title	Page
3/1	<i>REGIONAL PERFORMANCE OF AIR NAVIGATION IMPLEMENTATION PROJECTS</i>	3-1
3/2	<i>DEVELOPMENT OF A PROPOSAL FOR AMENDMENT (PFA) TO THE DOC 7030 - REGIONAL SUPPLEMENTARY PROCEDURES (SUPPS), CAR/SAM PART</i>	3-4
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3/7	<i>VHF COMMUNICATION IMPROVEMENTS IN THE PORT-AU-PRINCE FIR</i>	4-19

ii.9 List of Working and Information Papers and Presentations

Refer to the Meeting web page:

<http://www.icao.int/NACC/Pages/meetings-2016-aniwg3.aspx>

WORKING PAPERS

Number	Agenda Item	Title	Date	Prepared and Presented by
WP/01	1	Provisional Agenda and Schedule of the Second NAM/CAR Air Navigation Implementation Working Group Meeting	09/02/16	Secretariat
WP/02	2	Review and Follow-Up to Relevant and Valid Conclusions/Decisions of the ANI/WG/2 Meeting	29/02/16	Secretariat
WP/03	3.1	Implementation of the ICAO NACC Regional Office No Country Left Behind (NCLB) Strategy	22/03/16	Secretariat
WP/04	3.3	Follow-Up to the Development of the Electronic Regional Air Navigation Plan (eANP)	22/03/16	Secretariat
WP/05	3.4.1	Review of Regional Supplementary Procedures (Doc 7030)	22/03/16	Secretariat
WP/06	3.4.2	Results of the ITU World Radiocommunication Conference 2015 (WRC-15)	22/03/16	Secretariat
WP/07	4.1	Progress of the NAM/CAR Air Navigation Implementation Working Group (ANI/WG)	25/03/16	Chairperson of the ANI/WG
WP/08	4.1	Preliminary Progress Report by PBN Task Force	04/03/16	ANI/WG PBN TF Rapporteur
WP/09	4.1	Preliminary Progress Report by ATFM TF	21/03/16	ATFM TF Rapporteur
WP/10	4.1	Preliminary Progress report by AIDC Task Force Including FPL	31/03/16	AIDC Task Force Rapporteur
WP/11	4.1	Preliminary Progress report by ADS-B Task Force	30/03/16	ADS-B Task Force Rapporteur
WP/12	4.1	Preliminary Report on the Progress of the AIM Task Force	04/03/16	AIM Task Force Rapporteur
WP/13	4.1	Preliminary progress Report by AMHS Task Force	22/03/16	AMHS Task Force Rapporteur
WP/14	6	Planning Considerations on the Events held by the ICAO NACC Regional Office (ICAO NACC)	23/06/16	Cuba
WP/15		Cancelled		
WP/16	4.1	Air Traffic Services Interfacility Data Communication Implementation in the North American, Central American, Caribbean and South American Regions	22/03/16	United States
WP/17	4.1	United States update on the North American Common Interface Control Document (NAM ICD) Version 'E'	04/03/16	United States

WORKING PAPERS

Number	Agenda Item	Title	Date	Prepared and Presented by
WP/18	4.1	Reduction and Harmonization of Longitudinal Separation Minima	04/03/16	United States
WP/19	4.2	Progress on RPBANIP Targets	30/03/16	Secretariat
WP/20	4.1	Progress Report of the Sixth Eastern Caribbean Network Technical Group Meeting (E/CAR/NTG/6) and Fourth Eastern Caribbean Surveillance Data Sharing Group Meeting (E/CAR/RD/4)	22/03/16	E/CAR/NTG Rapporteur
WP/21	5	Training Issues in the NAM/CAR Regions	01/04/16	Secretariat
WP/22	4.1	Meteorological Information Exchange	03/04/16	Secretariat
WP/23	4.1	Single Eastern Caribbean (E/CAR) AIM-QMS Meeting	05/04/16	Secretariat

INFORMATION PAPERS

Number	Agenda Item	Title	Date	Prepared and Presented by
IP/01	--	List of Working and Information Papers	01/04/16	Secretariat
IP/02	4.1	AIM/ATM/CNS Progress in the E/CAR Region	09/03/16	E/CAR/CATG Chairperson
IP/03	2	Review and Follow-Up to Relevant and Valid Conclusions/Decisions of the CAR/SAM Regional Planning and Implementation Group (GREPECAS) of the Third Meeting of the Programmes and Projects Review Committee (PPRC/3)	01/03/16	Secretariat
NI/04	4.2	Avances PBN en COCESNA, Módulo B0 ASBU y Metas de la Declaración de Puerto España (<i>available only in Spanish</i>)	23/03/16	COCESNA
IP/05	4.1	Collaborative Decision Making (CDM) Process utilized in the establishment of a new West Atlantic Route System (WATRS) Route (NAM/CAR/SAM NATIONAL ROUTE L463)	04/03/16	United States
IP/06	4.1	ADS-B Implementation Status in the United States	17/03/16	United States
IP/07	4.1	MEVA III Network Overview	04/03/16	United States
IP/08	4.1	Miami Air Route Traffic Control Center, Miami High Sector 40: Improving Operations	04/03/16	United States
NI/09	4.3	Avances en la Implementación del Bloque 0 de ASBU Modulo B0-105/AMET, en la República de Cuba (<i>available only in Spanish</i>)	21/03/16	Cuba
NI/10	4.3	Avances en la Implementación del Bloque 0 de ASBU Modulo DAIM, en la República de Cuba (<i>available only in Spanish</i>)	21/03/16	Cuba

INFORMATION PAPERS

Number	Agenda Item	Title	Date	Prepared and Presented by
IP/11	4.3	Haiti ATM Planning: towards the adoption of ASBU Methodology	18/03/16	Haiti
IP/12	4.3	U.S. Implementation of the Aviation System Block Upgrades (ASBU) Block 0 Modules	21/03/16	United States
IP/13	4.1	Caribbean Air Traffic Flow Management (ATFM) Survey Results	30/03/16	United States
IP/14	4.1	Establishment of the Caribbean Regional Implementation Group for Air Traffic Flow Management (ATFM)/Collaborative Decision Making (CDM)	31/03/16	CANSO and United States
IP/15	3.2	Relevant ICAO SARPS amendments for Air Navigation Implementation/ ANIWG	01/04/16	Secretariat
IP/16	4.1	VHF Coverage Issue Resolution within the Haitian FIR	03/04/16	Haiti

PRESENTATIONS

Number	Agenda Item	Title	Presented by
P/01	6	Remotely Piloted Aircraft Systems (RPAS)	Secretariat
P/02	4.1	Automation Interface Update	04/03/16
P/03	4.1	North American (NAM) Common Coordination Interface Control Document (ICD) Version 'E' Update	04/03/16
P/04	4.1	A No Country Left Behind Initiative: implement	Secretariat
P/05	4.4	Regional Technical Cooperation Project for the Caribbean	Secretariat
P/06	4.1	ICAO/IATA/CANSO Performance-Based Navigation (PBN) Harmonization, Modernization and Implementation Meeting for the Caribbean (CAR Region)	Secretariat

DISCUSSION PAPERS

Number	Agenda Item	Title	Date	Prepared and Presented by
DP/01	4.1	PBN Task Forces Progress Report	05/04/16	PBN Task Force Rapporteur
DP/02	4.1	ANI/WG ATFM Implementation Task Force Progress Report	05/04/16	ATFM Task Force Rapporteur
DP/03	4.1	AIDC Task Force Progress Report	05/04/16	AIDC Task Force Rapporteur
DP/04	4.1	Work session of ADS-B Task Force	05/04/16	ADS-B Task Force Rapporteur
ND/05	4.1	Informe del Avance del Grupo de Tarea de AIM (<i>available only in Spanish</i>)	05/04/16	Relator del Grupo de Tarea AIM
DP/06	4.1	Aeronautical Message Handling System (AMHS) Task Force Report	05/04/16	AMHS Task Force Rapporteur

LIST OF PARTICIPANTS

ANTIGUA AND BARBUDA

Shenneth Phillips

BAHAMAS

Antoinette Cartwright
Colyn Brown
Wendy Major

BELIZE

Gilberto Orlando Torres

CANADA

Carole Stewart-Green
Pedro Aires Vicente

COSTA RICA

Carlos Bolaños Mayorga

CUBA

Orlando Nevot González
Carlos Jimenez Guerra

CURAÇAO

Natasha Leonora Belefanti

DOMINICAN REPUBLIC

Julio César Mejía Alcántara
Fernando A. Casso Rodríguez
Francisco Bolivar León Paulino
Betty Castaing

HAITI

Jacques Boursiquot
Eric Legagneur
Marc Ulrick Henry

JAMAICA

Carl Gaynair
Derrick Grant

MEXICO

Rodrigo Bruce Magallón de la Teja
Manuel Rodríguez Santiesteban
José Antonio Villanueva Solís
Oscar Vargas Antonio
Héctor Abraham García Cruz
Daniel Conrado Castañeda Cruz
Álvaro Edgar Pérez Galindo
Jorge Carrión Calderón
Salvador Gilberto Lozano Díaz
Rafael Castro Castro

SAINT LUCIA

Amy Charles

TRINIDAD AND TOBAGO

Robert Ricardo Rooplal
Veronica Ramdath
Rohan Garib

UNITED STATES

Dulce M. Rosés
Midori Tanino
Jorge Chades
Carlos Agueda
Leah Moebius
Dan Eaves
Bill Fernandez

CANSO

Javier A. Vanegas

COCESNA

Alfredo Santos Mondragón

Roger A. Perez

Victor Andrade

IATA

Marco Vidal

ICAO

Julio Siu

Víctor Hernández

Raúl Martínez

Eduardo Chacín

Romy Gallegos

CONTACT INFORMATION

Name / Post	Administration / Organization	Telephone / Email
Antigua and Barbuda/Antigua y Barbuda		
Shenneth Phillips Air Traffic Services Operations Officer	V.C. Bird Air Traffic Services	Tel. +1 268 562 0301 E-mail shenneth.phillips@ab.gov.ag; shennethp@yahoo.com
Bahamas		
Wendy Major Chief Operations Officer	Civil Aviation Department (Bahamas)	Tel. +1 242-377-2004/5 E-mail wendymajor@bahamas.gov.bs
Antoinette Cartwright Chief Electronic Technician	Bahamas Civil Aviation Department	Tel. + 1 242-377-2004/5 E-mail atcmox@gmail.com
Colyn Brown Operations Officer/O.I.C. AIS	Bahamas/Civil Aviation Department	Tel. + 1 242 397 4713 E-mail colyn55@live.com
Belize/Belice		
Gilberto Orlando Torres Deputy Director of Civil Aviation	Belize Department of Civil Aviation	Tel. +501 225 2014 E-mail gilberto.torres@civilaviation.gov.bz
Canada/Canadá		
Pedro Aires Vicente Manager, ACC & ATM Automation	NAV CANADA	Tel. +1 613 248 6965 E-mail Pedro.Vicente@navcanada.ca
Carole Stewart-Green Manager, Enroute and Oceanic Development	NAV CANADA	Tel. +1 613 563 5707 E-mail carole.stewart@navcanada.ca
Costa Rica		
Carlos Bolaños Mayorga Planificación CNS/ATM		Tel. +506 2290 0089 E-mail cbolanos@dgac.go.cr
Cuba		
Orlando Nevot González Director de Aeronavegación	Instituto de Aeronáutica Civil	Tel. + 537 838 1121 E-mail orlando.nevot@iacc.avianet.cu
Carlos Jimenez Guerra Especialista Aeronáutica CNS	Instituto de Aeronáutica Civil	Tel. +5354328565 E-mail carlosm.jimenez@iacc.avianet.cu
Curacao/Curazao		
Natasha Leonora Belefanti Chief AIS/ARO	DC-ANSP	Tel. +5999 839 3550 EXT 514 E-mail N.LEONORA-BELEFANTI@DC-ANSP.ORG

Name / Post	Administration / Organization	Telephone / Email
Dominican Republic/República Dominicana		
Fernando A. Casso Rodríguez Radar Systems Manager	Instituto Dominicano de Aviación Civil	Tel. +1 809 274 4322 E-mail fernando.casso@idac.gov.do
Betty Castaing Coordinadora Técnica de Navegación Aérea	Instituto Dominicano de Aviación Civil	Tel. +1 809 274 4322 ext 2057 E-mail bcastaing@idac.gov.do / bcastaing@hotmail.com
Julio César Mejía Alcántara Enc. Dpto. de Gestión del Tránsito Aéreo	Instituto Dominicano de Aviación Civil (IDAC)	Tel. + 1 809 274 4322 Ext. 2074 E-mail jmejia@idac.gov.do
Francisco Bolivar León Paulino Director de Navegación Aérea	Instituto Dominicano de Aviación Civil (IDAC)	Tel. + 1 809 274 4322 ext 2067 E-mail bleon@idac.gov.do
Haiti		
Marc-Ulrick Henry Deputy Director of Air Navigation	OFNAC	Tel. + 509 4494 0027/3757 0597 E-mail marculrickhenry@gmail.com
Joseph Jacques Boursiquot Executive Director of Air Navigation	Office National de l'Aviation Civile	Tel. +509 4494 0047 E-mail jacques.boursiquot@ofnac.gouv.ht
Mario Eric Legagneur Deputy Director of Air Navigation	Office National de l'Aviation Civile (OFNAC)	Tel. + 509 4494 0024 E-mail elegagneur@hotmail.com
Jamaica		
Carl Gaynair ATG. Deputy Director General	Jamaica Civil Aviation Authority (JCAA)	Tel. +876 960 3948 E-mail carl.gaynair@jcaa.gov.jm
Derrick Grant CNS Engineer	Jamaica Civil Aviation Authority	Tel. +876-960-3948 E-mail derrick.grant@jcaa.gov.jm
Mexico/México		
Héctor Abraham García Cruz Inspector Verificador Aeronáutico	Dirección General de Aeronáutica Civil	Tel. + 52 55 5723 9300 x.18071 E-mail hgarciar@sct.gob.mx
Manuel Rodríguez Santiesteban Inspector Verificador Aeronáutico	DGAC	Tel. + 52 55 5723 9300 Ext. 18259 E-mail mrodsant@sct.gob.mx
Daniel Conrado Castañeda Cruz Inspector Navegación Aeres	Dirección General de Aeronáutica Civil	Tel. + 52 55 5723 9300 x. 18071 E-mail dcastane@sct.gob.mx
Oscar Vargas Antonio Subdirector de área CNS	DGAC	Tel. + 52 55 5723 9300 ext. 18074 E-mail ovargasa@sct.gob.mx
Álvaro Edgar Pérez Galindo Inspector Verificador Aeronáutico	DGAC	Tel. +52 55 5723 9300 x.18071 E-mail aperegal@sct.gob.mx

Name / Post	Administration / Organization	Telephone / Email	
Rodrigo Bruce Magallón de la Teja Encargado de la Dirección de Tránsito Aéreo	SENEAM SCT	Tel. + 52 55 5786 5513 E-mail dta.seneam@sct.gob.mx	
José Antonio Villanueva Solís Encargado de la Dirección de Navegación e Información Aeronáutica	SENEAM	Tel. + 52 55 57865519 E-mail jvillanus@sct.gob.mx	
Jorge Carrión Calderón Especialista de tránsito aéreo	SENEAM	Tel. + 52 55 57166653 E-mail jcarrion@sct.gob.mx	
Salvador Gilberto Lozano Díaz Ingeniería de servicios	SENEAM	Tel. + 52 55 57865536 E-mail sagild@gmail.com	
Rafael Castro Castro Jefatura de Desarrollo de Telecomunicaciones	SENEAM	Tel. + 52 55 57865534 E-mail rcastroc@sct.gob.mx	
Saint Lucia/Santa Lucía			
Amy Charles Manager Air Traffic Services	Saint Lucia Air and Sea Ports Authority (SLASPA)	Tel. +1758 45 76116 E-mail amy.charles@slaspa.com; amy.charles@slaspa.com	
Trinidad and Tabago/Trinidad y Tabago			
Robert Ricardo Rooplal Air Traffic Management Officer	Trinidad and Tobago Civil Aviation Authority (TTCAA)	Tel. +1 868 766 5633 E-mail rrooplal@caa.gov.tt	
Rohan Garib Executive Manager Air Navigation Services	TTCAA	Tel. + 1 868 6688 222/689 4889 E-mail rgarib@caa.gov.tt	
Veronica Ramdath Manager CNS	TTCAA	Tel. +1 868 669 4706 E-mail vramdath@caa.gov.tt	
United States/Estados Unidos			
Dan Eaves Air traffic Control Specialist/ATC Requirements	Federal Aviation Administration (FAA)	Tel. +1 202 267 4726 E-mail dan.eaves@faa.gov	
Leah Moebius ATO CAO Global Lead ICAD	FAA	Tel. + 1 202 267 0269 E-mail Leah.Moebius@faa.gov	
Bill Fernandez RNAV/RNP-AR Approach specialist	FAA	Tel. + 1 202 267 9029 E-mail william.v.fernandez@faa.gov	
Dulce M. Rosés Program Manager, International Telecommunications CAR/SAM	FAA	Tel. + 1 305 716-1830 E-mail Dulce.roses@faa.gov	
Midori Tanino ATO International NextGen Lead	FAA	Tel. + 1 202 267 0992 E-mail midori.tanino@faa.gov	
Jorge Chades ATO Mission Support Services Oceanic and Offshore AT Standard and Procedures	FAA	Tel. + 1 202 267 0509 E-mail jorge.a.chades@faa.gov	

Name / Post	Administration / Organization	Telephone / Email
Carlos Agueda Senior representative	FAA	Tel. + 1 507 317 5046 E-mail carlos.agueda@faa.gov
James Ryan ETOPS Programme Manager	FAA	Tel. +1 (202) 267-7493 E-mail jim.ryan@faa.gov
CANSO		
Javier A. Vanegas Director para Latinoamérica y el Caribe	CANSO	Tel. + 52 55 5786 5512 E-mail javier.vanegas@canso.org
COCESNA		
Alfredo Santos Mondragón Jefe AIM	COCESNA	Tel. + 504 22834769 E-mail alfredo.mondragon@cocesna.org
Roger A. Perez Gerente de Estación Honduras	COCESNA	Tel. +504 2275 7090 ext 1601 E-mail roger.perez@cocesna.org
Victor Andrade Coordinador de Operaciones ATS	COCESNA	Tel. +504 2275 7090 x.1510 E-mail victor.andrade@cocesna.org
IATA		
Marco A. Vidal Macchiavello Manager Safety and Flight Operations – The Americas	IATA	Tel. +1 305 399 2053 E-mail vidalm@iata.org
ICAO/OACI		
Julio Siu Deputy Regional Director	ICAO	Tel. + 52 55 5250 3211 E-mail jsiu@icao.int
Víctor Hernández Especialista Regional en Gestión del Tránsito Aéreo y Búsqueda y Salvamento	ICAO	Tel. + 52 55 5250 3211 E-mail vhernandez@icao.int
Raúl Martínez Regional Officer, Aeronautical Information Management	ICAO	Tel. + 52 55 5250 3211 E-mail rmartinez@icao.int
Eduardo Chacin Regional Officer, Flight Safety	ICAO	Tel. + 52 55 52503211 x.115 E-mail echacin@icao.int
Romy Gallegos Regional Officer Technical Assistance	ICAO	Tel. + 52 55 52503211 x.114 E-mail rgallegos@icao.int

Agenda Item 1 Review and Approval of the Agenda, Working Method and Schedule of the Meeting

1.1 The Secretariat presented WP/01, inviting the Meeting to approve the provisional agenda and schedule, and referred to IP/01 Rev. with the list of associated documentation. The Meeting approved the agenda as presented in the historical section of this report and made minor changes to the schedule.

Agenda Item 2 Review and Follow-up to Relevant and Valid Conclusions/Decisions of ANI/WG/2 Meeting and Conclusions from the E/CAR/CATG/2, and GREPECAS PPRC/3 Meetings

2.1 The Secretariat requested the Task Force (TF) Rapporteurs and the TF members to consider the valid conclusions/decisions under WP/02 and IP/03, within the TF discussion dynamic. Therefore, the ANI/WG Chairperson presented the revision of the ANI/WG/2 valid conclusions and decisions. During the review of this part of the Agenda, the Meeting did not provide comments on the content of the respective Appendix.

2.2 After such revision, the Secretariat also presented IP/03 on conclusions/decisions of the Third Meeting of the GREPECAS Programmes and Projects Review Committee (PPRC/3). The status of the aforementioned conclusions/decisions was informed, without comments issued by the Meeting.

2.3 From the review of the Valid Conclusions/Decisions of the ANI/WG Meetings, all conclusions/decisions were considered completed, except for Conclusion ANI/WG/2/4 - REPORTING OF FUEL SAVING INITIATIVES.

2.4 E/CAR/CATG/2 Conclusions were not reviewed considering that the E/CAR/CATG will hold its meeting in October 2016.

Agenda Item 3 Global/Regional Air Navigation Developments

3.1 Implementation of the ICAO NACC Regional Office No Country Left Behind (NCLB) Strategy

3.1.1 The Secretariat presented WP/03 with information on the implementation of the ICAO “No Country Left Behind (NCLB)” Strategy developed by the ICAO NACC Regional Office, which was presented to the Meeting of North American, Central American and Caribbean Directors General of Civil Aviation and ICAO Council (NACC DGCA-C), held in Montego Bay, Jamaica, on 13 October 2015.

3.1.2 The NACC NCLB Strategy consists in four implementation phases, as follows:

- Phase I: State Senior Level Engagement
- Phase II: Data gathering and strategic plan by prioritization via data
- Phase III: Implementation – NCLB Technical Assistance Mission (TEAM) – in situ and regular videoconferences
- Phase IV: Continuous Measuring and quarterly reports

3.1.3 The objectives from the NACC NCLB Strategy are:

- Short Term, 1 Year – Development and initiation of the ICAO NACC NCLB Strategy
- Medium Term, 2 years (By December 2016) - Have NCLB Strategy implemented in all NACC States
- Long Term, 4 years - No more than 2 States below 80% of Effective Implementation (EI)

3.1.4 The Meeting noted that, in accordance with the Port-of-Spain Declaration, the NACC NCLB Strategy considers developing a tailored action plan for each State that can comply with the commitments in the established timeframe by the end of 2016. To this end, the Meeting considered appropriate that States designate a Point-of-Contact (PoC), and formulated the following:

**DRAFT CONCLUSION
ANI/WG/3/1**

REGIONAL PERFORMANCE OF AIR NAVIGATION IMPLEMENTATION PROJECT

That, bearing in mind that the deadline for Port-of-Spain Declaration targets finishes in December 2016, and the implementation of the NACC No Country Left Behind (NCLB) Strategy the ICAO NACC Regional Office to coordinate the development of a web application of the performance air navigation implementation system for the CAR Region in accordance with the new requirements of the CAR/SAM Electronic Air Navigation Plan (eANP) by 30 December 2016.

3.1.5 P/04 from ICAO Headquarters (Secretariat) showed a 'No Country Left Behind' strategy initiative that includes:

- High-level report showing State information and provides recommendation on priority areas of improvement
- Facilitation of the enhancement of a State's implementation rate by helping prioritize activities based on data
- The economic and social impact of aviation development

3.2 Relevant updates of ICAO Standards and Recommended Practices (SARPs)

3.2.1 Under IP/15, the Meeting noted the relevant ICAO Standards and Recommended Practices (SARPs) amendments for ANI/WG for air navigation Implementation are available on the ICAO website.

3.3 Regional Electronic Air Navigation Plan (eANP) implementation

3.3.1 Under WP/04, the Secretariat provided a follow-up to the activities for the development of the new *Regional CAR/SAM Electronic Air Navigation Plan (eANP)*, Doc 8733, including the ongoing amendment procedure and the action plan for its electronic availability and online maintenance.

3.3.2 Based on the coordination between the NACC and the SAM Regional Offices, the following update to the Action Plan was informed:

ANP volume	eANP activity/task	Action by	Completion date	Status up to 10 March 2016
Volume I, II & III	Inclusion of existing data on eANP	Regional Offices	September 2015	<ul style="list-style-type: none"> • Population of Volume I and Volume II: Completed • General content and layout of Volume III: completed
Volume I, II & III	Agreement on the content of the eANP	PIRGs/States	Mid 2015	<ul style="list-style-type: none"> • GREPECAS through the fast-track mechanism approved Volume I and Volume II (Ref. EMX 0883 dated 27 Aug 2015) • Volume III is on draft version
Volume I	Approval of Volume I of eANPs by the Council	Regional Offices/ANB	End 2015	Because of a second round of review by the States (ref. NACC59436 dated 10 February 2016), the whole approval process has taken more time than scheduled. <u>A new deadline for this action is end of March 2016</u>

ANP volume	eANP activity/task	Action by	Completion date	Status up to 10 March 2016
Volume II	Approval of Volume II of eANPs by regional agreement involving the relevant PIRG	Regional Offices/PIRGs	End 2015	Volume II approval process will start once the Volume I approval is granted and after the respective review time by States. The new deadline is end of June 2016
Volume III	Development and approval of Part II under PIRG responsibility. Inclusion of Volume III on web-based platform.	Regional Offices/PIRGs/ANB	End 2015	The Volume III will be rescheduled to consider several changes in the ASBU material and the 5 th Edition of the GANP. Rescheduled for 2017 An initial web-based platform will be implemented by the end of 2016
Consequential amendments	Amendments to existing ICAO documentation related to ANPs to ensure harmonization, including the Regional Office Manual, and review of the applicability of the uniform methodology for the identification, assessment and reporting of air navigation deficiencies to the new ANP.	ANB	Mid 2016	Ongoing

3.3.3 The Secretariat commented that the review process of the eANP has been supported by the CAR Region designated Points of Contact (PoCs) for the eANP (**Appendix B** refers). The Meeting agreed on the current review process conducted. Similarly, it was commented that ICAO is working on four areas for future inclusion into the eANP as follows:

- The Flight Information Region/Upper flight Information Region (FIR/UIR) coordinates to be included in the ANP, as well as the related electronic charts.
- eANP Volume III: it would be beneficial if Volume III template could be aligned with the Global Air Navigation Plan (GANP) update (5th edition).
- Translation of eANP: scheduled for medium term.
- Functionalities of the electronic ANP: under development.

3.3.4 IATA will collaborate with States to review and update the ANP in order to identify some deficiencies. In this regard, IATA along with the ICAO Secretariat is working with Bahamas, to be included in the review and update process, especially for the Marsh Harbour International Airport (MYAM) improvement.

3.3.5 Finally, it was commented that for the NAM Region, ICAO is in process of the development of the NAM Regional Plan with the participation of Canada and United States; the drafts for Volumes I and III are currently being reviewed. The Meeting congratulated the ICAO NACC Regional Office for this effort on the development of the new eANP NAM. A follow-up Meeting for this development of the NAM eANP will be conducted from 7 to 8 April 2016.

3.4 Other Global/Regional Air Navigation Developments

3.4.1 Review of Regional Supplementary Procedures (Doc 7030)

3.4.1.1 The Secretariat presented WP/05 with a Proposal for amendment (PFA) to the Doc 7030 - *Regional Supplementary Procedures (SUPPs)*, CAR/SAM Part, for the implementation of Required Navigation Performance (RNP) 10, 50 Nautical Miles (NM) lateral/longitudinal separation; RNP 4, 30 NM of lateral/longitudinal separation for its application in the Oceanic airspace of the Flight Information Regions (FIRs) for the Caribbean (CAR) Region.

3.4.1.2 The Meeting considered the need to analyze the inclusion of RNP 2 implementation and agreed that the Secretariat collect CAR States and Territories comments by 22 April 2016, for later necessary coordination to timely update Doc 7030. To this end, the Meeting adopted the following Draft Conclusion:

DRAFT CONCLUSION ANI/WG/3/2

DEVELOPMENT OF A PROPOSAL FOR AMENDMENT (PFA) TO THE DOC 7030 - REGIONAL SUPPLEMENTARY PROCEDURES (SUPPS), CAR/SAM PART

That,

- a) CAR States and Territories submit comments to the ICAO NACC Regional Office on the Proposal for Amendment (PFA) to Doc 7030 - *Regional Supplementary Procedures (SUPPs)*, CAR/SAM Part, for RNP 10 implementation, 50 NM of lateral/longitudinal separation, RNP 4, 30 NM lateral/longitudinal separation by 22 April 2016; and
- b) the ICAO NACC Regional Office coordinate timely update of Doc 7030 for the RNP 10 and RNP 4 implementation, 50 NM of lateral/longitudinal separation and 30 NM lateral/longitudinal separation, respectively, in the Oceanic areas of the Caribbean (CAR) FIR by 30 November 2016.

3.4.2 Results of the ITU World Radiocommunication Conference 2015 (WRC-15)

3.4.2.1 Under WP/06 the Secretariat informed of the positive results from the World Radio communication Conference 2015 (WRC-2015) regarding ICAO position, held from 2 to 27 November 2015 in Geneva, Switzerland; highlighting the lessons learned and the future actions by the NAM/CAR Regions States to continue the protection of the radiofrequency spectrum.

3.4.2.2 The Secretariat recalled the supporting resolutions and agreements made for the protection and optimum use of the aeronautical frequency spectrum; emphasizing the following major factors contributing to this achievement of positive results (refers to **WP/06 APXa**):

- the early development and dissemination of the draft ICAO Position by the Secretariat (Regional Offices) and the Commission
- the active participation by ICAO experts in the preparatory work of the ITU, including the relevant meetings of the ITU-R
- the active participation by ICAO experts in meetings of the regional telecommunication organizations (like CITELE)
- the organization of Aeronautical Communications Panel (ACP) and Frequency Spectrum Management Panel (FSMP) working group meetings and ICAO radio frequency workshops
- the implementation of Assembly Resolution A38-6
- the active participation of the ICAO delegation at the conference itself

3.4.2.3 The Secretariat commented that in support to the positive results of the conference for ICAO position, the Meeting will recognize the related regional activities conducted by:

- a) keeping a States Points of Contact (PoCs) list in support of the ICAO WRC Position (refers to **WP/06 APXb**) in support to ICAO CMR-15 Position for coordination and mutual support; and
- b) keeping the Regional Frequency Assignment List available for States and general public at ICAO Website: <http://www.icao.int/NACC/Pages/frequency.aspx>.

3.4.2.4 To this extend, the Meeting took note of the relevance of using and protecting the C band for Very Small Aperture Terminal (VSAT) Air Navigation Networks, like MEVA and CAMSAT (COCESNA), and the imperative need to register their corresponding nodes in the ITU Master International Frequency Register (MIFR), as to identify and recognise the nodes and magnitude of the networks in use for safety reasons in air navigation; formulating the following Draft Conclusion:

DRAFT CONCLUSION

ANI/WG/3/3

PROTECTION AND RECOGNITION OF C BAND SPECTRUM USAGE

That, in order to take the technical and regulatory actions to support existing and future operation of the fixed satellite service earth stations within the band 3 400 – 4 200 MHz, as an aid to the safe operation of aircraft and reliable distribution of meteorological information in States, NAM/CAR States take the appropriate measures in order to ensure the protection of the satellite C-band operated by the National and Regional VSAT networks through:

- a) registration of the aeronautical VSAT frequencies in the States register held by the national authorities of regulation of telecommunication; and
- b) follow-up with the concerned authorities in the States to further register the frequencies in the ITU Master International Frequency Register (MIFR) by **February 2017**.

3.4.2.5 Finally, the Meeting was informed that the FSMP will develop an initial draft of the ICAO Position by end of 2016. A final review of the ICAO Position by the Commission, and a subsequent approval by the Council, is foreseen in 2017.

Agenda Item 4 Follow-up, Performance Evaluation and Monitoring of the NAM/CAR Regional Performance Based Air Navigation Implementation Plan (NAM/CAR RPBANIP) Targets

4.1 Progress Reports of the Task Forces and the ANI/WG

4.1.1 Under WP/07, the ANI/WG Chairman presented the progress achieved by the ANI/WG since the Second NAM/CAR Air Navigation Implementation Working Group Meeting (ANI/WG/2), including the approved action plans.

4.1.2 The ANI/WG website provides further information and details at: <http://www.icao.int/NACC/Pages/naccregionalgroups-aniwg.aspx>

PBN Task Force Progress Report

4.1.3 Under WP/08 and DP/01, the PBN Task Force (PBN TF) presented the progress of its work programme. Among the PBN TF results is the PBN Survey that States submitted, and the following is highlighted:

- 70.6% of States/Territories uses a Collaborative Decision Making (CDM) process when PBN planning
- 64.7% of States have appropriately trained personnel
- Most States have more than 50% of instrument Runways (RWY) with PBN procedures implemented
- The percentage of operations equipped to utilize PBN procedures is very high. However, apart from Canada, Cuba and United States, the percentage of air operators using PBN procedures is less than 50% in the CAR Region
- The availability of Continuous descent operations (CDOs) and Continuous Climb Operations (CCOs) is approximately 23.5%
- The display of PBN capabilities in the Air Traffic Control (ATC) situation is very low, 17.6%
- Only 58.8% of States have PBN training programmes for Pilots/Air Traffic Controllers (ATCOs) etc.
- Over 70% of States require assistance on PBN implementation in the following matters:
 - Design and implementation expertise
 - Training/technical assistance
 - Design of PBN approach procedures
 - Air traffic flow management (ATFM) and PBN integration
 - Equipment for efficient implementation

4.1.4 Under P/06, the ICAO/IATA/CANSO Performance-Based Navigation (PBN) Harmonization, Modernization and Implementation Meeting for the Caribbean (CAR) Region served as a catalyst to show the progress in understanding and commitment to using PBN and other possible technologies, so the States may harmonize and modernize their air navigation systems. The outcomes obtained from the Meeting are:

- A key outcome is the CDM process in which participating States, air operators, and industry stakeholders worked together to accomplish key tasks that will lead to real safety and efficiency efforts in the CAR Region
- All participating States agreed, to the extent applicable, to reduce longitudinal separation from 80 NM to 40 NM between transferred air traffic operating in the FIRs of the CAR region. Some States agreed to apply 20 NM between transferred air traffic operating in the FIRs of the CAR Region. United States also informed on the progress made with Haiti and other CAR States to improve application of separation minima for transferring traffic with adjacent FIRs in the CAR Region (refer to WP/18)
- Five (5) Letters of Agreement (LOAs) for the coordination and operational procedures between the air traffic control facilities were signed on 5 April 2016.
- States and Air Navigation Service Providers (ANSPs) for the CAR and SAM Regions agreed to further review Air Traffic Service (ATS) LoAs not later than 30 November 2016, to apply longitudinal separation minima of 40 NM or 20 NM between transferred air traffic operating in the FIRs of the CAR region and adjacent FIRs of the SAM Region
- The proposed controller to controller phraseology for application of separation minima between transferred air traffic operating in the FIRs of the CAR Region will be discussed and agreed upon at the first teleconference in 22 April 2016.
- Seven (7) routes have been agreed to by the respective FIRs and will be submitted to ICAO for Proposal for Amendment (PfA) no later than 22 May 2016
- United States will submit proposed RNAV routes from the METROPLEX and “Y” projects to harmonize the regional ATS route network
- The new PBN route network includes implementation of Required Navigation Performance (RNP) 10, RNP 4 and RNP 2 in the Oceanic airspace of the CAR Region FIRs
- It is expected that the new PBN route network will improve regional capacity and efficiency of future traffic growth of 6% per year over the 2014-2017 period

- CAR States also agreed to review availability of restricted areas to air operations for prompt implementation of the Flexible Use of Airspace (FUA)
- As it was shown in Slide 11 from P/06 a new PBN Schedule for CAR Seamless Airspace presented in the ICAO/IATA/CANSO Performance-Based Navigation (PBN) Harmonization, Modernization and Implementation Meeting for the Caribbean (CAR) Region
- States should take advantage of the use of RANDOM routes in continental airspace. Guyana, Suriname and Trinidad and Tobago agreed to host the RANDOM route trials. The available RANDOM routes and/or areas and applicable procedures should be published in advance in the AIP for airspace users. Advanced flight planning of air operators take systems into account various factors as wind, costs and fuel for day flights. Airlines that confirmed participation in RANDOM route trails in continental airspace are American Airlines, Delta Airlines, Caribbean Airlines and Azul
- The Central American airspace harmonization project (ARESAC) between Central American States for the implementation of a comprehensive PBN airspace concept in July 2017, was recognized as a regional project model. Panama will join as full participant in the ARESAC Project.
- All CAR States are committed to achieve the PBN implementation targets as established in Assembly Resolution A37-11 and the *Port-of-Spain Declaration*
- Special consideration will be given by States to increase implementation of Continuous Climb Operations (CCOs) and Continuous Descent Operations (CDOs) criteria in all Standard Instrument Departures (SIDs) and Standard Instrument Arrivals (STARs) linked to the upper airspace to the greatest extent possible to obtain the most operational benefits
- The Regional PBN Implementation Project will be coordinated between Points-of-Contact (PoCs) of Central American, Eastern Caribbean and Central Caribbean States to ensure completion and monitoring of all implementation activities. The next PBN TF meeting for the implementation of CAR Seamless Airspace will be held from 6 to 9 December 2016 to ensure harmonized implementation based on traffic flows and homogenous areas

Operational benefits achieved

4.1.5 PBN implementation has improved safety and efficiency of operations and reduced the environmental impact of CO₂ emissions.

4.1.6 The Meeting identified specific areas within its States where PBN implementation contributed to their operations. For some States, reduction of lateral/longitudinal separation standards has positively impacted the efficiency of their operations.

4.1.7 Under IP/08 an update was provided on mitigations assistance that the Miami Air Route Traffic Control Center (ARTCC) has implemented to improve operations in the Miami High Sector 40, located in the United States offshore airspace, East-Southeast of the state of Florida, within the boundaries of the Miami ARTCC. It spans over portions of Bahamas and shares a common boundary with the Habana FIR and its vertical limits are flight level 240 and above.

PBN concerns

4.1.8 The following points were identified as limitations and concerns expressed by most States:

- States should amend their organizational structure to meet current need of Air Navigation Service Providers (ANSPs)
- States must meet the requirements of staff associated with the amendment structure
- States should pay particular attention to filling their organizational structure with suitable qualified and experienced personnel
- States should address the urgent need for succession planning
- States should ensure that the appropriate and relevant personnel represent them at meetings
- States should address the urgent need to procure equipment as necessary to enhance safety and efficiency required in the provision of ANS

Training needs required for successful implementation

4.1.9 There was a general consensus among all States on the fact that training was required for the successful implementation of PBN. States identified the urgent need for the following:

- ASBU Training
- PBN Implementation workshops/training
- Follow-up training as required above

4.1.10 The Meeting noted the information provided by CANSO on a follow-up of the ICAO/IATA/CANSO PBN meeting, scheduled for the first week of December 2016, in Costa Rica. States concurred that the success of the meeting would depend on each State having the appropriate representatives participating. These representatives should also be allowed to attend future PBN meetings to provide continuity and progress.

4.1.11 Follow up actions for this Meeting are:

- States will coordinate with IATA and the ICAO NACC Regional Office the assessment of the reduced track miles and CO₂, gas emission mitigation, as needed. In this regard, IATA will provide the reporting form
- ICAO, in coordination with CANSO and IATA, will follow-up on deficient use of PBN routes, procedures and route constraints

4.1.12 To this end, the Meeting adopted the following draft conclusion:

DRAFT CONCLUSION

ANI/WG/3/4

DEVELOPMENT OF A PROPOSAL FOR AMENDMENT (PFA) TO DOC 8733 - AIR NAVIGATION PLAN — CARIBBEAN AND SOUTH AMERICAN REGIONS

That,

- a) CAR States and Territories submit to the ICAO North America, Central American and Caribbean (NACC) Regional Office their RNAV route network change proposal by 30 December 2016; and
- b) the ICAO NACC Regional Office coordinate as appropriate in order to develop by 30 December 2016, a Proposal for Amendment (PFA) to ICAO Doc 8733 - *Air Navigation Plan — Caribbean and South American Regions*, with deadline implementation by 30 June 2017, which includes AIP publication based on three AIRAC cycles.

ATFM Task Force Progress Report

4.1.13 Under WP/09 and DP/02, the Meeting noted the focus of the ATFM Task Force who has continued to emphasize best practices, balancing demand and capacity methodology, and developing a region-wide pre-tactical web conference for all ANSPs and stakeholders to participate in order to ensure that important information is shared. The Task force has held four web meetings to discuss topics such as ATFM Progress in Central America, and an ATFM Contingency plan by Trinidad and Tobago, as well as other subjects of interest. These teleconferences have also tried to encourage participation by TF ANSPs.

4.1.14 ATFM Workshops were completed in Cuba, Panama and Trinidad and Tobago. Dominican Republic also participated in two ATFM workshops hosted by United States Federal Aviation Administration Air Traffic Control Systems Command Center (ATCSCC). These workshops provided opportunities for States to participate in briefings and discuss best practices for ATFM and Collaborative Decision Making.

4.1.15 The Task Force noted that a CAR Operational Teleconference is hosted three times a week (Fridays, Saturdays and Sundays). The Task Force recommends that all States in the CAR Region participate in these Teleconferences to the extent possible. This participation will assist in valuable information sharing, as well as support CDM practices.

4.1.16 The ATFM TF may consider to date a regional ATFM Concept of Operations (CONOPS) aligned with ICAO Doc 9971 - *Manual on Collaborative Air Traffic Flow Management* and the CAR/SAM ATFM CONOPS approved by GREPECAS. One State in the Region is currently using a CONOPS for its ATFM operations; however, the target is to ensure a harmonized, integrated approach of the ATFM implementation.

Caribbean Air Traffic Flow Management (ATFM) Survey Results

4.1.17 Seven of the eight relevant Caribbean States responded to the ATFM TF survey requesting information and developing a regional baseline of the current ATF initiatives in the NAM/CAR Regions. The survey also requested that ANSPs provide information for future ATFM planning activities.

4.1.18 It is important to note that the whole Region affirms the Port-of-Spain (PoS) Declaration targets establish an ATFM capability, particularly as it relates to improving aviation safety and efficiency to meet projected growth, adopting a joint approach to resolving problems of common interest, and building a common understanding of how delays can have system wide effects. The results of the ATFM Survey show the following:

- The CAR Region has very limited ATFM/Collaborative Decision Making (CDM) capability
- Regional ATFM infrastructure is quite diverse, with only two ANSPs having a mature system
- The need exists to develop the human and technological infrastructure to support ATFM/CDM
- In many cases where States decided implementation of an ATFM Unit within the ACC, the ATFM initiatives are included in the ATS Letters of Agreement
- Many States do not have the capability to monitor demand-capacity issues. Two ANSPs have declared this capability
- While there is limited ATFM interoperability between States, three ANSPs reported automated data exchange capability

4.1.19 States provided ATFM standardized and recurring training for personnel that perform ATFM functions. In addition, under IP/14 United States and CANSO presented the achieved agreement on 5 March 2016, to establish a Regional Implementation Group that will focus on the implementation of ATFM capabilities using CDM principles. Finally, it was mentioned that the purpose of this group is to expedite ATFM/CDM implementation in the CAR Region FIRs managed by CANSO members under the CANSO Latin America and Caribbean Chief Executive Officers (CEO) Committee's leadership.

AIDC TF Progress Report

4.1.20 Under WP/10 and DP/03, the AIDC Task Force (TF) presented an update to the AIDC Regional Plan and of the AIDC Points of Contact (PoC) as shown in **Appendix C**. The Meeting recognized that it is very important to keep the information in the regional plan up to date, as it is the guide to plan testing and implementation between FIRs, as well as how to concentrate efforts, assign priorities and identify possible conflicts between systems.

4.1.21 The Meeting took note that since the last ANI/WG meeting in June 2015, the Task Force has carried out two teleconferences, and will hold a meeting in April 2016. In these events, there have been the following deliverables and obtained results:

- a) A sample Letter of Agreement (LoA) for automated data exchange between FIRs **Appendix D** refers. This example may be included in the LoA items for automation as an appendix to existing operational LoAs;
- b) The comparison between NAM Interface Control Document (ICD) and PAN ICD for the purpose of harmonization, pointing out the differences in applicability and environment between both ICDs;
- c) The results of the AIDC regional target, along with the graph showing implementation of AIDC in the CAR region, where a total of 9 AIDC interface implementation in the CAR region by December 2016 is expected. The implementation of AIDC in the NAM/CAR region currently meets the target performance goal of 50%, now at 81.40%. Currently, there are 7 implementations in operation, among which Central America (CENAMER) is considered as one implementation, although internally there are several interfaces between the upper airspace and the approach area of each Member State of COCESNA. The TF considers:

- i. defining a goal for Class II and III AIDC message implementations. The importance of implementing Class II and III was referred to in the group discussion, as United States indicated that there had been many Moderate (MOD) messages transmitted between Canada and themselves, in an average of 3 MODs per Current Flight Plan (CPL). Thus, the implementation of Class II will bring significant benefits over just Class I implementation. This is work in progress which will be discussed in the face to face meeting in April 2016 **Appendix E** refers, showing the status of the different classes of messages)
- ii. include another task in the definition of metrics which can allow a State or Organization to measure the impact of AIDC implementation, in a “Before/After” fashion. Thus, the metric must be applicable to both non-automation and automation settings, to ensure a common baseline for comparison.

d) The operational benefits achieved by Mexico were described by the TF.

4.1.22 The AIDC TF FPL Monitoring group recalled the change of strategy since the last ANI/WG/2 meeting, in which the efforts would be concentrated to one error at a time, beginning with duplication. Since the meeting, the following activities were performed:

- A total of five teleconferences were held.
- A data on duplicate cases was collected from September 14th to October 4th 2015. The results of this data collection were presented in DP/03, reflecting a significant reduction in duplication.
- Two data collections are planned for 2016.
- The last teleconference included the setting of a goal for 2016, regarding the reduction of duplicate flight plans. Taking into account the grand total of over 15,000 cases of duplication collected in the previous process last year, the goal for the data collection in September will be 8,000 cases of duplication for the whole region in the three week period.

4.1.23 Further discussion and analysis from the last teleconference revealed important information regarding duplication generated by operators and ATS units, as detailed in DP/03. Finally, the Meeting commented that there are implementations of new flight data processing systems in Central America and Trinidad and Tobago, which will contribute to reduce errors in flight plans.

4.1.24 The AIDC TF updated work programme is provided in **Appendix F**.

4.1.25 Regarding training needs, the TF commented on properly training personnel working with flight plans, to avoid procedural errors that negatively impact ATC service.

4.1.26 Following the disuse of converters, the AIDC TF presented an updated table as presented in **Appendix G**.

4.1.27 The Meeting congratulated the AIDC TF for the achievements made and suggested that in the operational benefit analysis, Large Height Deviation (LHD) reduction should be one of the aspects to consider.

4.1.28 Under WP/16 and P/02, United States informed on their current Air Traffic Services Interfacility Data Communication Implementation in the NAM/CAR/SAM Regions, highlighting that both, NAM and traditional AIDC ICD implementation, have proven highly successful, providing significant safety and efficiency gains.

4.1.29 The Meeting was also informed of the automated flight data message set found in the NAM ICD, which is operationally used between Canada and United States, Cuba and Mexico, Cuba and United States, Mexico and United States, Cuba and COCESNA, and Mexico and COCESNA, emphasizing the NAM message set's scalability. This information was reviewed by the AIDC TF and included in the update of its action plan.

4.1.30 In accordance with WP/17 and P/03, United States presented information on Air Traffic Service Inter-facility Data Communications (AIDC) of the North American Common Interface Control Document update to Version "E", which serves as the primary guide for the automated data exchange for automated Air Traffic Service (ATS) systems of the NAM/CAR Regions.

ADS-B TF Progress Report

4.1.31 Under WP/11 and DP/04, the ADS-B TF commented that they had held a teleconference in January 2016, collecting the following State progress:

- COCESNA informed on progress made in the implementation of ADS-B to continue its testing from their Cerro de Hula station; statistics collected on capabilities of aircraft equipped with ADS-B in the region, improvement with their Mode S radars and inclusion of the ability of ADS-B to cover the entire continental area. The plans to conduct feasibility studies of Multilateral (MLAT) systems with ADS-B capability were also informed.
- Mexico installed 10 ADS-B stations at strategic locations to feed with ADS-B D0-260 and D0-260A data in Cat 21 Asterix ed. 0.26 for the systems in their 4existing Area Control Centres (ACCs). This seeks to improve surveillance for ATC in the Valley of Mexico (TMA helicopters and operations), ATC in Monterrey and Merida Airport Terminal Area, redundancy of monitoring at station Puerto Peñasco and surveillance helicopters flying from/to the oil rig in the Gulf of Mexico. This information also included coordination for the ADS-B stations at Cancun Merida and Tampico

- Under IP/06, United States presented an overview of their ADS-B implementation
- Canada informed the Meeting of their ADS-B operations, including its current network of ground-based surveillance, the safety study regulatory approvals for the provision of services through ADS-B Out, AIP information related to ADS B, reports of anomalies and testing of NAV CANADA satellite link for ADS-B
- Dominican Republic presented their plans for the evaluation and implementation of multilateration and ADS-B in selected airports with three ADS-B receivers
- Cuba presented its progress and lessons learned from the results of the continuation of the ADS-B trials (since late 2014 and early 2015), the development of software for statistical analysis of ADS-B signals; and its plans for a multilateration system at the Varadero airport
- Jamaica has an ADS - B receptor, but no data are being analyzed as it is currently in the planning process to improve its automation system and plans to summarize the data collection and statistical processing at the end of the year
- Trinidad and Tobago presented its ADS-B trial plans, currently supported by only one equipment, which will require its extension to increase coverage with additional receivers

4.1.32 The ADS-B TF conducted a review on the status of activities by the States with the ADS-B, as shown in the compliance table presented in WP/11. Similarly, an update to the ADS-B Plan was conducted as shown below:

TASK	DELIVERABLE	DATE START	DATE END	COMPLETED PERCENTAGE	RESPONSIBLE BODY
Activities Task ADS- B		1/8/13	31/12/18		
1.0 Formation of ADS-B TF	Participant List	1/8/13	1/8/13	100 %	Group Members
2. Terms and references	present Terms of Reference of the Working Group	1/8/13	1/8/13	100 %	Cuba(Rapporteur)
3. Develop Work Plan	Work Plan	2/8/13	14/8/13	100%	Cuba (Rapporteur)
3.1 Provide to OACI the Work Plan		14/8/13	14/8/13	100%	Cuba(Rapporteur)
4.0 Approve Work Plan TF ADS-B		24/01/14	30/10/14	100%	Group Members
5.0 Begin implementation of the Work Plan		31/10/13	31/12/18		Group Members
5.1 Develop ADS-B survey	Survey on the state of ADS-B	23/01/14	14/02/14	100%	COCESNA
5.1.1 Send ICAO survey for distribution to the states of the region		18/02/14	18/02/14	100%	COCESNA
5.2 Surveying information on the implementation of ADS-B aircraft	survey on the status of ADS-B aircraft	23/01/14	30/4/14	100%	IATA
5.2.1 Collect Information on implementation of ADS-B aircraft	ICAO Current Status of ADS- B aircraft	30/04/14	29/05/15		IATA
6.0 Implementation of ADS-B trials	Recommendations / testing improvements towards operational implementation	30/10/13	29/5/15		Group Members
6.1 ADS-B trials are underway	List of states that are making (Progress)	30/10/13	29/5/15	38%	United States, Cuba, México, Canadá, COCESNA, T and T, Dominican Republic, and Jamaica

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TASK	DELIVERABLE	DATE START	DATE END	COMPLETED PERCENTAGE	RESPONSIBLE BODY
6.2 Send to the members of the task group the Guide for testing	Guide for testing	13/02/14	13/02/14	100%	Relator
6.3 Begin to ADS-B trials in states that do not yet list of states that implemented and date (Progress)	Support for those who wish to trials	30/10/14	29/5/18	62%	States / Territories in the region that have not yet done
6.4 Sending quarterly reporting ICAO deficiencies in trials	Test results	30/10/13	29/5/18	19%	Cuba, México, Trinidad & Tobago y COCESNA
6.5 Deliver results of comparisons of statistics of ADS-B	results of comparisons of statistics of ADS-B	23/05/14	29/05/18	19%	Cuba, México, Trinidad & Tobago y COCESNA
7.0 Follow-up meeting and Teleconf to the development of ADS-B implementation	Final Report or Minute		At the end of each one	100%	ICAO NACC
8.0 Develop relevant operational requirements for the ADS-B implementation		15/11/13	30/04/14		Group Members
8.1 Creation of ad hoc group for the formation of the proposal	Op AdHoc Group members	23/05/14	23/05/14	100%	CONOPS AdHoc Group
8.2 Development the regional operational concept for the implementation ADS-B	CONOPS DRAFT	23/05/14	30/10/14	100%	CONOPS AdHoc Group
8.3 Deliver the regional operational concept for the implementation ADS-B	CONOPS	27/04/15	15/05/15	100%	CONOPS AdHoc Group Rapporteur
9.0 Develop technical requirements to purchase equipment for ADS-B trials		23/05/14	15/05/15		Group Members
9.1 Creation of ad hoc group for the formation of the proposal	Op AdHoc Group members	23/05/14	23/05/14	100%	Create Spec AdHoc Group
9.2 Development of technical requirements for ADS-B equipment	Technical requirements for ADS-B equipment DRAFT	30/06/14	08/05/15	100%	Spec AdHoc Group
9.3 Deliver technical requirements for ADS-B equipment	Technical requirements for ADS-B equipment	30/06/14	08/05/15	100%	Spec AdHoc Group Rapporteur
10.0 Collect information on operational implementation of ADS-B in places implemented.	State Compliance	31/10/13	31/12/18	100%	Group Members
10.1 Operational implementation of ADS-B	State Compliance	31/05/15	31/12/20		

4.1.33 In reference to Decision ADS-B/TF/2/7 - *Development of Selection Criteria to ADS-B Metrics*, related to the development of requirements (criteria) for the definition of the selected airports related to ADS-B metrics, the ADS-B TF commented that the use of ADS-B at aerodromes was a surveillance tool for Surface Movement Guidance and Control Systems (SMGCS) and that the requested implementation criteria are defined in Doc 9476 - *Manual of Surface Movement Guidance and Control Systems (SMGCS)* in view that recipients of ADS-B, either alone or combined with Surface Movement Radar (SMR), are part of the elements necessary for the operation of an airport in low visibility conditions, these criteria should be used as a guide for the States when defining in which of their airports ADS-B should be implemented to improve situational awareness on the surface.

4.1.34 Under IP/06, United States presented an update on its ADS-B implementation activities, including:

- Regulatory Activities - The FAA has conducted a variety of ADS-B-related regulatory activities and has continued activities planned for the future as ADS-B-In avionics standards continue to evolve, such as Advisory Circular (AC) 20-165B and AC 90-114A, Technical Standard Order (TSO) – C195b, and AC 20-172B.
- Surveillance and Broadcast Services Program for en-route airspace, terminal area airspace, and on airport surfaces
- Service Delivery Approach and implementation status. Harris is the prime contractor selected by the FAA under a service contract to provide surveillance and broadcast services and the Exelis ground radio infrastructure receives/transmits messages from either ADS-B Version 1 or 2 avionics
- Gulf of Mexico Expansion Project with *Servicios a la Navegación en el Espacio Aéreo Mexicano* (SENEAM)
- Service Monitoring
- FAA ADS-B development strategy
- Avionics upgrades to ADS-B version 2 avionics
- Equip 2020- to identify and address barriers to equipping with ADS-B Out by January 2020, as required by FAA regulations
- Air Traffic Control (ATC) separation services
- Using ADS-B to enhance ATC separation services to enable ATC separation services in low-altitude, Gulf of Mexico
- ATC Spacing Services (aka, Interval Management, IM) [ICAO ASBU B0-RSEQ]
- Pilot Advisory Services/Pilot Applications
- Oceanic In-Trail Procedures (ITP) [ICAO ASBU B0-OPFL]
- Interval Management (IM) [ICAO ASBU B1-ASEP]
- Traffic Situation Awareness with Alerts
- Flight Trial of Merging & Spacing and Cockpit display of traffic information (CDTI)-Assisted Visual Separation (CAVS)
- ADS-B on Airport Surface Vehicles

Limitations or concerns for the ANI/WG to discuss and solutions for directors to approve

4.1.35 The Task Force discussed the fact that the FAA was mandating the use of DO-260B transponders to support ADS-B in the United States. The European Union was also updating its ADS-B mandate to specify DO-260B. In Canada and Australia, however, any DO-260 transponder was acceptable. The Task Force agreed that the regional policy should be that ADS-B implementation should accept any DO-260 transponder, since this would support the operational requirements for providing 5 NM ATS surveillance separation. However, if any State determined that DO-260B was required for their operations, they should be permitted to require its use.

4.1.36 The Task Force also discussed whether there should be a mandate for ADS-B. It was noted there were a number of different possible ATS surveillance technologies. The Task Force agreed there should not be a mandate that only ADS-B should be used or implemented. Each State should implement the technology or technologies that best meet their operational requirements, based on a positive business case. The role of the Task Force would be to ensure support and harmonization for ADS-B implementation, for those States taking that solution.

4.1.37 There was discussion about whether an additional layer of surveillance, such as radar, should be required if ADS-B was implemented. It was noted that both Australia and Canada used ADS-B as a sole source of ATS surveillance to provide ATS surveillance separation. The Task Force agreed there should not be regional requirement for an additional layer of ATS surveillance where ADS-B was implemented.

4.1.38 The Meeting agreed to conduct a meeting of the ADS-B Task Force in the first semester of 2017, the place and date of the meeting are to be determined, this meeting will be held in connection with a Workshop for Communications Navigation and Surveillance (CNS), Air Traffic Management (ATM) and Air Navigation authorities. Canada offered support to conduct this workshop.

AIM TF Progress Report

4.1.39 Under WP/12, WP/23 and ND/05, the AIM Task Force presented the progress achieved. Taking into consideration the ANI/WG/1 and ANI/WG/2 meetings, as well as the NACC/WG/4, and based on the Terms of Reference (ToRs) and the different activities of the AIM Task Force work programme, it was informed on the implementation continuity of the AIM transition by the States and International Organizations

4.1.40 On the other hand, it was suggested to update information in accordance with the progress reports, outcomes of Seminars/Workshops held by the States and ICAO, as well as the possibility of updating the membership and the AIM Task Force Rapporteur.

4.1.41 During the ANI/WG/3, the AIM Task Force was supported by delegates from Bahamas, Belize, Curacao, Haiti, Mexico, CANSO, IATA and COCESNA. Changes and suggestions were presented to the ToRs and work programme review. Additionally, information related to the progress on their own States was provided.

4.1.42 Regarding the progress and compliance of AIM TF activities subsequent to the ANI/WG/2, several coordination teleconferences were held; the Integrated Single Aeronautical Information Management (AIM) - Quality Management System (QMS) and Flight Planning Issues and Plans for AIM Transition Meeting/Workshop (QMS, FPL, AIM Transition Meeting/Workshop) was held in St. John's, Antigua and Barbuda, 14 to 18 March 2016, was conducted for E/CAR States, having large participation and positive outcomes in the development of the following seminars:

- a) CAR/SAM Electronic Aeronautical Charts of Performance Based Navigation (PBN), Terminal Procedures and Aerodrome Mapping Seminar, Mexico City, Mexico, 24 to 27 August 2015;
- b) Aeronautical Information Exchange Model (AIXM) / Unified modeling language(UML) / Extensible mark-up language (XML) / Geographic Markup Language (GML)Seminar/Workshop, Lima, Peru, 28 September to 2 October 2015;
- c) ICAO CAR/SAM electronic Terrain and Obstacles Data (eTOD) Seminar, Mexico City, Mexico, 23 to 25 November 2015; and
- d) Integrated Single Aeronautical Information Management (AIM) Quality Management System (QMS) and Flight Planning Issues and Plans for AIM Transition Meeting/Workshop (QMS, FPL, AIM), St. John's, Antigua and Barbuda, 14 to 18 March 2016.

4.1.43 The AIM/TF discussed on training needs and priorities for the AIM personnel, in consideration turnover or retirement of the staff, as well as the technological progress in this regard, knowing that courses through the regional instruction centres are available, therefore the following draft conclusion was proposed:

DRAFT CONCLUSION

ANI/WG/3/5

AIM TRAINING PROGRAMMES UPDATE

That,

- a) States implement permanent AIM instruction programmes for personnel in the Region by 31 May 2017;
- b) Regional training centres analyse the AIM instruction requirements (NAM/CAR/CATC/WG/3), based on the specialists competencies, ICAO reference documentation update by 30 December 2016; and
- c) States consider as priority the following courses by 30 December 2018:

- AIM Basic
- DNOTAM, statistical and dynamic data
- AIM integrated documentation
- AIM-QMS and AIXM ver 5.1
- Recurrent AIM
- Second Electronic aeronautical charts Seminar/Workshop update and eTOD

4.1.44 The AIM/TF noted CANSO and IATA representatives suggestion of considering the standardization of PBN chart format and the need for developing reference guidance for the States, for the presentation of the Instrument Approach Chart (IAC) PBN, due to the different versions and information content that is currently published by States (that they initially take into account ICAO Circular 336 guidelines - *Area Navigation (RNAV) to Required Navigation Performance (RNP) Instrument Approach Chart Depiction*).

4.1.45 Regarding the updated ToRs and the revised work programme revision, **Appendices H and I** are included respectively, showing the AIM TF ToR validity, the incorporation of new members, the request to update the membership and review the rapporteur election. Several participant States and with support of the Secretariat proposed Curacao delegate, Mrs. Natasha Leonora-Belefanti, as the new AIM TF rapporteur.

4.1.46 In this regard, a collective appreciation was provided to the outgoing rapporteur, Mr. J. Alfredo Mondragón, COCESNA, who developed an important work on regional transition progress to AIM.

4.1.47 Finally, **Appendix J** shows progress to follow-up of the ICAO AIM roadmap for Phase 1, which has been reported by States/Territories and International Organizations to the ICAO NACC Regional Office and the scope according to PoS and RPBANIP regional objectives.

AMHS TF Progress Report

4.1.48 Under WP/ 13 and DP/06, the AMHS Task Force updated the Matrix for Implementation of AMHS in the CAR Region (**Appendix K** refers), and urged the Member States to continue updating the Matrix as accurate and soon as possible in order to better schedule testing and implementation. The AMHS TF recalled the amendment to the IPv4 addressing scheme for the Caribbean as Version 1.1. States such as Cuba, St Marteen and Trinidad and Tobago have been conducting AMHS interoperability testing. The Meeting recalled that Trinidad and Tobago will only be using the IPv4 version 1.1 between Piarco and San Juan.

4.1.49 The Meeting also noted that with the increased activity in AMHS interoperability testing following MEVA III network implementation, topics have been identified which might be addressed by *Go-Teams* in preparation for future States' implementation activities, such topics are:

1. Router equipment must be deployed to support IP links between States and provide a gateway and exit to a private local area network (LAN) hosting AMHS Message Transfer Agent (MTA) (and other) equipment. Expertise identifying this equipment and designing a private LAN is sometimes required.
2. States are expected to provide MTA host IP addresses conforming to the ICAO IP addressing scheme. A single IP address identifying redundant AMHS MTA equipment is desirable. Expertise for the configuration of Network Address Translation (NAT) and associated router configurations is sometimes needed.
3. AMHS interoperability testing is often necessary using the same equipment currently providing operational Aeronautical Fixed Telecommunication Network (AFTN) traffic. In this case, extreme care must be taken to ensure that AMHS test messages do not 'leak' into the operational AFTN network. Careful review of test scenarios and address routing configuration is needed.
4. Prior to AMHS cutover, it is often desirable to duplicate operational AFTN traffic in a parallel non-operational AMHS traffic stream. This provides an environment for operator training and other pre-operational development activities. Investigation of this capability and/or other stepwise traffic transitions is required.

4.1.50 Similarly, following Decision PPRC 3/6 - *Establishment of a working group to obtain better AMHS operational use*, the TF discussed the establishment of a new working group formed by Members from Brazil, Dominican Republic, United States and the GREPECAS Programme D identifying coordinators for the CAR/SAM Region in order to explore AMHS potentials and take advantage of its operational use. The Meeting accepted the identified task will work through virtual meetings and prepare a strategy to ensure AMHS operational use and provide it to the Region as soon as possible. The Representative from Brazil needs to be identified; in the meantime, Dominican Republic and United States agreed to start preliminary work for the proposed test plan. The first coordination meeting will take place the week of 18 April 2016, following the information provided in WP/22.

4.1.51 Finally, the Meeting also emphasized the importance of the upcoming ATS Data Link Implementation Workshop scheduled for 18 to 21 April 2016 in St Maarten, where AMHS matters are to be discussed and agreements to be made to expedite the AMHS implementation. Members should take this opportunity to exchange information in order to progress in the implementation of AMHS.

4.1.52 Based on the above, the Meeting agreed on the following Draft Conclusion:

DRAFT CONCLUSION

ANI/WG/3/6

AMHS IMPLEMENTATION PROCESS IN THE CAR REGION

That, to streamline the AMHS operational use, the CAR States/Territories

- a) update accordingly the CAR Region Implementation Matrix by **December 2016**;
- b) take advantage of the ATSN Data Link Implementation Application Workshop scheduled for 18 to 21 April 2016 in St Maarten to exchange information and progress on the implementation; and
- c) carry on the additional task of testing the transmission of XML data through the AMHS system, coordinating these activities with the AMHS TF, informing the NACC/WG and GREPECAS Meetings.

4.1.53 The Secretariat presented WP/22 informing the requirement for the exchange of aeronautical meteorological information in a digital form, inviting the Meeting to participate in the Air Traffic Service (ATS) Messages Handling Systems (AMHS) testing - for Extensible Markup Language (XML) MET exchange to seek the full operational use of the AMHS capability.

4.1.54 States interested will consider their participation providing dates and PoCs.

Other Regional Implementation Groups

4.1.55 Under WP/20, the Eastern Caribbean Network Technical Group (E/CAR/NTG) presented an overview of the surveillance data sharing activities achieved and an update of the implementation plan on this matter to encompass all the surveillance data related actions for informing the Eastern Caribbean (E/CAR) Directors as mandated. This overview also included the E/CAR Aeronautical Fixed Services (AFS) Network.

4.1.56 For the E/CAR Radar Data Sharing implementation activities, the French Civil Aviation Authority donated and installed eleven computers (IRMA) as part of the Phase 1 implementation of Radar Data Display. The Implementation Plan for the Radar Data exchange includes the actions for radar data exchange with the adjacent FIRs, as part of the process to enhance the MRT data for the E/CAR users (San Juan, Sint Maarten and Venezuela).

4.1.57 Regarding the E/CAR AFS Network, it was noted that the network was globally compliant with consistently good performance and availability; was highlighted the new dedicated MEVA circuit for the radar exchange between San Juan and Sint Maarten, and the fact that the voice circuits to Anguilla, Antigua and Barbuda and Saint Kitts and Nevis are already installed. These circuits were implemented as part of the E/CAR AFS and MEVA network interconnection between Anguilla and Sint Maarten, Antigua and Barbuda and Saint Kitts and Nevis.

4.1.58 IP/02, presented by the Eastern Caribbean Civil Aviation Technical Group Management (E/CAR/CATG) Chairperson, informed on the activities of the Aeronautical Information Management (AIM), Air Traffic Management (ATM) and Communications Navigation and Surveillance (CNS) Committees of the E/CAR/CATG since the Second NAM/CAR Air Navigation Implementation Working Group Meeting (ANI/WG/2) and the E/CAR/CATG/2 Meeting.

4.1.59 The main activities reported by the AIM Committee are summarised as follows:

- a) the effort for the implementation of a PIARCO AIS/NOTAM Contingency Plan, which could use the IDS North America NOTAM software called SPATIA, once a proposal is analysed by Trinidad and Tobago Civil Aviation Authority (TTCAA) CNS and AIM departments. The Directorate of the TTCAA is committed to achieving this goal, expecting results through 2016; and
- b) in relation with the implementation of a Quality Management System (QMS) for Aeronautical Information Service (AIS) in the Eastern Caribbean (E/CAR) the AIM Committee decided to adopt COCESNA is model of a single harmonized QMS for the E/CAR. To this end, an AIM QMS workshop was conducted in Antigua and Barbuda from 14 to 18 March 2016.

4.1.60 To enhance the knowledge and understanding of participants on the requirements of a QMS that complies with the ISO 9000, the Central Flight Planning Unit will be deployed during the second Quarter of 2016, in order to instituting a single AFTN address for the PIARCO FIR and to centralise flight planning.

4.1.61 Electronic Terrain and Obstacle Data (eTOD) consequently, with the received training States who are committed to continue developing the AIM action plans for the AIS to AIM transition in accordance with Conclusion NACC/WG 4/7 - *AIM Action Plans for the AIS to AIM Transition*.

4.1.62 Under IP/07, the MEVA Technical Management Group (TMG) presented an overview of the MEVA III Network, informing on the actual configuration, implemented circuits and the installed equipment, the insolvency proceedings process that was resolved with a new Service Provider (Frequentis).

VHF coverage issue resolution within the Port-Au-Prince FIR

4.1.63 Under IP/16, Haiti presented information on the resolution process of the VHF coverage in Port-au-Prince FIR. At the end of 2013, OFNAC decided to thoroughly tackle this long standing deficiency and acquired a brand new and sophisticated communication system with proven capability to cover the whole FIR. At the end of 2014, ATC controllers and airspace users could finally enjoy a better quality communication system providing more confidence and efficiency in their interactions. As a result, the number of communication incidents dropped to a very low level, which significantly improved safety within the Port-au-Prince FIR.

4.1.64 The current Voice Control Communication System (VCSS) comprehensively manages air-ground and ground-ground communications in a full redundancy mode and offers a friendly usable environment. All radios operate in double redundancy mode with a repeater remotely located on one of the highest mountains in Haiti and linked with a microwave system. The VHF coverage goes successfully well beyond the Port-au-Prince FIR boundaries, providing also clear communications in the south and southwest oceanic airspace.

4.1.65 To this extend, the Meeting congratulated Haiti for this improvement and agreed on the following Draft Conclusion:

DRAFT CONCLUSION
ANI/WG/3/7

VHF COMMUNICATION IMPROVEMENTS IN THE PORT AU PRINCE FIR

That, in order to support the improvements made by Haiti in their VHF Communication service in the Port au Prince FIR:

- a) Haiti inform of the new VHF communication coverage (coverage map) to Cuba, Curacao, Dominican Republic, Jamaica, United States and IATA by **30 May 2016**;
- b) Cuba, Dominican Republic, Jamaica, United States and IATA, in coordination with Haiti and ICAO, support Haiti in conducting an assessment of the VHF communication service improvement by **June 2016**; and
- c) Haiti report the results of this improvement by the NACC/DCA/6 Meeting in May 2017.

4.2 Evaluation of the Progress Implementation on Port-of-Spain Declaration and RPBANIP Targets

4.2.1 In order for responses of this evaluation to be sent, it is necessary to count with sufficient time to gather the data and it is important that the appropriate persons be aware that the data was requested. Otherwise, the responses would be late or incomplete. It was emphasized that only the State's ICAO Point-of-Contact (PoC) should send responses; however, the PoC could be assisted by one Subject Matter Expert (SME) of another State as necessary.

4.2.2 States identified two major issues that impeded their submission: If data request was sent

- Internal communications issues within States exist where the person responsible to update the targets did not receive the State letter
- The timeframe provided by the ICAO NACC Regional office for completing this update form was considered too short.

4.2.3 The Meeting concurred that when the NACC Regional Office requests updates on reporting progress of the regional targets in the RPBANIP and the Port-of-Spain Declaration, copies should be sent to the ANI/WG and ANI/WG Task Force members.

4.2.4 The Meeting also noted that the Air Navigation Service (ANS) Standing Committee, chaired by Trinidad and Tobago, for CASSOS Member States, has continuously offered assistance to the Directors General of the CASSOS Member States. Member States were encouraged to seek assistance via this committee. Of the States present: Bahamas, Haiti and Saint Lucia indicated their need for assistance.

4.2.5 The Meeting noted that representatives of the Member States on the PBN TF would be accountable to review and update targets progress in 2016.

4.2.6 The Secretariat presented the results of the survey conducted for air navigation target, the webpage prototype, the current report provided to GREPECAS and to ICAO; and invited the Meeting to take actions on implementing a periodic reporting and thorough analysis of the regional targets defined in the RPBANIP.

4.2.7 The list of air navigation targets is shown in **Appendix L**. Similarly some targets and metrics shall be reviewed in light of the update of ICAO Standards and Recommended Practices (SARPs).

4.2.8 ICAO developed a webpage under the ICAO NACC Regional Office website. This webpage is still a prototype (<http://www.icao.int/NACC/Pages/Implementation-Targets.aspx>) that requires continuous verification and updating by States/ANSPs and IATA to ensure that the data included is up-to-date and consistent with each State National Air Navigation Plan priorities.

4.2.9 A new revised edition (5th edition) has been circulated for comments by the States/ANSPs. The proposed edition of the GANP is also available, along with other relevant documentation including an electronic copy of the Aviation System Block Upgrades (ASBUs) document, at: <http://www.icao.int/airnavigation/Pages/GANP-Resources.aspx>.

4.2.10 Following ICAO commitment to assist and take the necessary actions to support the States in the completion of the reporting forms to ensure the proper understanding and appropriate provision of information for monitoring the implementation, an ASBU implementation workshop is scheduled for August 2016. This workshop seeks to solve difficulties for Regions/States to correlate their plans with the ICAO ASBU planning framework, using the ASBU working document and the elements for each module (reference: The Aviation System Block Upgrades framework for global harmonization, Draft edition 2016).

4.2.11 NI/04 presented to the Meeting the significant progress on PBN implementation in accordance with the RPBANIP, ASBU B0 Module and the accomplishment of the *Port-of-Spain Declaration* targets.

4.3 Progress Report by States of Adopted Aviation System Block Upgrades (ASBU) B0 Modules

4.3.1 Under NI/09, the progress of Cuba on the implementation of AMET Module of ASBU Block 0 is described. It is concluded that Cuba has continuous progress in the ASBU Block 0, B0-105/AMET Module Implementation, and complies with the planned targets until 2018.

4.3.2 NI/10 that describes the progress on the implementation of DAIM module of ASBU Block 0 in Cuba was also presented, concluding that Cuba maintains continuous progress in the ASBU Block 0, DAIM module implementation, and continues complying with the planned proposed targets for 2018. However, there are no dates for the e-TOD regulation implementation and the acquisition of Aerodrome Cartographic Data (AMDB) that would support the implementation of digital NOTAMs; the collection and implementation of this data require high budgets that, in a 2-year period, would be difficult for the Region to be achieved.

4.3.3 It is proposed to develop a strategy to exchange experiences and resources within the Region in order to implement the eTOD through the possible establishment of a Regional eTOD Working Group.

4.3.4 Under IP/11, Haiti presented the follow-up on the Twelfth Air Navigation Conference (AN-Conf/12) recommendations in order to align air navigation application plans within the ATM ICAO operational concept with ASBU methodology. Haiti expressed its commitment to prepare an air navigation master plan that shows a structured approach in order to meet local and regional needs for Haiti air navigation system modernization and harmonization.

4.3.5 IP/12 from United States presented information on the update and the ICAO Aviation System Block Upgrade (ASBU), supporting the Global Air Navigation Plan (GANP). The paper also describes ASBU application areas in United States and their wider effects over international aviation.

4.3.6 On the other hand, and in order to coordinate the modernization of the global air navigation system, it is essential to have a harmonized plan to follow by civil aviation regulators, operators and the industry.

4.3.7 It was mentioned that it is necessary to have a planning, development, training and implementation of a harmonized global system over a framework that includes scalable plans and provides operational and economic results, as well as safety benefits (see tables and diagrams included in IP/12).

4.3.8 Based on the discussion from the Agenda Items 4.2, 4.3 and 4.5; the Meeting identified the following:

- Lack of response to the targets revision
- The need to express the NACC/DCA difficulties on the formulation of the targets and therefore their accomplishment

4.3.9 In this regard, the Meeting agreed on a more active participation from the States/ANSP to reflect their national priorities and user's main needs, and therefore agreed on an Ad hoc Group to support review, follow-up and reporting the achievement of the Air Navigation (AN) targets established in the RPBANIP and Port-of-Spain Declaration. The expected results from this Ad hoc Group are:

- Review/follow-up on AN targets to inform the NACC/DCA/6 Meeting
- Comments on improvements to the AN target website/ANRFs/etc.
- Support for the ASBU implementation Workshop in August 2016

4.4 CAR RLA/09/801 Project Outcomes in Support to RPBANIP Targets

Regional Technical Cooperation Project for the CAR Region

4.4.1 Under P/05, the Secretariat reviewed air navigation projects completed under the RLA/09/801 Regional Technical Cooperation Programme. With the pending implementation of Phase II of the Project set for July 2016, the Meeting was asked to provide feedback on the previous projects completed: what worked and what can be developed to ensure that the goals of Phase II of the project to assist in the effective implementation of ICAO Standards and Recommended Practices, in line with strategic targets and corresponding air navigation and safety plans.

4.4.2 The Meeting was asked to discuss appropriate training needs during upcoming sessions of their Task Forces, and present possible projects for consideration for the 2017 RLA/09/801 calendar. These projects should meet ICAO Strategic Objectives of mitigation of safety and security deficiencies, increase the capacity of State's Civil Aviation Authorities, as well as the NACC Regional Office objectives, such as increasing the Effective Implementation (EI) rates, and implementation of global and regional air navigation and safety plans

4.5 ICAO Monitoring Programme

4.5.1 For convenience purposes of the Meeting, this item was reported under 4.2 - *Evaluation of the Progress Implementation on Port-of-Spain Declaration and RPBANIP Targets*, taking into account the similarity of the issues discussed in the correspondent session.

Agenda Item 5 Training Issues

Training matters in the NAM and CAR Regions

5.1 The Secretariat presented WP/21, which mentioned that, in order to effectively implement the ASBU Modules, there is a need of well-trained aviation professionals throughout the CAR Region in the short, medium and long terms. The Meeting is aware of the key role of Civil Aviation Training Centres in preparing and maintaining aviation professionals as needed. In order to support this activity, the ICAO NACC Regional Office serves as Secretariat of the NAM/CAR Regions Civil Aviation Training Centres Working Group, which is in charge among other things of the promotion of the creation of courses based on demand as mandated by the NAM/CAR Regions Civil Aviation Authorities.

5.2 The Meeting was informed by the Secretariat that the Third NAM/CAR Civil Aviation Training Centres Working Group Meeting (NAM/CAR/CATC/WG/3) that was initially convened at the ICAO NACC Regional Office, Mexico City, Mexico, from 12 to 13 April 2016, has been rescheduled for 4th quarter of 2016. The Meeting acknowledged the importance of training for skill development, as well as the role of the ICAO NACC Regional Office to coordinate this issue not only with the CATC/WG, but with ICAO Global Aviation Training (GAT). Therefore, the Meeting agreed to maintain communication with the CATC/WG and ICAO GAT through the Secretariat, in order to ensure the availability of the identified courses for developing and maintain the required aviation professionals as a key element for the successful implementation of ICAO SARPs.

Agenda Item 6 Other Business

6.1 Cuba presented WP/14 related to the difficulties experienced for their participation in the ICAO NACC Regional Office events in 2015 due to the time frame that should be enough for planning, mainly financially, by the States; likewise, it was reaffirmed that translation and simultaneous interpretation services for bilingual events in the Region, should continue to be afforded by the ICAO NACC Regional Office budget. Since States contribute annually to ICAO for these activities. The money that States contribute to the RLA/09/801 Project should not be used to cover translations and simultaneous interpretation.

6.2 Furthermore, it is necessary that the annual event plan be approved during the Steering Committee Meeting of the Regional Technical Cooperation Project for the Caribbean Region (RLA/09/801), keeping such plan without changes and that it should be published in the ICAO website by September for its application in the next year.

Remotely Piloted Aircraft Systems

6.3 Under P/01, the Secretariat provided information on the increasing number of incidents involving Remote Piloted Aircraft System (RPAS) operating in non-segregated airspace. Statistics and analysis are providing airspace planners with data showing an escalation of incidents involving unmanned aircraft with traditional aircraft, and this is becoming a significant hazard to commercial aviation.

6.4 ICAO, who began working on this issue nine years ago, is considering amending 18 of the 19 Annexes to the Chicago Convention to accommodate RPAS/Unmanned Aircraft Systems (UAS) requirements. ICAO focus will remain on international operations of these vehicles, while it is incumbent upon the national authority responsibility to focus on domestic operations of these vehicles.

6.5 The challenge for ICAO and national authorities will be how to integrate RPAS/UAS into the full air traffic management system. This will be done through the use of equipment (communication, navigation and surveillance), as well as possible certification and licensing of these vehicles.

6.6 SARPs development is currently underway and ICAO will also institute an advisory group to share best practices and will conduct RPAS workshops beginning in the summer of 2016.

6.7 A suggestion was made to revise the working arrangements for the ANI/WG concerning the impossibility of holding Task Force (TF) break-out session/meetings during ANI/WG meeting. It was highlighted that most States did not include Task Force members for each of the Task Forces among their delegations; therefore, it might not be reasonable to request complementary break-out sessions to update the working papers already submitted to the TF rapporteurs. It was suggested that TF updates be presented to the ANI/WG through the respective TF rapporteurs. This would allow the ANI/WG in general to consider whether work programmes or deliverables required revision. The ANI/WG agreed with the suggestion.

6.8 The Meeting noted that for 2017 the NACC/WG/5 meeting is scheduled, which tentatively will be held in the Eastern Caribbean: Trinidad and Tobago in June 2017, and therefore, based on the Meeting Rotational scheme, the next ANI/WG/4 Meeting, will be tentatively held in North America, United States/IATA in July 2018.

**APPENDIX A
EXECUTIVE LIST OF CONCLUSIONS/DECISIONS**

Number	Conclusion/Decision	Responsible for action	Deadline
C-3/1	<p>REGIONAL PERFORMANCE OF AIR NAVIGATION IMPLEMENTATION PROJECT</p> <p>That, bearing in mind that the deadline for Port-of-Spain Declaration targets finishes in December 2016, and the implementation of the NACC <i>No Country Left Behind (NCLB)</i> Strategy the ICAO NACC Regional Office to coordinate the development of a web application of the performance air navigation implementation system for the CAR Region in accordance with the new requirements of the CAR/SAM Electronic Air Navigation Plan (eANP) by 30 December 2016.</p>	ICAO NACC	30 November 2016
C-3/2	<p>DEVELOPMENT OF A PROPOSAL FOR AMENDMENT (PFA) TO THE DOC 7030 - REGIONAL SUPPLEMENTARY PROCEDURES (SUPPS), CAR/SAM PART</p> <p>That,</p> <p>a) CAR States and Territories submit comments to the ICAO NACC Regional Office on the Proposal for Amendment (PfA) to Doc 7030 - Regional Supplementary Procedures (SUPPs), CAR/SAM Part, for RNP 10 implementation, 50 NM of lateral/longitudinal separation, RNP 4, 30 NM lateral/longitudinal separation by 22 April 2016; and</p> <p>b) the ICAO NACC Regional Office coordinate timely update of Doc 7030 for the RNP 10 and RNP 4 implementation, 50 NM of lateral/longitudinal separation and 30 NM lateral/longitudinal separation, respectively, in the Oceanic areas of the Caribbean (CAR) FIR by 30 November 2016.</p>	---	---
	a) CAR States and Territories submit comments to the ICAO NACC Regional Office on the Proposal for Amendment (PfA) to Doc 7030 - Regional Supplementary Procedures (SUPPs), CAR/SAM Part, for RNP 10 implementation, 50 NM of lateral/longitudinal separation, RNP 4, 30 NM lateral/longitudinal separation by 22 April 2016; and	States/Territories	22 April 2016
	b) the ICAO NACC Regional Office coordinate timely update of Doc 7030 for the RNP 10 and RNP 4 implementation, 50 NM of lateral/longitudinal separation and 30 NM lateral/longitudinal separation, respectively, in the Oceanic areas of the Caribbean (CAR) FIR by 30 November 2016.	ICAO NACC	30 November 2016

Number	Conclusion/Decision	Responsible for action	Deadline
C-3/3	<p>PROTECTION AND RECOGNITION OF C BAND SPECTRUM USAGE</p> <p>That, in order to take the technical and regulatory actions to support existing and future operation of the fixed satellite service earth stations within the band 3 400 – 4 200 MHz, as an aid to the safe operation of aircraft and reliable distribution of meteorological information in States, NAM/CAR States take the appropriate measures in order to ensure the protection of the satellite C-band operated by the National and Regional VSAT networks through:</p>	---	---
	<p>a) registration of the aeronautical VSAT frequencies in the States register held by the national authorities of regulation of telecommunication; and</p>	States	---
	<p>b) follow-up with the concerned authorities in the States to further register the frequencies in the ITU Master International Frequency Register (MIFR) by February 2017.</p>	States	February 2017
C-3/4	<p>DEVELOPMENT OF A PROPOSAL FOR AMENDMENT (PFA) TO THE DOC 8733 - AIR NAVIGATION PLAN — CARIBBEAN AND SOUTH AMERICAN REGIONS</p> <p>That,</p>	---	---
	<p>a) CAR States and Territories submit to the ICAO North America, Central American and Caribbean Regional Office their RNAV route network change proposal by 30 December 2016; and</p>	States/Territories	30 December 2016
	<p>b) the ICAO North America, Central American and Caribbean Regional Office coordinate as appropriate in order to develop by 30 December 2016, a Proposal for Amendment (PFA) to ICAO Doc 8733 - Air Navigation Plan — Caribbean and South American Regions, with deadline implementation by 30 June 2017, which includes AIP publication based on three AIRAC cycles.</p>	ICAO NACC	30 June 2017

Number	Conclusion/Decision	Responsible for action	Deadline
C-3/5	AIM TRAINING PROGRAMMES UPDATE That,	---	---
	a) States implement permanent AIM instruction programmes for personnel in the Region by 31 May 2017;	States	31 May 2017
	b) Regional training centres analyse the AIM instruction requirements (NAM/CAR/CATC/WG/3), based on the specialists competencies, ICAO reference documentation update by 30 December 2016; and	State's Instructions Centres	30 December 2016
	c) States consider as priority the following courses by 30 December 2018: - AIM Basic - DNOTAM, statistical and dynamic data - AIM integrated documentation - AIM-QMS and AIXM ver 5.1 - Recurrent AIM - Second Electronic aeronautical charts Seminar/Workshop update and eTOD	States	30 December 2018
C-3/6	AMHS IMPLEMENTATION PROCESS IN THE CAR REGION That, to streamline the AMHS operational use, the CAR States/Territories	---	---
	a) update accordingly the CAR Region Implementation Matrix by December 2016;	States/Territories	December 2016
	b) take advantage of the ATSN Data Link Implementation Application Workshop scheduled for 18 to -21 April 2016 in St Maarten to exchange information and progress on the implementation; and	States/Territories	April 2016
	c) carry on the additional task of testing the transmission of XML data through AMHS system, coordinating these activities with the AMHS TF; informing the NACC/WG and GREPECAS Meetings	States/Territories	GREPECAS and NACC/WG Meeting

Number	Conclusion/Decision	Responsible for action	Deadline
C-3/7	VHF COMMUNICATION IMPROVEMENTS IN THE PORT-AU-PRINCE FIR That, in order to support the improvements made by Haiti in their VHF Communication service in the Port au Prince FIR:	---	---
	a) Haiti inform of the new VHF communication coverage (coverage map) to Cuba, Curacao, Dominican Republic, Jamaica, United States and IATA by 30 May 2016;	Haiti	30 May 2016
	b) Cuba, Dominican Republic, Jamaica, United States and IATA, in coordination with Haiti and ICAO, support Haiti in conducting an assessment of the VHF communication service improvement by June 2016; and	Cuba, Dominican Republic, Jamaica, United States and IATA in coordination with Haiti and ICAO	June 2016
	c) Haiti report the results of this improvement by the NACC/WG Meeting in May 2017.	Haiti	May 2017

**APPENDIX B
E/CAR eANP POINTS-OF-CONTACT**

Representing Representando	Name Nombre	Position Puesto	e-mail / Telephone e-mail / Teléfono
Anguilla	Mark Denney	IFP & CNS Inspector	Mark.denney@airsafey.aero Tel: +44 (0)1293 897005
Antigua and Barbuda	Shenneth Phillips	Dep. Chief Air Traffic Service	shenneth.phillips@ab.gov.ag Tel:+ 268-562-0301
Barbados	Suzanne Griffith	Technical Officer, training and systems	Suzanne.griffith@barbados.gov.bb Tel: 246 428-6667
British Virgin Islands	Mark Denney	IFP & CNS Inspector	Mark.denney@airsafey.aero Tel: +44 (0)1293 897005
French Antilles	Olivier Jouans	Director of ATM services	Olivier.jouans@aviation-civile.gouv.fr Tel:+ 596 696 70 5147
Grenada	Roselyn Charles	Manager ATS	Roselyn.charles@gov.gd Tel: + 473-444 4555 ext 2026
Montserrat	Mark Denney	IFP & CNS Inspector	Mark.denney@airsafey.aero Tel: +44 (0)1293 897005
Saba	G.J. (Gloria) Hooplot, MA	ICAO Focal Point	E-mail: gloria.hooplot@minienm.nl; Tel: 31 70 456 9530
Saint Kitts and Nevis	Kurt Louarde	Sn. ATCO	E-mail: kurt.louard@scaspa.com Tel: :+ 869 664 5457
Saint Lucia	Amy Charles	Manager ATS	Amy.charles@slaspa.com Tel: +1758 45 76156
Saint Vincent and the Grenadines	Bernard Scott	Sn. ATCO	E-mail: catcsvg@gmail.com Tel: :+ 784 458 4960
Sint Eustatius	G.J. (Gloria) Hooplot, MA	ICAO Focal Point	E-mail: gloria.hooplot@minienm.nl; Tel: 31 70 456 9530
Sint Maarten	Louis Halley	Director General	E-mail: louis.halley@sintmaartengov.org Tel: + 721 545 2024
Trinidad and Tobago	Rohan Garib	Executive Manager Air Navigation Services	E-mail: rgarib@caa.gov.tt Tel:+ 868 669 4806
United States	Leah Moebius	Air Traffic ICAO Lead	E-mail: Leah.moebius@faa.gov Tel: + 202-267-0269

C/CAR eANP POINTS OF CONTACT (POCS)

Representing Representando	Name Nombre	Position Puesto	e-mail / Telephone e-mail / Teléfono
Aruba			
Bahamas	Keith Majors		
Cayman Islands Islas Caimanes	P.H. Richard Smith	Director General – Civil Aviation	richard.smith@caacayman.com Tel. + 345 949 7811 (w) + 345 916 6285 (c)
Costa Rica*	Gianella Baltodano A.	Subdirectora	gbaltodano@dgac.go.cr Tel. + 506 2290 0090 ext. 254
	Rolando Richmond	Subdirector NAV	rrichmond@dgac.go.cr
Cuba	Orlando Nevot González	Director de Aeronavegación IACC	orlando.nevot@iacc.avianet.cu Tel. + 537 838 1121
Curaçao Curazao	Michael Celestÿn	ATS/AD Inspector	michael.celestyn@gobiernu.cw
Dominican Republic República Dominicana	Francisco Bolivar León Paulino	Director de Navegación Aérea	bleon@idac.gov.do Tel. + 809 274 4322 ext. 2136 y 2067
Haiti Haití	Dumas J. Laurent	Director of Flight Safety	ljdumas.hcaa@yahoo.com Tel. + 509 4494 0045
	Jean Marc Flambert	Technical Adviser	jeanmarc.flambert@ofnac.gouv.ht
Jamaica	Carl Gaynair	Director ANS	carl.gaynair@jcaa.gov.jm Tel. + 876 995 7581
Sint Maarten*	Louis Halley	Director General	louis.halley@sintmaartengov.org Tel. + 721 545 2024
Trinidad and Tobago* Trinidad y Tabago	Ramesh Lutchmedial	Director General	dgca@caa.gov.tt Tel. + 1868 669 4302
Turks and Caicos Islands Islas Turcas y Caicos	Peter Forbes	Deputy Managing Director	pforbes@tcway.tc Tel. + 649 941 8085
United States Estados Unidos	Christopher Barks	Director, Western Hemisphere Office	christopher.barks@faa.gov Tel. + 507 317 5370
	Michelle Westover	ICAO Desk, Western Hemisphere Division	michelle.westover@faa.gov

Representing Representando	Name Nombre	Position Puesto	e-mail / Telephone e-mail / Teléfono
	Leah Moebius	ICAO, Air Traffic International	leah.moebius@faa.gov
	Dwayne Murray	Desk Officer	dwaine.murray@tsa.dhs.gov Tel. + 202 679 8531

*: Not C/CAR States but will be recorded on Regional e-ANP PoC list/
No es Estado C/CAR pero se registrará en la lista PoC e-ANP

CENTRAL AMERICA eANP POINTS OF CONTACT (POCS)

Representing Representando	Name Nombre	Position Puesto	e-mail / Telephone e-mail / Teléfono
Belice	Gilberto Torres	Sub-director de Aviación Civil	gilberto.torres@civilaviation.gov.bz, Tel. + 501 225 2014
Costa Rica	Rolando Richmond	Sub-Director ANS	r-richmond@dgac.go.cr Tel. + 506 2231 4924
El Salvador	Mauricio Rivas Rodas	Subdirector de Navegación Aérea	mrodas_halcon54@hotmail.com
Guatemala	Por confirmar		
Honduras	Heriberto Sierra	Jefe de Navegación Aérea	Tel. 3144-0003
Nicaragua	Por confirmar	CNS	aeronav@inac.gob.ni
COCESNA	Mauricio Matus	Subdirector ACNA	mauricio.matus@cocesna.org Tel. +504 2234 3360

APPENDIX C
AIDC REGIONAL PLAN AND OF THE AIDC POINTS OF CONTACT (POC)
Table A: General Information

State/Organization	System	Point of contact	Network Bandwidth	Comments
Bahamas	-	-	-	-
Belize	-	-	-	-
Canada	CAATS GAATS+ (Gander Oceanic)	Pedro Vicente Pedro.Vicente@navcanada.ca	-	-
COCESNA	INDRA Aircon 2100 Renovado	Mayda Ávila (mayda.avila@cocesna.org) Jenny Lee (Jenny.lee@cocesna.org)	N/A (the current AFTN circuit speed is 1.2 kbps internally and 9.6 kbps the internationals). COCESNA planned to change her AFTN network for a new AMHS network in September 2016	-
Costa Rica	No - FDP Server must upgrade – Q1 2017	Warren Quirós navegacionaerea.cns@dgac.go.cr +50622314924 Fernando Naranjo Elizondo fer_nar_eli@hotmail.com	1200 bps	AIDC may be implemented until the upgrade of El Coco Center
Cuba	yes - Oracle Version 9 modified by LITA-CUBA	Manuel Castillo Velasco, Operation Management Havana ACC (537)-649-7281, email: mcastillo@aeronav.ecasa.avianet.cu	19200 BPS	We received many mistakes from the users in the FPL, in almost all fields. We have detected changes in the FPL forwarded by ACC's or ANSP offices related to FPL's presented by operators
Curacao	-	Jacques Lasten ATS Manager, DC-ANSP, j.lasten@dc-ansp.org	AMHS: 64 Kbps	-

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State/Organization	System	Point of contact	Network Bandwidth	Comments
Dominican Republic	Yes TopSky-ATC, Thales ATM 2014	Julio Cesar Mejia A. Enc. ATM, jmejia@idac.gov.do 809 274-4322. Ext. 2103 + Fernando Casso fernando.casso@idac.gov.do	AMHS: 64 Kbps	-
El Salvador	INDRA Aircon 2100 Renovado	Danilo Ramirez danilo.ramirez@cepa.gob.sv	9600 bps	-
Guatemala	INDRA Aircon 2100 Renovado	Sergio Raul Enrique senriquez@gmail.com David Ascoli davidascoli@gmail.com	9600 bps	-
Haiti	-		-	-
Jamaica	Thales Topsky Q4 2016	Carl Gaynair Carl.gaynair@jcaa.gov.jm	64k	
Mexico	Yes- FDP=Topsky, Producer= THALES ATM, INFO= Four Control Centres, all Mexico covered	Ing. Jose de Jesus Jimenez Director de Sistemas Digitales SENEAM/SCT/MÉXICO disda@sct.gob.mx 55 57 86 55 32	19200 bps	Mexico already counts with the implementation of CPL/LAM information exchange between: MZT ≤ ≥ LAX, MZT ≤ ≥ ABQ, MTY ≤ ≥ ABQ, MTY ≤ ≥ HOU, MID ≤ ≥ HOU, MID ≤ ≥ HAB
Nicaragua	INDRA Aircon 2100 Renovado	Jorge Saballos jsaballos@eaai.com.ni	9600 bps	-
Trinidad and Tobago	SELEX ATM System	Veronica Ramdath vramdath@caa.gov.tt	64k	To begin testing 2016 end of april Still no compatible interfaces between them

State/Organization	System	Point of contact	Network Bandwidth	Comments
United States	Yes - Host Automation / En Route Automation Modernization (ERAM) systems. Lockheed-Martin (LMCO) is the prime contractor for the Host/ERAM system. Ocean21 provides its own FDP processing in the oceanic environment. LMCO is also the contractor for Ocean21.	Dan Eaves, Federal Aviation Administration Air Traffic Control Specialist, Dan.Eaves@FAA.gov 202-385-8492	US- Mexico: NADIN/AFTN 64 kbps X.25 US- Cuba : MEVA III 64 kbps connection to NADIN	The domestic FDP is integrated into the Host Automation / En Route Automation Modernization (ERAM) systems.. The flight data function of the San Juan Combined Center / Radar Approach Control (CERAP) is integrated into the Miami Air Route Traffic Control Center (ARTCC) Host/ERAM.

Table B: Interfaces

State or Organization	State/Org FIR	Adjacent FIR	Interface Class	Interface Status	Implementation Date	Bilateral Agreement or ICD	Circuit / Bandwidth used	Comments
Bahamas	Nassau	Miami	N/A	Planned	TBD	NAM-ICD Version D		
Canada	Edmonton	Anchorage	Class II	Operational		NAM-ICD Version D		
Canada	Edmonton	Reykjavik		Operational		NAT ICD		
Canada	Edmonton	Salt Lake City	Class II	Operational		NAM-ICD Version D		
Canada	Edmonton	Seattle	Class II	Operational		NAM-ICD Version D		
Canada	Gander	New York		Operational		NAT ICD		
Canada	Gander	Prestwick		Operational		NAT ICD		
Canada	Gander	Reykjavik		Operational		NAT ICD		
Canada	Gander	Santa Maria		Operational		NAT ICD		
Canada	Moncton	Boston	Class II	Operational		NAM-ICD Version D		
Canada	Moncton	New York	Class II	Planned	TBD	TBD		
Canada	Montreal	Boston	Class II	Operational		NAM-ICD Version D		
Canada	Montreal	Cleveland	Class II	Operational		NAM-ICD Version D		
Canada	Oakland	Seattle	Class II	Operational		NAM-ICD Version D		
Canada	Toronto	Boston	Class II	Operational		NAM-ICD Version D		
Canada	Toronto	Cleveland	Class II	Operational		NAM-ICD Version D		
Canada	Toronto	Minneapolis	Class II	Operational		NAM-ICD Version D		
Canada	Vancouver	Salt Lake City	Class II	Operational		NAM-ICD Version D		
Canada	Vancouver	Seattle	Class II	Operational		NAM-ICD Version D		

State or Organization	State/Org FIR	Adjacent FIR	Interface Class	Interface Status	Implementation Date	Bilateral Agreement or ICD	Circuit / Bandwidth used	Comments
Canada	Vancouver	Oakland	Class II	Operational		NAM-ICD Version D		
Canada	Winnipeg	Minneapolis	Class II	Operational		NAM-ICD Version D		
Canada	Winnipeg	Salt Lake City	Class II	Operational		NAM-ICD Version D		
COCESNA	CENAMER	Belize	N/A	Planned	2017	PAC ICD		
COCESNA	CENAMER	Bogota	N/A	Testing	December 2015	PAC ICD		
COCESNA	CENAMER	Costa Rica	N/A	Planned	2017	PAC ICD		
COCESNA	CENAMER	El Salvador	N/A	Testing	October 2015	PAC ICD		
COCESNA	CENAMER	Guatemala	Class I	Testing	December 2015	PAC ICD		
COCESNA	CENAMER	Guayaquil	N/A	Testing	January 2016	PAC ICD		
COCESNA	CENAMER	Havana	Class I	Operational		NAM-ICD Version D		
COCESNA	CENAMER	Kingston	N/A	Planned	TBD			
COCESNA	CENAMER	Merida	N/A	Testing	TBD	NAM-ICD Version D		
COCESNA	CENAMER	Nicaragua	N/A	Operational	September 2015	PAC ICD		
COCESNA	CENAMER	Panama	N/A	Testing	November 2015	PAC ICD		
Costa Rica	San José	CENAMER	N/A	Planned	April 2017	NAM-ICD Version D		
Costa Rica	San José	Nicaragua	N/A	Planned	April 2017	NAM-ICD Version D		
Costa Rica	San José	Panama	N/A	Planned	April 2017	NAM-ICD Version D		
Cuba	Havana	CENAMER	Class I	Operational	March/April 2015	NAM-ICD Version D		Using CPL/LAM/LRM
Cuba	Havana	Kingston	N/A	Planned	TBD	NAM-ICD Version D		
Cuba	Havana	Merida	Class I	Operational	March 9, 2012	NAM-ICD Version D		
Cuba	Havana	Miami	Class I	Operational	December 15, 2011	NAM-ICD Version D		Using CPL/LAM/LRM
Cuba	Havana	Port au Prince	N/A	Not Planned	TBD			

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State or Organization	State/Org FIR	Adjacent FIR	Interface Class	Interface Status	Implementation Date	Bilateral Agreement or ICD	Circuit / Bandwidth used	Comments
Curacao	Curacao	Kingston	N/A	Planned		NAM-ICD Version D		
Curacao	Curacao	Maiquetia	N/A	Planned				
Dominican Republic	Santo Domingo	Curacao	N/A	Planned	TBD			
Dominican Republic	Santo Domingo	Miami	Class II	Implementing	September 2016	NAM-ICD Version D		
Dominican Republic	Santo Domingo	Port au Prince	N/A	Not Planned	TBD			
El Salvador	El Salvador	Guatemala	N/A	Planned	Septiembre 2016	PAC ICD		
El Salvador	El Salvador	Nicaragua	N/A	Planned	Agosto 2016	PAC ICD		
Guatemala	Guatemala	Belize	N/A	Planned	2017	PAC ICD		
Guatemala	Guatemala	El Salvador	N/A	Planned	Septiembre 2016	PAC ICD		
Haiti	Port-au-Prince	Santo Domingo	N/A	Planned	TBD	NAM-ICD Version D		
Jamaica	Kingston	Havana		Planned		NAM-ICD Version D		
Mexico	Mazatlán	Albuquerque	Class I	Operational	2005	NAM-ICD Version D		
Mexico	Mazatlán	Los Angeles	Class I	Operational	2005	NAM-ICD Version D		
Mexico	Mazatlán	Monterrey	Class I	Operational	2005	NAM-ICD Version D		
Mexico	Mazatlán	Oakland	N/A	Testing	March 2015	PAN ICD V.1		
Mexico	Mérida	CENAMER	Class I	Testing	June 2015	NAM-ICD Version D		
Mexico	Mérida	Havana	Class I	Operational	2011	NAM-ICD Version D		
Mexico	Mérida	Houston	Class I	Operational	2005	NAM-ICD Version D		
Mexico	México	Mazatlan	Class I	Operational	2005	NAM-ICD Version D		
Mexico	México	Mérida	Class I	Operational	2005	NAM-ICD Version		

State or Organization	State/Org FIR	Adjacent FIR	Interface Class	Interface Status	Implementation Date	Bilateral Agreement or ICD	Circuit / Bandwidth used	Comments
						D		
Mexico	México	Monterrey	Class I	Operational	2005	NAM-ICD Version D		
Mexico	Monterrey	Albuquerque	Class I	Operational	2005	NAM-ICD Version D		
Mexico	Monterrey	Houston	Class I	Operational	2005	NAM-ICD Version D		
Mexico	Monterrey	Mérida	Class I	Operational	2005	NAM-ICD Version D		
Nicaragua	Nicaragua	Costa Rica	N/A	Planned	2017	PAC ICD		
Nicaragua	Nicaragua	El Salvador	N/A	Planned	Agosto 2016	PAC ICD		
Trinidad and Tobago	PIARCO	French Guyanne	N/A	Planned	TBD	???		
Trinidad and Tobago	PIARCO	Maiquetia	N/A	Planned	TBD			
Trinidad and Tobago	PIARCO	New York	N/A	Planned	TBD	PAN ICD		To begin Testing 2016
Trinidad and Tobago	PIARCO	SAL	N/A	Planned	TBD	NAM-ICD Version D		
Trinidad and Tobago	PIARCO	San Juan/Miami	N/A	Planned	TBD	NAM-ICD Version D		Still no compatible interfaces between them
United States	Albuquerque	Monterrey	Class I	Operational		NAM-ICD Version D		
United States	Anchorage	Edmonton	Class II	Operational		NAM-ICD Version D		
United States	Anchorage	Vancouver	Class II	Operational		NAM-ICD Version D		
United States	Boston	Moncton	Class II	Operational		NAM-ICD Version D		
United States	Boston	Montreal	Class II	Operational		NAM-ICD Version D		

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State or Organization	State/Org FIR	Adjacent FIR	Interface Class	Interface Status	Implementation Date	Bilateral Agreement or ICD	Circuit / Bandwidth used	Comments
United States	Boston	Toronto	Class II	Operational		NAM-ICD Version D		
United States	Cleveland	Toronto	Class II	Operational		NAM-ICD Version D		
United States	Cleveland	Montreal	Class II	Operational		NAM-ICD Version D		
United States	Houston	Merida	Class I	Operational		NAM-ICD Version D		
United States	Houston	Monterrey	Class I	Operational		NAM-ICD Version D		
United States	Los Angeles	Mazatlan	Class I	Operational		NAM-ICD Version D		
United States	Miami	Havana	Class II	Planned	Q4 2015	NAM-ICD Version D		
United States	Miami	Havana	Class I	Operational		NAM-ICD Version D		
United States	Miami	Nassau	N/A	Planned	TBD	NAM-ICD Version D		
United States	Miami	Santo Domingo	Class I	Planned	TBD	NAM-ICD Version D		
United States	Minneapolis	Toronto	Class II	Operational		NAM-ICD Version D		
United States	Minneapolis	Winnipeg	Class II	Operational		NAM-ICD Version D		
United States	Oakland	Mazatlán		Operational		PAN ICD V.1		
United States	Oakland	Vancouver	Class II	Operational		NAM-ICD Version D		
United States	Salt Lake City	Edmonton	Class II	Operational		NAM-ICD Version D		
United States	Salt Lake City	Winnipeg	Class II	Operational		NAM-ICD Version D		
United States	San Juan	Santo Domingo	Class I	Planned		NAM-ICD Version D		
United States	Seattle	Vancouver	Class II	Operational		NAM-ICD Version		

State or Organization	State/Org FIR	Adjacent FIR	Interface Class	Interface Status	Implementation Date	Bilateral Agreement or ICD	Circuit / Bandwidth used	Comments
						D		

APPENDIX D
LETTER OF AGREEMENT BETWEEN (CENTER A) AND (CENTER B)
ANNEX <#>
Automated Data Exchange (ADE)

Date Effective: (mm/dd/yyyy), <00:00> UTC

1. **PURPOSE:** This Section (**Annex #**) establishes procedures for the Automated Data Exchange of active flight plan information between (**Center A**) Center and (**Center B**) Center. The message exchange is performed using the protocol NAM ICD. Subsequent sub-sections will introduce abbreviations, definitions and operational procedures to be used by respective facilities.
2. **OPERATIONAL PROCEDURES FOR ADE IS DESCRIBED IN THIS SECTION.** These procedures will evolve as subsequent phases are introduced. This Annex may be deleted and absorbed into the main body of the Letter of Agreement when final phase is implemented and subject mutual agreement.
3. **ABBREVIATIONS:**
 - ADE Automated Data Exchange
 - CFL Coordinated Flight Level
 - CPL Active Flight Plan
 - FPL Proposed Flight Plan
 - LAM Logical Acknowledgement Message
 - UTM Unsuccessful Transmission Message
4. **PROCEDURES:**
 - 4.1. ADE is the primary method of exchanging flight data information between (**Center A**) and (**Center B**) Centers.
 - 4.2. Coordination.
 - 4.2.1. The parameter times for the interface are as follows:
 - a) Not less than (**##, for example 15**) minutes - (**Center A**) Center CPL send time (prior to boundary).
 - b) (**##, for example 60**) seconds - (**Center A**) Center LAM time-out (time to wait for **LAM** from (**Center B**) Center).
 - c) Not less than (**##, for example 13**) minutes - (**Center B**) Center **CPL** send time (prior to boundary)
 - d) 60 seconds - (**Center B**) Center LAM time-out (time to wait for LAM from (**Center A**) Center).
 - e) (**Center B**) Center and (**Center A**) Center may agree to modify the parameters listed in a) and c) as necessary to enhance the automation system.
 - 4.2.2. The transferring facility must ensure that CPLs are verified with the receiving facility for all UTMs.

5. FLIGHT LEVEL COORDINATION

5.1. Aircraft landing in **(OACI code of Airport X)** and **(OACI code of Airport Y)** will be assigned flight levels in accordance with paragraphs **(mention number of paragraphs, for example 5.2.5.1, 5.2.5.4)** in this Letter of Agreement without **CFL** update. Flight levels for all other **(Name FIR)** FIR airports must be individually coordinated.

5.1.1. All **(OACI code Airport Y)** Terminal arrivals over **(Name of the waypoints)** must be at **(level of the flight, for example FL360)** or below.

5.1.2. Departures overflying **(Name of the waypoints)** must be at **(level of the flight for example FL280)** or below

6. SCHEDULED AND NON-SCHEDULED OUTAGES

6.1. When ADE is disabled the primary method of exchanging FPL messages will be the MEVA III dialline in accordance with paragraph **(for example 11.2)**.

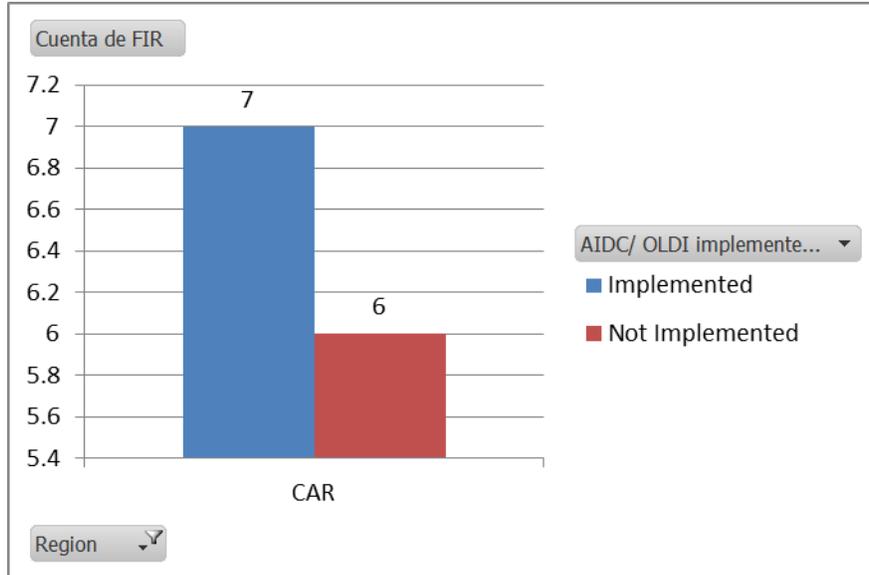
6.2. The **(Center A)** and **(Center B)** Operational Managers must mutually agree when to effect and or reestablish a transition to/from the MEVA dial line and ADE.

6.3. **(Center A)** Center and **(Center B)** Center will coordinate, in advance or as soon as practical, all scheduled and non-scheduled outages which impact ADE.

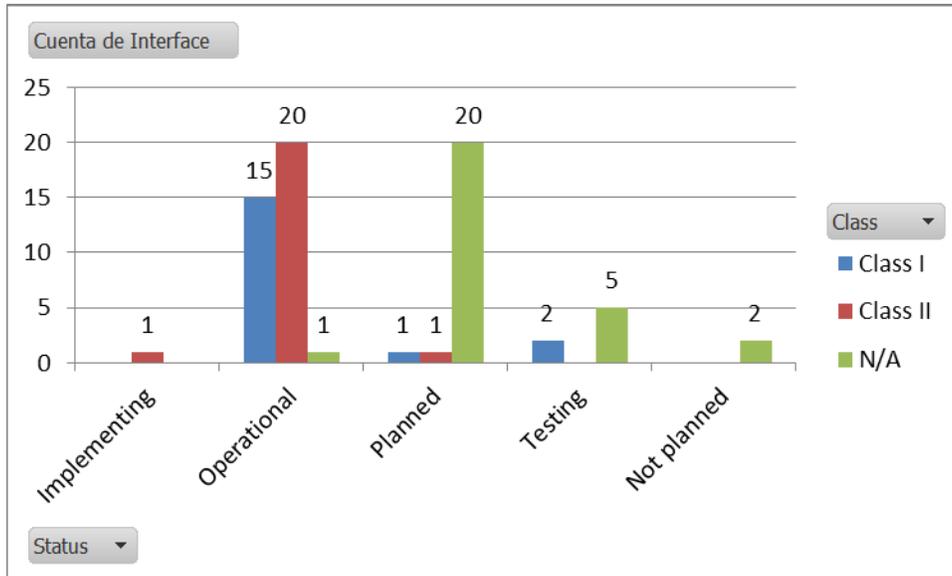
(Signatures of both parties)

**APPENDIX E
AIDC IMPLEMENTATION PERFORMANCE INDICATOR**

Graph 1: Implementation percentage, CAR region



Graph 2: AIDC Implementation by Class



Note: Class N/A refers to ICDs that do not implement classes (e. g. PAN ICD)

APPENDIX F
AIDC TASK FORCE WORK PROGRAMME
Update 04-04-2016

Descripción	Inicio	Fin	Estado	Entregable	Responsable
1. AIDC Trials and Implementation	28/10/2013	09/06/2014			
1.1 Update Regional Plan	28/10/2013	15/05/2014	Ongoing	Updated Regional Plan	Rapporteur
1.2 Determine reference ICD	28/10/2013	15/05/2014			
1.2.1 Evaluate potential ICDs to adopt	28/10/2013	20/11/2013	Completed	Evaluation of ICDs	Cuba;United States
1.2.2 Draft Final recommendations for adoption of ICD Doc	21/11/2013	17/02/2014	Completed	Draft document of recommendation of adoption of ICD	Task Force
1.2.3 Approve reference ICD document	18/02/2014	18/02/2014	Completed	Approved reference ICD document	Task Force
1.2.4 Draft recommendations for modifications of reference ICD	18/02/2014	31/03/2014	Completed	Draft document of recommendations for modification of ICD	COCESNA;Dominican Republic;United States
1.2.5 Distribute recommendations	01/04/2014	01/04/2014	Completed		Rapporteur
1.2.6 Approve recommendations for modifications of ICD document	25/04/2014	25/04/2014	Completed	Approved recommendations for modifications (no modification submitted)	Task Force
1.2.7 Submit modification of ICD	28/04/2014	15/05/2014	Completed	Modification request (no modificatios submitted)	Task Force
1.3 Maintain and update ICD					
1.3.1 Create a template for the annexes to the LOAs with the details of the parameters and agreements pertaining the procedures under NAM ICD	01/03/2015	01/04/2015	Valid	Annex Template	United States
1.3.2 Include wording or mechanisms to give regional scope to the NAM ICD document	01/03/2015	01/04/2015	Valid	Updated NAM ICD	United States
1.4 Create testing and implementation procedures	17/12/2013	06/06/2014			
1.4.1 Suggest and comment recommendations for trials/implementation of AIDC	17/12/2013	17/02/2014	Completed	Collection of recommendations	Task Force
1.4.2 Draft implementation procedures	18/02/2014	23/05/2014	Completed	Draft document for testing and implementation procedures	Ad hoc Group
1.4.3 Distribute draft for comments	26/05/2014	26/05/2014	Completed		Rapporteur
1.4.4 Approve implementation procedures	27/05/2014	06/06/2014	Completed	Approved testing and implementation procedures	Task Force
1.5 Create test procedure guideline					
1.5.1 Draft a testing guideline	01/03/2015	27/03/2015	Valid	Draft test procedure guideline	COCESNA
1.5.2 Distribute draft for comments	27/03/2015	30/03/2015	Valid	-	Task Force Rapporteur

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Descripción	Inicio	Fin	Estado	Entregable	Responsable
1.5.3 Submit comments to the testing guideline	30/03/2015	10/04/2015	Valid	Comments to the testing guideline	Task Force
1.5.4 Approve the testing guideline.	13/04/2015	15/04/2015	Valid	Approved testing guideline	Task Force
1.6 Follow up on testing and implementation	09/06/2014	09/06/2014	Ongoing	Test and implementation results documentation for each implementation.	Task Force
2. Mitigation of FPL issues	28/10/2013	28/04/2014			
2.1 Formation of FPL monitoring group	21/03/2014	25/04/2014	100%		
2.1.1 Create initial membership list	21/03/2014	21/03/2014	Completed	Initial membership list	
2.1.2 Draft terms of reference	24/03/2014	11/04/2014	Completed	Draft document of terms of reference	Rapporteur
2.1.3 Distribute terms of reference	14/04/2014	14/04/2014	Completed		Rapporteur
2.1.4 Approve terms of reference	25/04/2014	25/04/2014	Completed	Approved terms of reference	Task Force
2.2 Create mitigation action plan	28/10/2013	28/04/2014			
2.2.1 Recollect results and lessons learned from FPL solutions carried out in E/CAR, CA and USA-Cuba	28/10/2013	23/01/2014	Completed	Collection of results and lessons learned	Ad hoc Group
2.2.2 Report evaluation and comments of statistics recollected	24/01/2014	18/02/2014	Completed	Evaluation document	Ad hoc Group
2.2.3 Draft action plan for mitigation/solution of issues	19/02/2014	11/04/2014	Completed	Draft document of action plan	Ad hoc Group
2.2.4 Distribute action plan	14/04/2014	14/04/2014	Completed		Rapporteur
2.2.5 Approve action plan	25/04/2014	25/04/2014	Completed	Approved action plan	Task Force
2.2.6 Follow up on action plan	28/04/2014	28/04/2014	Ongoing	Plan execution results documentation	FPL Monitoring Group
3. Set new goals for AIDC TF					
3.1 Evaluation of the state of AIDC implementation in the region (how many Class I and II implementations), due Jan 29th.	14/01/2016	29/01/2016	Valid	Implementation evaluation	Task Force
3.2 Hold a teleconference to discuss this evaluation, due Feb 5th.	05/02/2016	05/02/2016	Valid	Meeting minutes/conclusions	Task Force
3.3 Evaluate the benefits of Class III implementation, and project the implementation of Class II and III among FIRs in the region, due Feb. 15th	06/02/2016	15/02/2016	Valid	Implementation projection	Task Force
3.4 Set implementation goals for each Class, due Feb 26th.	16/02/2016	26/02/2016	Valid	Implementation goals	Task Force

**APPENDIX G
FPL2012 POST IMPLEMENTATION CHECKLIST AND
FOLLOW-UP TO FPL2012 FULL COMPLIANCE ACTIVITIES**

State	Solution	
	AFTN Terminal – FPL	ATC Automated System – FDP
Anguilla	Implemented	Manual
Antigua and Barbuda	Implemented	Manual
Aruba	Implemented	Implemented
Bahamas	Implemented	Implemented, not operational
Barbados	Implemented	Implemented
Belize	Implemented	Full upgrade planned (converter in use)
Bermuda	Implemented	Manual
British Virgin Islands	Implemented	Manual
Canada	Implemented	Implemented
Cayman Islands	Implemented	Implemented
Costa Rica	Implemented	Full upgrade planned (converter in use)
Cuba	Implemented	Implemented
Curacao	Implemented	Implemented
Dominica	Implemented	Manual
Dominican Republic	Implemented	Implemented
El Salvador	Implemented	Implemented
Grenada	Implemented	Implemented
Guatemala	Implemented	Implemented
French Antilles	Implemented	Implemented
Haiti	Manual	Manual
Honduras	Implemented	Full upgrade planned (converter in use)
Jamaica	Implemented	Full upgrade planned (converter in use)
Mexico	Implemented	Implemented
Montserrat	Implemented	Manual
Netherlands (BES Islands)	Manual	Manual
Nicaragua	Implemented	Implemented
Saint Kitts and Nevis	Implemented	Manual
Saint Lucia	Implemented	Manual
Saint Vincent and the Grenadines	Implemented	Manual
Sint Maarten	Implemented	Implemented
Trinidad and Tobago	Implemented	Implemented
Turks and Caicos Islands	Implemented	Implemented
United States	Implemented	Implemented
COCESNA	Implemented	Implemented

**APPENDIX H
AERONAUTICAL INFORMATION MANAGEMENT (AIM) IMPLEMENTATION
TASK FORCE**

1. Background

During the first ANI/WG meeting, an AIM Implementation Task Force was formed in order to streamline related air navigation implementation activities. This Task Force shall improve AIM regional coordination as well as update and report progress to the ANI/WG based on the action plan for these tasks.

2. Responsibilities

The Task Force is responsible for:

- a) Work Programme Management
- b) Supporting States that have not yet finished the transition to AIM
- c) Supporting States with Phase 2 and Phase 3 implementation of the ICAO AIM Roadmap
- d) Periodically requesting statistics from States to monitor implementation status

3. Working Methods

The Task Force will:

- a) Present its work programme containing activities in terms of objectives, responsibilities, deliverables and timelines
- b) Avoid duplicating work within the ANI/WG and maintain close coordination among the existing entities to optimize use of available resources and experience
- c) Designate, as necessary, Ad hoc Groups to work on specific topics and activities and organize clearly defined tasks and activities
- d) Coordinate tasks to maximize efficiency and reduce costs via electronic means including emails, telephone and teleconference calls, and convene meetings as necessary
- e) Report on and coordinate the progress of assigned tasks to the ANI/WG

4. Membership

Task Force Member- Name:	State/T/IO	email
Denise Silston	Antigua and Barbuda	denisesilston@yahoo.com
Shirley Ford	Barbados	Shirley.Ford@barbados.gov.bb
Gilberto Torres	Belize	giltorres65@gmail.com
Chuck Montgomery	Canada	montgoc@navcanada.ca
Edwin Quiros Vargas	Costa Rica	equiros@dgac.go.cr
Maytte Maciñeira	Cuba	maytte.macineira@iacc.avianet.cu
Maidy Plana		maidy.plana@iacc.avianet.cu
Julio Rodriguez	Dominican Republic	julio.rodriguez@idac.gov.do
Heriberto Sierra	Honduras	hsierra@dgachn.org
Maxine Allen	Jamaica	maxine.allen@jcaa.gov.jm
Manuel Rodríguez Santiesteban	Mexico	mrodsant@sct.gob.mx;
Edgar Gonzalez Flores,		egonzaf@sct.gob.mx;
Juan Martín Fuentes Mancilla		ais_pcr@sct.gob.mx;
Eleane Salguera	Nicaragua	aeronav@inac.gob.ni
Steve Julien	Trinidad and Tabago	sjulien@caa.gov.tt
Christopher Criswell	United States	christopher.criswell@faa.gov
Gregory Pray		Gregory.Pray@faa.gov
Javier Vanegas	CANSO	javier.vanegas@canso.org
José Alfredo Santos Mondragón (Rapporteur)	COCESNA	alfredo.mondragon@cocesna.org

APPENDIX I

TASK FORCE FOR THE IMPLEMENTATION OF AERONAUTICAL INFORMATION MANAGEMENT (AIM)

1. Background

During the first meeting of the ANI/WG, it was agreed to activate a group working for the AIM implementation formed to support and make more efficient the implementation activities AIM in accordance with the road map for the transition from AIS to AIM. This task group will have to improve processes and coordination among States, Territories and international organizations, as well as offer to the regional planning groups and States, practical guidance and advice for the development of implementation strategies of aeronautical information management. On the other hand, propose the tasks that have to be done and corresponding implementation schedule, as well as update and report its progress to the ANI/WG based on the plan of action for these tasks

2. Responsibilities

The Task Force is responsible for:

- a) Management of the work programme
- b) Support States to complete the transition to the AIM
- c) Assisting States with the implementation of Phase 2 and Phase 3 of the ICAO Roadmap, in preparation for the establishment of the System Wide Information Management (SWIM), in consideration of the AIM based on performance
- d) Periodically ask States for data which allows producing statistics to monitor their status of AIM implementation

3. Work Methods

The Task Force:

- a) It shall submit its work programme containing activities in terms of: objectives, responsibilities, deliverables results and times
- b) Prevent duplication of work within the ANI/WG and will maintain close coordination between existing entities to optimize the use of available resources and expertise
- c) Designate if so deemed Ad hoc groups to work on specific activities and issues and organize tasks and clearly defined activities
- d) Coordinate tasks to maximize efficiency and reduce costs through electronic media including emails, phone and teleconferencing, and convene meetings where necessary
- e) It will be notified and will coordinate the progress of the tasks assigned to the ANI/WG

GRUPO DE TAREA PARA LA IMPLEMENTACIÓN DE LA GESTIÓN DE INFORMACIÓN AERONÁUTICA (AIM)

1. Antecedentes

Durante la primera reunión del ANI/WG, se acordó activar un Grupo de Trabajo para la Implementación AIM formado con el fin de apoyar y hacer más eficientes las actividades de implementación AIM de acuerdo con la Hoja de ruta para la transición del AIS al AIM. Este Grupo de Tarea habrá de mejorar los procesos y la coordinación entre los Estados, Territorios y organizaciones internacionales, así como, ofrecer a los grupos de planificación regionales y a los Estados, orientación práctica y asesoramiento para el desarrollo de las estrategias de implantación de la gestión de información aeronáutica. Por otra parte, proponer las tareas que han de realizarse y el calendario de implantación correspondiente, así como actualizar y notificar su avance al ANI/WG con base en el plan de acción para estas tareas.

2. Responsabilidades

El Grupo de Tarea es responsable de:

- a) Gestión del Programa de Trabajo
- b) Apoyar a los Estados para finalicen la transición a la AIM
- c) Apoyar a los Estados con la implementación de la Fase 2 y Fase 3 de la Hoja de Ruta de OACI, en preparación para el establecimiento de Gestión de la información de todo el sistema (SWIM), en consideración de AIM basada en performance
- d) Solicitar periódicamente a los Estados datos que permitan elaborar estadísticas para monitorear su estado de implementación AIM

3. Métodos de trabajo

El Grupo de Tarea:

- a) Presentará su programa de trabajo conteniendo actividades en términos de: objetivos, responsabilidades, resultados entregables y tiempos
- b) Evitará duplicación de trabajo dentro del ANI/WG y mantendrá estrecha coordinación entre las entidades existentes para optimizar el uso de recursos y experiencia disponibles
- c) Designará si así lo considera Grupos Ad hoc para trabajar en temas y actividades específicas y organizar las tareas y actividades claramente definidas
- d) Coordinará las tareas para maximizar eficiencia y reducir costos a través de medios electrónicos incluyendo emails, teléfono y teleconferencias, y convocará reuniones cuando sea necesario
- e) Notificará y coordinará el avance de las tareas asignadas al ANI/WG

Work Programme / Programa de trabajo

AIM TASKFORCE (AIM/TF) / GRUPO DE TAREA AIM
2013-2016

No	Activity Actividad	Objective Objetivo	Responsible Responsable	Deliverable Entregable	Date Fecha	Status Estado
1	Review of the AIM part for updating the draft of the NAM/CAR Regional Performance-Based Air Navigation Implementation Plan (NAM/CAR RPBANIP) Revisión de la parte AIM para la actualización del borrador del Plan de Implementación de navegación aérea basado en la performance para las regiones NAM/CAR (NAM/CAR RPBANIP)	Comply with the requested in the DECISION ANI/WG/1/13 Cumplir con lo solicitado en la DECISIÓN ANI/WG/1/13	ICAO AIM/TF OACI/AIM/TF	Report to ANIWG Informe al ANIWG	15 October 2013	<u>Completed</u> <u>Completada</u>
2	Develop AIM TF work programme Elaborar programa de trabajo del AIM TF	Manage AIM/TF activities Gestionar actividades del AIM/TF	ICAO AIM/TF OACI AIM/TF	Report to ANIWG Informe al ANIWG	31 October 2013	<u>Completed</u> <u>Completada</u>
3	Follow-up progress of amendments of ICAO Annexes 4 and 15, existing and new ICAO Manuals to support digital requirements as eAIP, eCharts, using GIS, etc. Seguimiento a los avances de enmiendas de los Anexos 4 y 15 de OACI, Manuales existentes y nuevos de OACI para soportar los requerimientos digitales como eAIP, cartas aeronáuticas electrónicas, usando GIS, etc.	Comply with the process of introducing and implementing Amendments to Annexes 4 and 15 of the Chicago Convention and related Manuals Cumplir con el proceso de introducción e implementar enmiendas a los Anexos 4 y 15 del Convenio de Chicago y Manuales relacionados	ICAO OACI	Report to ANIWG Informe al ANIWG	2015 2018	<u>Valid</u> <u>Valida</u>
4	Develop a format for progress reports and propose it to the States/Territories/International Organizations Elaborar formato de avance de informes y proponerlo a los Estados/Territorios y Organizaciones Internacionales	Report regularly on the generation and distribution of Integrated Aeronautical Information Package (IAIP) Informar periódicamente sobre la generación y distribución de la Documentación integrada de información Aeronáutica (IAIP)	States AIM/TF Estados AIM/TF	Progress report format Formato de informe de avance	2016	<u>Valid</u> <u>Valida</u>
5	Develop a methodology for the implementation of QMS processes and quality management of the electronic automation in States, Territories and International Organizations that ensures the quality, safety and effectiveness related to the production and distribution of electronic information Desarrollar una metodología para la implementación de los procesos QMS y gestión de la calidad en la automatización electrónica en los Estados, Territorios y Organizaciones Internacionales que asegure la calidad, la seguridad operacional y la efectividad relacionada con la producción y distribución electrónica de la información	Ensure the quality in the aeronautical information management according to requirements of users Asegurar la calidad en la gestión de información aeronáutica de acuerdo a los requerimientos de los usuarios	ICAO AIM/TF OACI AIM/TF	Consultation to States that have QMS, by reference OR NACC ICAO Realizar consulta a Estados que cuentan con QMS, mediante referencia de OR NACC OACI	2016	<u>Valid</u> <u>Valida</u>
6	Advising States in collaboration and coordination of information requirements through a system of domains allowing wide information management in preparation for the implementation of the SWIM, with the contribution of other States and Organizations sharing the experience in taking decisions and progress of its programmes Asesorar a los Estados en la colaboración y coordinación de los requerimientos de información a través de un sistema de dominios permitiendo amplia gestión de información en preparación para la implementación del SWIM, con la contribución de otros Estados y Organizaciones compartiendo la experiencia para la toma de decisiones y avance de sus programas	Assist States, Territories and International Organizations in making appropriate decisions related to current aeronautical information services towards transition to the AIM and define acceptable levels of safety and performance Asistir a los Estados, Territorios y Organizaciones Internacionales con la toma de decisiones apropiadas relacionada con los servicios actuales de información aeronáutica hacia la transición a la AIM y definir los niveles aceptables de seguridad y performance	ICAO AIM/TF OACI AIM/TF	Prepare periodic Bulletins Elaborar boletines periódicos	2015 2018	<u>Valid</u> <u>Valida</u>

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No	Activity Actividad	Objective Objetivo	Responsible Responsable	Deliverable Entregable	Date Fecha	Status Estado
7	<p>Coordinate activities such as Workshops and Seminars to train human resources in the interpretation and application of new SARPS and technological advances that provide the framework for an interoperable Global System.</p> <p>Coordinar actividades como Talleres y Seminarios para capacitar al Recurso Humano en la interpretación y aplicación de nuevos SARPS y avances tecnológicos que proporcionen el marco para un sistema Global interoperable</p>	<p>Assist States, Territories and International Organizations with the process of transition to AIM, in order to implement ICAO standards to establish a harmonized operating environment performance-based</p> <p>Asistir a los Estados, Territorios y Organizaciones Internacionales con el proceso de transición a AIM, con el fin de implementar las Normas de la OACI para establecer un entorno operativo armonizado basado en el performance</p>	<p>ICAO AIM/TF</p> <p>OACI AIM/TF</p>	<p>Perform a Seminar or Workshop</p> <p>Realizar Seminario o Taller</p>	<p>20162018</p>	<p>Valid</p> <p>Valida</p>
8	<p>Encourage the adoption of cooperation agreements between NOTAM offices (NOF), and the update of contingency plans (for weather events and/or volcanic) in harmonization with ATM contingency plans</p> <p>Incentivar la adopción de convenios de cooperación entre oficinas NOTAM (NOF) y la actualización de planes de contingencia (por eventos climatológicos y/o vulcanológicos) en armonización con los planes de contingencia ATM</p>	<p>Develop AIM to support the Air traffic management operational concept; including NOTAM contingency plans</p> <p>Desarrollar AIM para apoyar el Concepto Operacional de Gestión del Tránsito Aéreo; incluyendo los planes de contingencia NOTAM</p>	<p>ICAO AIM/TF</p> <p>OACI AIM/TF</p>	<p>Generate support through reference OR. NACC. ICAO</p> <p>Generar apoyo mediante referencia de OR NACC OACI</p>	<p>20152018</p>	<p>Valid</p> <p>Valida</p>
9	<p>Consult the experience of States in the acquisition of integrated solutions to provide guidance and assistance to the States to implement a performance-based approach</p> <p>Consultar la experiencia de los Estados en la adquisición de soluciones integradas para brindar orientación y ayuda a los Estados para implementar un enfoque basado en performance</p>	<p>Ensure that AIM solutions should be harmonized and integrated at a regional and international level, in preparation for the SWIM implementation</p> <p>Asegurar que las soluciones AIM se armonicen e integren a nivel regional e internacional, en preparación para la implementación del SWIM</p>	<p>ICAO AIM/TF</p> <p>OACI AIM/TF</p>	<p>Make consult through reference OR NACC ICAO</p> <p>Realizar consulta mediante referencia de OR NACC OACI</p>	<p>20162020</p>	<p>Valid</p> <p>Valida</p>
10	<p>Coordinate activities such as Workshops and Seminars to train human resources and in the eTOD topic</p> <p>Coordinar actividades como Talleres y Seminarios para capacitar al Recurso Humano y en el tema eTOD</p>	<p>Share experiences and resources in the implementation of the eTOD through the establishment of an eTOD Regional Working Group</p> <p>Compartir experiencias y recursos con la implementación del eTOD a través del establecimiento de un Grupo de Trabajo Regional eTOD</p> <p>Implement technical ICAO Doc 9881 requirements, as required</p> <p>Implementar requerimientos técnicos del Doc 9881 de la OACI, según sea necesario</p>	<p>ICAO AIM/TF</p> <p>OACI AIM/TF</p>	<p>Perform Seminar or Workshop</p> <p>Realizar Seminario o Taller</p>	<p>20162015</p>	<p>Completed</p> <p>Completada</p>
11	<p>Develop a format for progress reports and propose it to the States/Territories/International Organizations</p> <p>Elaborar formato de avance de informes y proponerlo a los Estados/Territorios y Organizaciones Internacionales</p>	<p>Report requirements and monitor the status of eTOD implementation using electronic media to the ICAO NACC Regional Office</p> <p>Reportar requerimientos y monitorear el estado de implementación del eTOD usando medios electrónicos a la Oficina Regional NACC de la OACI</p>	<p>ICAO AIM/TF</p> <p>OACI AIM/TF</p>	<p>Progress report format</p> <p>Formato de informe de avance</p>	<p>20162015</p>	<p>Completed</p> <p>Completada</p>
12	<p>Develop a format for progress reports and propose it to the States/Territories/International Organizations</p> <p>Elaborar formato de avance de informes y proponerlo a los Estados/Territorios y Organizaciones Internacionales</p>	<p>Develop an agreement of high-level management of a nationwide Et OD programme</p> <p>Desarrollar un acuerdo de alto-nivel para gestión de un programa nacional eTOD</p>	<p>ICAO AIM/TF</p> <p>OACI AIM/TF</p>	<p>Agreement format</p> <p>Formato de acuerdo</p>	<p>20162018</p>	<p>Valid</p> <p>Valida</p>

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13	<p>Provide and promote the aeronautical information management implementing exchange and conceptual models</p> <p>Proporcionar y promover la gestión de información aeronáutica implementando modelos conceptuales y de intercambio</p>	<p>Assist States, Territories and International Organizations in the implementation of the AICM and the AIXM</p> <p>Asistir a los Estados, Territorios y Organizaciones Internacionales en la implementación del AICM y el AIXM</p>	<p>ICAO AIM/TF</p> <p>OACI AIM/TF</p>	<p>Perform Seminar or Workshop</p> <p>Realizar Seminario o Taller</p>	<p>20162015</p>	<p>Completed</p> <p>Completada</p>
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APPENDIX J
AIM PROGRESS
PHASE 1

Phase 1 Consolidation				
State	P-03 AIRAC	P-04 (EFOD)	P-05 WGS84	P-17 QMS
Antigua and Barbuda	1	1	1	2
Bahamas	1	2	1	3
Barbados	1	1	1	2
Belize	1	1	1	2
Canada	1	1	1	1
Costa Rica	1	1	1	1
Cuba	1	1	1	1
Dominican Republic	1	1	1	1
El Salvador	1	1	1	2
Grenada	1	3	1	pending status
Guatemala	1	1	1	1
Haiti	3	3	1	3
Honduras	1	1	1	1
Jamaica	1	1	1	2
Mexico	1	1	1	1
Nicaragua	1	1	1	1
Saint Kitts and Nevis	1	1	1	3
Saint Lucia	1	1	1	2
Saint Vincent and the Grenadines	1	1	1	3
Trinidad and Tobago	1	1	1	1
United States	1	1	1	1
COCESNA	1	0	0	1
French Territories				
Guadeloupe	1	1	1	1
Martinique	1	1	1	1
St. Barthélemy	1	1	1	1
Netherlands Territories				
Aruba	1	1	1	3
Curaçao	1	1	1	2
St. Maarten	1	1	1	pending status
Bonaire	1	1	1	pending status
Saba	1	1	1	pending status
St. Eustatius	1	1	1	pending status
UK Territories				
Anguilla	1	1	1	2

Phase 1 Consolidation				
State	P-03 AIRAC	P-04 (EFOD)	P-05 WGS84	P-17 QMS
Bermuda	1	1	1	pending status
British Virgin Islands	1	1	1	2
Cayman Islands	1	1	1	pending status
Montserrat	1	1	1	2
Turks and Caicos Islands	1	1	1	pending status
US Territories				
Puerto Rico	1	1	1	1
Virgin Islands	1	1	1	1

ASBU Module B0-DAIM – PoS Declaration AIM Target

Target: 100% of Aeronautical Information Services (AIS) to implement AIM Roadmap – Phase I required elements by December 2016

Phase 1	Phase 1
P-03 — AIRAC adherence monitoring P-04 — Monitoring of States’ differences to Annex 4 and Annex 15 P-17 — Quality	P-05 — WGS-84 implementation

		P-03 AIRAC	
Instructions for completing the table:		Count	Percentage no segmented
FC= 1	Fully Compliant	38	97.43%
PC= 2	Partially Compliant	0	0.00%
NC= 3	Not Compliant	1	2.56%
N/A= 0	Not Applicable	0	0

		P-04 (EFOD)	
Instructions for completing the table:		Count	Percentage no segmented
FC= 1	Fully Compliant	34	87.18%
PC= 2	Partially Compliant	1	2.56%
NC= 3	Not Compliant	3	7.69%

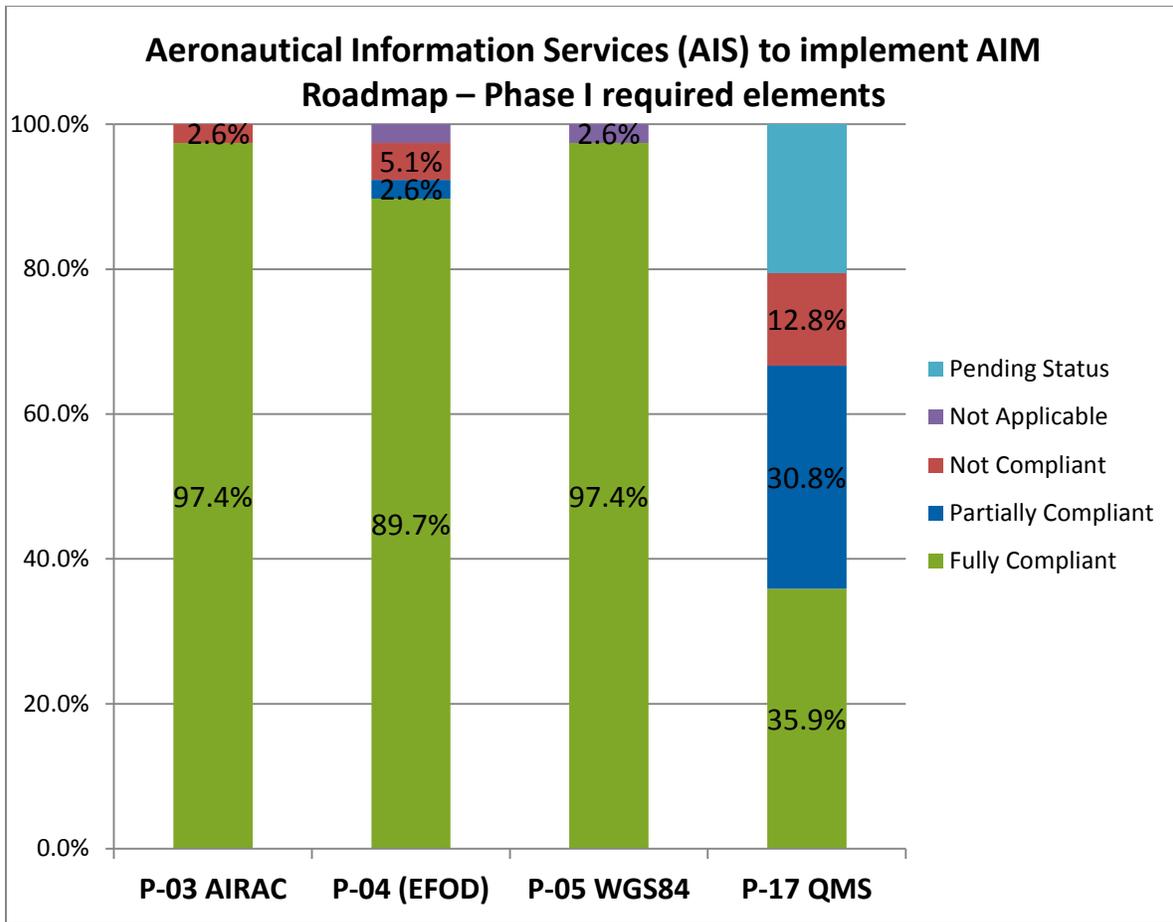
N/A= 0	Not Applicable	1	2.56%
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Instructions for completing the table:		P-05 WGS84	
		Count	Percentage no segmented
FC= 1	Fully Compliant	38	10.25%
PC= 2	Partially Compliant	0	56.41%
NC= 3	Not Compliant	0	33-33%
N/A= 0	Not Applicable	1	2.56%

Instructions for completing the table:		P-17 QMS	
		Count	Percentage no segmented
FC= 1	Fully Compliant	14	35.89%
PC= 2	Partially Compliant	12	30.76%
NC= 3	Not Compliant	5	12.82%
N/A= 0	Not Applicable	0	0
PS/=4	Pending Status	8	20.51%

Phase 1 = 25% (full AIRAC)+ 25% (Full eFOD)+ 25% (Full WGS84) + 25% (Full QMS)

**Phase 1 status=
79.49%**



APPENDIX K

Update: May 2015														CAR Region AMHS Implementation Matrix													
Administr ation	STATUS	System Description					System implementation milestones					(COM CHART) Connecti on with	POC	Remarks													
		Location of Facility	AMHS Facility Type	AMHS Vendor	Curre nt Facili ty Type	Current Vendor	AMHS System Procure ment Date	AMHS System Implement ation Date	AMHS Interopera bility Test	AMH S Servi ce Cuto ver																	
Aruba	Under Study	Aruba										United States	Joselito Andrade	5-2015 In the process of changing AFTN PAD. No projected date for AMHS													
Bahamas		Nassau					1Q2011 mtg FAA Feb11	Jun 2011	Jun2011 begin testing			United States	Hillard Walker	Q2 2011: will engage an Isode Integrator to provide an AMHS solution 5-2015 No recent updates													

Update: May 2015													CAR Region AMHS Implementation Matrix												
Cayman Islands	Establishment of Testing Circuit	Grand Cayman	MTA + UA	Frequency	AFT N switch	Frequency	end 1Q2011	4Q 2014	2Q2015	TBD	United States	Wayne DaCosta	5-2015 System implemented but not operational. Interoperability testing in process 4-16 Testing has been suspended until further notification from Cayman												
Dominican Republic	Implemented	Santo Domingo	AMHS - MTA/UAs	Ubitech	AFT N Switch		already	Jan2011	May 2012	Sep 2012	United States	Fernando Casso	Originally implemented on MEVA II. Successfully transitioned to MEVA III												

Update: May 2015													CAR Region AMHS Implementation Matrix												
Cuba	Interoperability Testing in process	La Habana	AMHS - MTA/UAs	ISODE/In-house	AFT N Switch	Own system	N/A	TBD	2014Q4 - 2015Q2	-Sept 2015	United States	Carlos Jimenez y Layla Rodriguez, Carme n de Armas	5 2015Parts of the Interoperability Testing was performed over a test circuit on MEVA II; Testing resumed once the test cicuit was migrated to MEVA III												
Haiti	Under Study	Port-au-Prince	TBD	TBD	AFT N User	DSA	10/15	03/16	05/16	09/16	United States	Emmanuel Jacques	06/15 - Current vendor needs to be verify. Updated system implementation milestone												

Update: May 2015														CAR Region AMHS Implementation Matrix													
COCESNA	System Implemented- ready for testing	Tegucigalpa	AMHS Gateway	ISODE/In-house	AFT N Switch	COCESNA	N/A	TBD	TBD	TBD	Belize - MTA	Mayda Avila	5-15 Testing with FAA on hold pending notification from COCESNA pending notification from COCESNA														
								TBD	TBD	TBD	Guatemala - MTA	Oscar Villela															
								1Q 2013	1Q 2013	1Q 2013	Managua - MTA																
								TBD	1Q 2013	TBD	Mexico - MTA																
								TBD	TBD	TBD	San Jose - MTA																
								1Q 2013	1Q 2013	1Q 2013	San Pedro Sula - MTA																
								TBD	TBD	TBD	San Salvador - MTA																
								1Q2011	Jun 2012	Sep 2012	United States																

Update: May 2015													
CAR Region AMHS Implementation Matrix													
Jamaica	System Implemented -ready for testing	Kingston	AMHS G/W	TBD	AFT N Switch	TBD	Q2-2012		Aug 2012	Oct 2012	United States	Derrick Grant	5-15 No updates 4-16 Updating ATN system, Completion projected for end of 2017.
Mexico	Coordination initiated	Mexico									Centro-America United States		5 2015 Initiated coordination with SENEAM 4-16 No updates provided at this time.
Curacao	Scheduled for testing	Curacao	AMHS MTA	Ubitech	AMHS System	Ubitech	May 2012	Jul 2012	Sept 2015	Feb 2016	Caracas-MTA	Jean Baptiste Getrouw	5-15 no updates
Trinidad and Tobago	Implemented- for testing	Port-of-Spain	AMHS MTA/UAs/ Gateway	Comsoft	AFT N Switch	Comsoft	Apr 2012	Sep 2012	Sep 12	Sep 12	Anguilla	Veronica Ramdath	5-15 Interoperability testing in process

Update: May 2015													CAR Region AMHS Implementation Matrix												
										Sep 12	Sep 12	Antigua	Randy Gomez	6-1-15 Testing to continue after MEVA III implementation. FAA to start coordination with T&T the week of 8 June 2015. End-to-end Testing will be coordinated in segment. 4-16 Interoperability testing in progress. 80% completed											
										Sep 12	Sep 12	Barbados -UA													
										Oct 2012		Caracas-MTA													
										Sep 12	Sep 12	Dominica - UA													

Update: May 2015														CAR Region AMHS Implementation Matrix													
	In Interoperability Testing									Sep 12	Sep 12	Fort-de-France-UA															
										Sep 12	Sep 12	Georgetown-UA															
										Sep 12	Sep 12	Grenada-UA															
										Sep 12	Sep 12	Montserrat-UA															
										Sep 12	Sep 12	Pointe-a-Pitre-MTA															
										Sep 12	Sep 12	Saint Kitts and Nevis-UA															
										Sep 12	Sep 12	Saint Lucia-UA															
										Sep 12	Sep 12	Saint Vincent-UA															
										2015Q2	TBD	United States															
Turks and Caicos	Scheduled for testing	Providenciales	MTA	Stonefield Sys	AFT N Term	Stonefield Sys	1Q 2012	2Q 2012	Feb 2013	Mar 2013	United States	Emmanuel Rigby John T. Smith	5 2015 No updates														

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Update: May 2015													
CAR Region AMHS Implementation Matrix													
Sint Maarten	Coordinati on Initiated		AMHS MTA	IDS	AFT N Swit ch		2014Q1		2015Q3	TBD	United States	Lloyd Hinds	Project to resume after implementation of MEVA III
United States		Atlanta	AMHS G/W	U.S.A.	AFT N Swit ch	U.S.A.	now	now			Aruba Brazil Caracas Cayman Centro America Curazao Grand Turk La Habana Kingston Lima Mexico Nassau-S Panama Port-au-Prince Port-of-Spain Saint Maarten Santa Domingo Tortola	Dulce Roses	5-15 see notes

APPENDIX L
NAM/CAR RPBANIP AIR NAVIGATION TARGETS

Based on RPBANIP ver 3.1

Red text: POS Declaration Targets

Updated: Dec 2015 for Council WP

ASBU B0 Module	Element	Targets	Progress up to December 2015
B0-10/FRTO: Improved Operations through Enhanced En-Route Trajectories	1. Airspace Planning	100% of States to have completed a PBN plan by Dec. 2018	90%
	2. Flexible Use Airspace	50% of selected segregated airspaces available for civil operations by Dec. 2016	40%
B0-15/RSEQ: Improve Traffic Flow Through Runway Sequencing (AMAN/DMAN)	3. AMAN And Time-Based Metering	10% of selected aerodromes with AMAN and time based metering by Dec. 2016	Not available- under development
	4. Departure Management (DMAN)	10% of selected aerodromes with DMAN by Dec. 2016	Not available- under development
	5. Movement Area Capacity Optimization	20% of selected aerodromes with Airport-capacity calculated by Dec. 2016	10%
B0-40/TBO: Improved Safety and Efficiency through the initial application of En-Route Data Link	6. ADS-C Over Oceanic and Remote Areas	80% of selected FIRs with ADS-C implemented by December 2016	38.5 %
	7. CPDLC	80% of selected FIRs with CPDLC implemented by June 2018	75 %
B0-65/APTA: Optimization of Approach Procedures Including Vertical Guidance	8. APV with Baro VNAV	80% of instrument runways to have APV with Baro VNAV implemented by December 2016 – Service Providers and users	65.2%
	9. APV with SBAS (WAAS)	20% of instrument runways to have APV with SBAS/WAAS implemented by December 2018– Service Providers and users	28.2%
	10. APV with GBAS	20% of instrument runways to have APV with GBAS by December 2018 – Initial implementation at some States (services providers)	28.2%
	11. LNAV	60% of instrument runways to have LNAV procedure implemented by December 2016 – Service Providers and users as per Assembly Resolution A37-11	79.9%
B0-75/SURF Safety and Efficiency of Surface Operations (A-SMGCS Level 1-2)	12. Surveillance System for Ground Surface Movement (PSR, SSR, ADS B or Multilateration)	30% of selected aerodromes with SMR/ SSR Mode S/ ADS-B/ Multilateration for ground surface movement by June 2018 States/airport operator	Not available- under development

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ASBU B0 Module	Element	Targets	Progress up to December 2015
	13. On-board Surveillance Systems (transponder with ADS-B capacity)	20% of aircraft on the NAM/CAR State registries to have surveillance system on board (SSR transponder, ADS B capacity) by June 2018 Aircraft operators	Not available- under development
	14. Vehicle Surveillance Systems	20% of vehicles at selected aerodromes with a cooperative transponder systems by June 2018 Vehicle operators	Not available- under development
	15. Visual Aids for Navigation	70% of selected aerodromes complying with visual aid requirements as per Annex 14 by December 2015 States/Airport operators	Not available- under development
	16. Aerodrome Bird/Wildlife Organization and Control Programme	70% of selected airports with an aerodrome bird/wildlife organization and control programme by December 2018 Airport operators	Not available- under development
B0-80/ACDM Improved Airport Operations through Airport - CDM	17. Airport – CDM	60% of selected aerodromes with Airport-CDM by Dec. 2018 – Airport Operator, Stakeholders	Not available- under development
	18. Aerodrome Certification	48% of international aerodromes to be certified in the CAR Region by December 2016– State CAA	34.46%
	19. Heliport Operations	30% of selected Heliports with operational approval by Dec. 2018 – State CAA	Not available- under development
B0-84/ASUR: Initial Capability for Ground Surveillance	20. Implementation of ADS-B	30% of selected aerodromes with ADS-B implemented by Dec 2018	0 %
	21. Implementation of Multilateration	80% of multilateration system implemented in selected aerodromes by June 2018	0%
B0-101/ACAS: ACAS Improvements	22. ACAS II (TCAS Version 7.1)	10% of aircraft on NAM/CAR State registries equipped with ACAS II (TCAS Version 7.1) by Dec 2018	Not available- under development
B0-102/SNET: Increased Effectiveness of Ground-Based Safety Nets	23. Short-term Conflict Alert Implementation (STCA)	80% of selected ATS units with ground based safety nets (STCA) implemented by Dec 2015	Not available- under development
	24. Area Proximity Warning (APW)/ Minimum Safe Altitude Warning (MSAW)	70% of selected ATS units with ground based safety nets (APW) implemented / 70% of selected ATS units with ground based safety nets (MSAW) implemented by Dec 2015	Not available- under development
	25. Medium-term Conflict Alert (MTCA)	80% of selected ATS units with ground based safety nets (MTCA) implemented by Dec 2016	Not available- under development

ASBU B0 Module	Element	Targets	Progress up to December 2015
B0-105/AMET: Meteorological Information Supporting Enhanced Operational Efficiency and Safety	26. WAFS	100% of States implementation of WAFS Internet File Service (WIFS) by December 2014	100 %
	27. IAVW	70% of MWOs with IAVW procedures implemented by December 2014. Volcanic Ash Advisory Centre, Washington USA and VAAC Montréal, Montréal, Canada	77.78 %
	28. Tropical Cyclone Watch	100% of MWOs with tropical cyclone watch procedures implemented by December 2014. Tropical Cyclone Advisory Centre, Miami, USA	100 %
	29. Aerodrome Warnings	50% of selected aerodromes/AMOs with Aerodrome warnings implemented by December 2014	Not available- under development
	30. Wind Shear Warnings and Alerts	20% of selected aerodromes/AMOs with wind shear warnings procedures implemented (MET provider services) by December 2015	Not available- under development
	31. SIGMET	90% of selected aerodromes/MWOs with SIGMET procedures implemented (MET provider services) by Dec. 2014	87.50 %
B0-25/FICE: Increased Interoperability, Efficiency and Capacity through Ground-Ground Integration	32. MEVA III IP Network Implementation	100% implementation of MEVA III IP Network by MEVA Member States by August 2015	9.33%
	33. AMHS Implementation	4 States with Air Traffic Services Message Handling Services (AMHS) interconnected with other AMHS by December 2014	3
	34. AIDC Implementation	50% of FIRs within which all applicable ACCs have implemented at least one interface to use AIDC/OLDI with a neighbouring ACC by December 2016	81.82% (NAM/CAR) 42.86% (CAR)
	35. ATN Router Structure Implementation	70% of ATN router structure implemented by June 2016	50 %
B0-30/DAIM: Service Improvement through Digital Aeronautical Information Management	36. QMS - AIM	100 % of States QMS Certified by Dec.2016	35.89%
	37. e.TOD Implementation	10 % of States e-TOD Implemented by Dec.2018	Not available- under development
	38. AIXM 5.1 Implementation	40 % of States with AIXM 5.1 implemented by Dec.2018	18 %
	39. e-AIP Implementation	45 % of States with e-AIP implemented by Dec.2018	10.3%

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ASBU B0 Module	Element	Targets	Progress up to December 2015
	40. Digital NOTAM	35 % of States with Digital NOTAM implemented by Dec. 2018	2.56 %
B0-35/NOPS: Improved Flow Performance through Planning Based on a Network-Wide View	41. Air Traffic Flow Management	100% of FIRs within which all ACCs have ATFM measures available by Dec. 2018	Not available- under development
B0-05/CDO: Improved Flexibility and Efficiency in Continuous Descent Operations (CDOs)	42. CDO implementation	50% of selected. Aerodromes with continuous descent operations (CDO) implemented by Dec.2016	30%
	43. PBN STARs	80% of selected. Aerodromes with PBN STARs implemented by Dec.2016	60%
B0-20/CCO: Improved Flexibility and Efficiency Departure Profiles - Continuous Climb Operations (CCOs)	44. CCO Implementation	60 % of selected aerodromes with continuous climb operations (CCO) implemented by Dec.2016	30%
	45. PBN SIDs Implementation	60% of selected aerodromes with PBN SIDs implemented by Dec.2016	60%
	Results from 36-40	100% of Aeronautical Information Services (AIS) to implement AIM Roadmap – Phase I required elements by December 2016	79.49%
PBN related- RPBANIP environmental target	Result form PBN- IFSET	Reduce Regional CO2 emissions by 40,000 tons per year through PBN implementation by December 2016	Not available- under review in PBN implementation

— END —