



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

**SECOND NAM/CAR AIR NAVIGATION
IMPLEMENTATION WORKING GROUP MEETING
(ANI/WG/2)**

FINAL REPORT

PUNTARENAS, COSTA RICA, 1 TO 4 JUNE 2015

Prepared by the Secretariat

June 2015

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HISTORICAL

ii.1 Place and Date of the Meeting

The Second NAM/CAR Air Navigation Implementation Working Group Meeting (ANI/WG/2) was held at the DoubleTree Hotel by Hilton in Puntarenas, Costa Rica, from 1 to 4 June 2015.

ii.2 Opening Ceremony

Mr. Julio César Siu, Regional Officer, Communications Navigation and Surveillance of the North American, Central American and Caribbean (NACC) Regional Office of the International Civil Aviation Organization (ICAO) emphasized on the follow-up of the ANI/WG activities, implementation support and achievement of the NAM/CAR Regional Performance-Based Air Navigation Implementation Plan (RPBANIP) and Port-of-Spain Declaration (POS) targets, as well as monitoring and air navigation progress report and the ANI/WG participation on the “No Country Left Behind” (NCLB) campaign, and thanked the “Dirección General de Aviación Civil” (DGAC) from Costa Rica for hosting the meeting. Mr. Julio Mejia, ANI/WG Chairman, described the works to be carried out and the expected deliverables for this ANI/WG/2 Meeting and the achievement of the implementation operative benefits. Mrs. Gianella Baltodan, Deputy General Director, DGAC Costa Rica, welcomed the participants and officially opened the meeting.

ii.3 Officers of the Meeting

The ANI/WG/2 Meeting was chaired by the ANI/WG Chairperson, Mr. Julio Mejia, in plenary. Mr. Julio César Siu, Regional Officer, Communications Navigation and Surveillance served as Secretary of the Meeting, assisted by Mr. Raul Martinez, Regional Officer, Aeronautical Information Management, and Mr. Carlos Gonzalez, Regional Officer, Air Traffic Management, all 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, discussion papers and report of the meeting were available to participants in both languages.

ii.5 Schedule and Working Arrangements

It was agreed that the working hours for the plenary sessions of the meeting would be from 09:00 to 16:30 hours daily with adequate breaks. Task Forces Meetings were conducted. Ad hoc Groups were created during the Meeting to do 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/1 and Conclusions from the E/CAR/CATG, NACC/WG/4, NACC/DCA/5, GREPECAS/17 and other DCA WG Meetings

Agenda Item 3 Global/Regional Air Navigation Developments

- 3.1 Port-of-Spain Declaration
- 3.2 First Annual Global Air Navigation Report and Regional Performance Dashboards
- 3.3 ICAO relevant Standards and Recommended Practices (SARPs) updates
- 3.4 electronic Air Navigation Plan (eANP) development
- 3.5 Other Global/Regional Air Navigation Developments

Agenda Item 4 Follow-up on the NAM/CAR Regional Performance Based Air Navigation Implementation Plan (NAM/CAR RPBANIP)

- 4.1 Progress reports of the Task Forces and the ANI/WG
- 4.2 National Plans Reports on Aviation System Block Upgrade (ASBU) (AIM, ATM and CNS)

Agenda Item 5 Performance Monitoring of Air Navigation Systems

- 5.1 Air Navigation Report Form (ANRF) review-regional level
- 5.2 Progress report by States

Agenda Item 6 Human Factor and Training Issues

Agenda Item 7 Terms of Reference (ToRs) and Work Methodology Review

Agenda Item 8 Other Business

ii.7 Attendance

The Meeting was attended by 12 States/Territories from the NAM/CAR Regions, 3 International Organizations and the Industry, totalling 48 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).

List of Draft Conclusions

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2/2	COORDINATION FOR UPDATED VERSION OF THE ICAO WRC-2015 POSITION	3-4
2/3	IMPROVEMENT OF THE EFFECTIVENESS OF THE PBN TASKFORCE	4-3
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2/17	AMHS IMPLEMENTATION PROCESS IN THE CAR REGION	4-15
2/18	CPDLC/ADS-C IMPLEMENTATION GUIDANCE AND CONSIDERATIONS	4-16
2/19	GOLD TASK FORCE DISBANDMENT	4-16
2/20	ADOPTION OF NEW ANRF AND REPORTING APPROACH TO ASBU IMPLEMENTATION	5-3
2/21	APPROVAL OF ANI/WG TERMS OF REFERENCE AND WORKPROGRAMME	7-1

List of Decisions

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2/1	MEETING/ WORKSHOP ON ATM, AIM AND MET COORDINATION	2-1
2/10	AMENDMENT TO ADS_B/IMP/2 MEETING REPORT	4-10

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

ii.9 List of Working, Information and Discussion Papers

Refer to the Meeting web page:

<https://authoring2010.icao.int/NACC/Pages/meetings-2015-aniwg2.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	27/04/15	Secretariat
NE/02	2	Conclusiones/Decisiones Validas de la Reunión ANI/WG/1 (<i>available only in Spanish</i>)	22/05/15	ANI/WG Chairman
WP/03	3.1	Port-of-Spain (POS) Declaration and the ICAO NACC Regional Office Strategy for supporting the “No Country Left Behind” (NCLB) campaign	13/05/23	Secretariat
WP/04	3.4	New Electronic Regional Air Navigation Plan (eANP) Template and Procedures for Amendments	27/04/15	Secretariat
NE/05	4.1	Avances del grupo de Trabajo sobre Implementación de Navegación Aérea Para las Regiones NAM/CAR (ANI/WG) (<i>available only in Spanish</i>)	29/05/15	ANI/WG Chairman
WP/06	4.1	Preliminary Progress report by PBN Task Force	26/05/15	PBN Task Force Rapporteur
WP/07	4.1	ANI/WG ATFM Implementation Task Force Progress Report	28/05/15	ATFM Task Force Rapporteur
WP/08	4.1	Preliminary Progress Report of the AIDC Task Force	22/05/15	AIDC Task Force Rapporteur
WP/09	4.1	Report of Progress of the Task Force ADS-B to ANI/WG	21/05/15	ADS-B Task Force Rapporteur
WP/10	4.1	Preliminary Progress Report of the AIM Task Force	19/05/15	AIM Task Force Rapporteur
WP/11	4.1	Aeronautical Message Handling System (AMHS) Task Force Report	22/05/15	AMHS Task Force Rapporteur
WP/12	4.1	ANI/WG GOLD (CPDLC/ADS-C) Implementation Task Force Progress Report	29/05/15	GOLD Task Force Rapporteur
WP/13	5.1	Review of the existing Air Navigation Reporting Forms (ANRFs)	26/05/15	Secretariat
WP/14	5.2	Proposal to modify Air Navigation Reporting Form	26/05/15	Canada and United States

WORKING PAPERS

Number	Agenda Item	Title	Date	Prepared and Presented by
WP/15	4.1	Support to the Implementation on Air Navigation Issues on Behalf of the Technical Cooperation Regional Project– Implementation of Performance-Based Air Navigation systems for the CAR Region (RLA/09/801)	26/05/15	Secretariat
WP/16	4.1	Global Navigation Satellite System (GNSS) Activities in support of Performance-Based Navigation (PBN)/Automatic Dependent Surveillance – Broadcast (ADS-B) implementation	29/05/15	Secretariat
WP/17	7	Review of the Terms of Reference and Work Programme of the NAM/CAR Air Navigation Implementation Working Group (ANI/WG)	22/05/15	ANI/WG Chairman
WP/18	3.5	Unmanned Aircraft System (UAS) and Remote Piloted Aircraft System (RPAS)	25/05/15	Secretariat
WP/19	----	Cancelled	---	----
WP/20	3.5	ICAO Position for the International Telecommunication Union (ITU) World Radiocommunication Conference (WRC-2015)	27/04/15	Secretariat
WP/21	4.1	RAIM Prediction	28/05/15	DW International
WP/22	4.1	Follow-up on the implementation of the NAM/CAR Regional Performance Based Air Navigation Plan (RPBANIP) in the Eastern Caribbean: Progress report of the Fifth Eastern Caribbean Network Technical Group Meeting (E/CAR/NTG/5) and Third Eastern Caribbean Radar Data Sharing Group Meeting (E/CAR/RD/3)	26/05/15	E/CAR/NTG- E/CAR/RD Rapporteur
WP/23	4.1	FPL Monitoring Group Progress Report	22/05/15	AIDC Task Force Rapporteur
WP/24	4.1	Implementation of Annex 15, Chapter 11 Aerodrome Mapping Data	22/04/15	Secretariat
WP/25	4.1	Report of E/CAR/CATG	27/05/15	Chairperson of the E/CAR/CATG
WP/26	4.1	Miami air route traffic control center, Miami high sector 40: improving operations	27/05/15	United States
WP/27	4.1	Reduction and harmonization of the Longitudinal Separation Minima in the CAR/NAM FIR's boundaries	27/05/15	IATA
WP/28	4.1	Need of adopting a Collaborative Focus on the Airspace Management in the Common Boundary of Havana and Miami FIR by the Impact of Hazardous Areas in North Latitude 2400	28/05/15	Cuba

INFORMATION PAPERS				
Number	Agenda Item	Title	Date	Prepared and Presented by
IP/01	---	List of Working and Information Papers	29/05/15	Secretariat
IP/02	2	Review to Valid NACC/WG/4 and E/CAR/CATG/1 Meetings Conclusions related to the ANI/WG	22/05/15	Secretariat
IP/03	2	Relevant Valid Conclusions/Decisions from the NACC/DCA/5, GREPECAS/17 Meetings and other DCAs Meetings	25/05/15	Secretariat
IP/04	3.2	First Annual Global Air Navigation Report and Regional Performance Dashboards	22/05/15	Secretariat
IP/05	3.3	Doc 9981 - Procedures for Navigation Services – Aerodromes (PANS-AGA), First Edition	13/05/15	Secretariat
IP/06	3.5	Mini-Global Project Demonstrations	25/05/15	United States
IP/07	8	International Civil Aviation Organization (ICAO)/United Nations Office of Outer Space Affairs (UNOOSA) Aerospace Symposium	20/04/15	Secretariat
IP/08	4.1	Study of an own Satellite Based Augmentation System (SBAS) for the CAR/SAM Regions - Project RLA/03/902– Transition to GNSS/SBAS in the CAR/SAM Regions - Augmentation Solution for the CARIBBEAN, Central And South America - (SACCSA) – Phase III	27/04/15	Secretariat
IP/09	4.1	Procedures for Air Navigation for Aeronautical Information Management (PANS-AIM)	29/05/15	Secretariat
IP/10	6	Results of the Second NAM/CAR Civil Aviation Training Centres Working Group Meeting (NAM/CAR/CATC/WG/2) and activities carried out by the Training Task Force	25/05/15	Secretariat
IP/11	8	Collaborative Arrangement for the Prevention and Management of Public Health Events in Civil Aviation (CAPSCA)	12/05/15	Secretariat
IP/12	4.1	FAA Wide Area Augmentation System (WAAS) status update	26/05/15	United States
IP/13	4.2	U.S. Implementation of the Aviation System Block Upgrades (ASBU) Block 0 modules	25/05/15	United States
IP/14	3.1	Regional Aviation Safety Group — Pan America (RAGS-PA)	19/05/15	Secretariat
IP/15	4.1	MEVA III Network Implementation Overview	22/05/15	MEVA TMG Coordinator
IP/16	4.1	Operational use of CPDLC and ADS-C in Trinidad and Tobago	28/05/15	Trinidad and Tobago
IP/17	4.1	AIM Roadmap implementation Progress in the Republic of Cuba	25/05/15	Cuba
NI/18	4.2	Implementación en Cuba del Plan Regional NAM/CAR de Implementación de Navegación Aérea Basada en la Performance (RPBANIP) y el Bloque 0 de la Metodología de Mejoras por Bloques del Sistema de la Aviación (ASBU) <i>(available only in Spanish)</i>	26/05/15	Cuba

INFORMATION PAPERS

Number	Agenda Item	Title	Date	Prepared and Presented by
IP/19	8	ICAO Second High-Level Safety Conference (HLSC) 2015	27/05/15	Secretariat
IP/20	4.1	United States offshore Caribbean airspace operations improvement	27/05/15	United States
IP/21	4.2	State industry collaborative process for the transition from current systems to those specified in the Aviation System Block Upgrade (ASBU)	27/05/15	IATA and RTCA
IP/22	4.1	PBN implementation progress in Haiti	27/05/15	Haiti
IP/23	4.1	Collaborative decision making (CDM) in procedure designing in Haiti	27/05/15	Haiti
IP/24	4.2	Improvement in Air Navigation Communication between the FIRS of PIARCO and Dakar	29/05/15	Trinidad and Tobago

DISCUSSION PAPERS

Number	Agenda Item	Title	Date	Prepared and Presented by
ND/01	4.1	Avances del Grupo de Trabajo sobre implementación de navegación aérea para las regiones NAM/CAR (ANI/WG) <i>(available only in Spanish)</i>	03/06/15	ANI/WG Chairman
DP/02	4.1	Preliminary progress report by PBN Task Force	03/06/15	PBN TF Rapporteur
DP/03	4.1	Preliminary ANI/WG ATFM implementation task force progress report	03/06/15	ATFM TF Rapporteur
DP/04	4.1	Preliminary progress report of the AIDC task force	03/06/15	AIDC TF Rapporteur
DP/05	4.1	Preliminary progress report of the AIM task force	02/06/15	AIM TF Rapporteur
DP/06	4.1	Report of progress of the task force ADS-B to ANI/WG	02/06/15	ADS-B TF Rapporteur
DP/07	4.1	Aeronautical Message Handling System (AMHS) Task Force Report	02/06/15	AMHS TF Rapporteur
DP/08	4.1	ANI/WG GOLD (CPDLC/ADS-C) implementation Task Force progress report	02/06/15	GOLD TF Rapporteur
DP/09	4.1	ANRFS Adopted with the Regional Performance-Based Air Navigation Implementation Plan (RPBANIP)	03/06/15	ANRF Ad hoc Rapporteur

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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 draft 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/1 and Conclusions from the E/CAR/CATG, NACC/WG/4, NACC/DCA/5, GREPECAS/17 and other DCA WG Meetings

2.1 Under WP/02, the ANI/WG Chairman presented a review of the valid conclusions/decisions of the ANI/WG/1 as informed in the NACC/WG/4 Meeting.

2.2 After the Meeting's review all conclusions/decisions of the ANI/WG/1 remained as informed in the NACC/WG/4 Meeting, with the following observations:

- a) Conclusion ANI/WG/1/9 still valid: taking into account that Trinidad Tobago and COCESNA presented their progress in this Meeting. Mexico to provide its progress.
- b) Conclusion ANI/WG/1/11 was superseded: the Meeting agreed that the Meeting/Workshop on ATM, AIM and MET Coordination was not carried out in 2014 and is not scheduled for 2015. In this regard, the Meeting agreed that this event could be held in the first semester of 2016, considering as well, that MET services in some States are not under the Civil Aviation Authority. During this event, it was recommended that IATA and other International Organizations participate. The following Decision was adopted:

**DECISION
ANI/WG/2/1**

**MEETING/WORKSHOP ON ATM, AIM AND MET
COORDINATION**

That, in preparation for the Meeting/Workshop on ATM/AIM/MET Coordination (May 2016), and in order to promote coordination to improve safety during natural events with major aviation impact, States/Territories of the CAR Region and COCESNA provide information on coordination among ATM, AIM and MET services to the ICAO NACC Regional Office by 28 December 2015.

2.3 Under IP02, the Secretariat presented a follow-up on the valid NACC/WG/4 conclusions related to the ANI/WG. Based on the work of the Task Forces and the Meeting, an update to the follow-up was made as shown in **Appendix B**. Similarly, the Meeting took note of the valid conclusions of the First Eastern Caribbean Civil Aviation Technical Group Meeting (E/CAR/CATG/1) Meeting,

2.4 The Meeting noted under IP/03 the Fifth North American, Central American and Caribbean Directors of Civil Aviation Meeting (NACC/DCA/5) valid conclusions related with air navigation implementation; the valid Seventeenth Meeting of the CAR/SAM Regional Planning and Implementation Group (GREPECAS/17) conclusions, and the list of relevant conclusions of other Civil Aviation Directors Meetings.

Agenda Item 3 Global/Regional Air Navigation Developments

3.1 Port-of-Spain Declaration

3.1.1 The Secretariat presented WP/03 related with the *Port-Of-Spain Declaration (POS)* and the ICAO NACC Regional Office Strategy for supporting the “*No Country Left Behind*” (NCLB) campaign, that punctuates the safety and air navigation targets established in POS for the ICAO NAM/CAR Regions, highlighting ICAO’s efforts to assist States in implementing ICAO Standards and Recommended Practices (SARPs) and the achievements of these goals.

3.1.2 The Meeting highlighted that States should assign adequate resources to support implementation and achievement of the safety and air navigation targets in order to meet the agreed targets as outlined in the POS.

3.1.3 In 2014, ICAO established the NCLB campaign to clarify existent large discrepancies with respect on how some States implement ICAO SARPs and for ICAO to provide direct assistance to have an active role in the coordination among States, helping to generate the necessary political will for the States to obtain resources, participate in the regional efforts, allocating voluntary funds and building capacity.

3.1.4 In addition, the NCLB initiative also promotes ICAO’s efforts to resolve Significant Safety Concerns (SSCs) brought to light through ICAO Universal Safety Oversight Audit Programme-Continuous Monitoring Approach (USOAP-CMA) as well as other safety, security and emissions-related objectives.

3.1.5 The initiative is aimed to achieve an effective implementation of the deficient areas that are critical for the States to have safe and secure civil aviation; following strategy basic steps that will be initiated as of second quarter of 2015, as follows:

- Develop the regional strategy
- Communicate with Directors General for agreement on the strategy
- Gather factual data on each State
- Coordinate and communicate data with Directors General and their specialists team
- Agree, at highest levels, priorities with each member State to meet its needs

3.1.6 IATA informed the Meeting of their support with data on the performance of air navigation services for the data gathering process. ICAO thanked IATA for their support and will consider it on this process.

3.1.7 Under IP/14, the Secretariat mentioned the Aviation Safety Group — Pan America (RASG-PA) activities background, integration, and results, as well as the regional targets set forth in the Bogota and Port-of-Spain Declarations.

3.1.8 The Meeting also informed that RASG-PA has developed safety initiatives and projects to enhance aviation safety following the ICAO Global Aviation Safety Plan (GASP) and Annex 19 to reduce the fatal accident rate in Pan America.

3.2 First Annual Global Air Navigation Report and Regional Performance Dashboards

3.2.1 Under IP/04, the Secretariat informed of the regional performance dashboards, which are published since May 2014, and their conforming indicators, including safety and air navigation targets of the POS. The Regional Performance Dashboards are available at: <http://www.icao.int/safety/Pages/Regional-Targets.aspx>

3.2.2 Similarly, the Secretariat informed of the First Annual Global Air Navigation Report (2014) that presents the annual results, and suggests new areas where the report could provide additional indicators, including information on traffic growth, regional priorities, implementation success stories and explanations of the Regional Performance Dashboards. The first Annual Global Air Navigation Report - 2014 is available at: <http://www.icao.int/airnavigation/Pages/Air-Navigation-Report.aspx>. The second Annual Global Air Navigation Report corresponding to 2015 is scheduled for 2nd semester 2015.

3.3 ICAO relevant Standards and Recommended Practices (SARPs) updates

3.3.1 Under IP/05, the Secretariat made reference on the approval of Doc 9981 - *Procedures for Navigation Services – Aerodromes (PANS-AGA)*, first edition and the Proposal for Amendment 12 to Annex 14, Volume I. This Paper also contains the list of latest valid ICAO Annex amendments for 2014.

3.4 electronic Air Navigation Plan (eANP) Development

3.4.1 Under WP04, the Secretariat presented the progress achieved in the development of the new regional electronic Air Navigation Plan (e-ANP) template, amendment procedures and the action plan for its electronic availability and maintenance online, performed by the ICAO working group (e-ANP WG), with a new structure, format and content for the regional plans. The objectives and purpose of electronic Air Navigation Plans (ANPs) were informed.

3.4.2 The e-ANP will consist of three volumes. The structure of the technical parts of Volumes I and II (AOP, CNS, ATM, MET, SAR and AIM) will consist of: a) introduction; b) general regional requirements; and c) specific regional requirements. Volumes I and II include several of the existing ANP planning principles. The information contained in Volume III will be related to implementation monitoring, planning and/or guidance. Volume III will contain the information agreed in the RPBANIP, regarding the regional priorities, adopted ASBU modules, indicators and targets. The Volume III structure consists of: a) Part 0 – Introduction; b) Part I – General Planning Aspects (GEN); and c) Part II – Air Navigation System Implementation.

3.4.3 The Secretariat detailed the GREPECAS procedures for amendment of the e-ANP. Finally, the CAR/SAM e-ANP implementation action plan was presented to be completed in 2015 and its access through the ICAO SPACE portal (iSTARS 2.0 website), providing flexibility to the States concerning planning and facilitating better coordination in particular among States in the boundaries between the CAR and SAM Regions and other adjacent regions.

3.4.4 The Meeting noted the progress in the CAR/SAM Regions with Doc 8733 – *Air Navigation Plan Caribbean and South America Regions*, where the first e-ANP stage was conducted with the inclusion of the existing data in the ANP for Volumes I and II, and for the second semester of 2015. The ICAO NACC and SAM Regional Offices will make the contents update (requirements) for Volumes I and II and the filling of Volume III. Also it was noted that for the NAM Region, Canada and United States with the assistance of the ICAO NACC Regional Office are analysing the feasibility for developing the NAM eANP.

3.4.5 The Meeting was informed that to streamline the development and filling process of the CAR/SAM Regions e-ANP, the 98th Meeting of Directors of Civil Aviation of Central America and Panama (DGAC/CAP/98), and the Fourteenth Directors of Civil Aviation of the Central Caribbean Meeting (C/CAR/DCA/14) named Points of Contact (PoCs) for this purpose.

3.5 Other Global/Regional Air Navigation Developments

3.5.1 Under WP/18, the Meeting took note about the guidelines for integrating an Unmanned Aircraft System (UAS) into the Air Traffic Service(s) (ATS) airspace, so as to ensure safety air operations between Air Navigation Service Providers (ANSP) and users as well of conclusion C/CAR/DCA 14/8, urging the C/CAR States to develop a Remote Piloted Aircraft System (RPAS) Operations Regulatory Framework.

3.5.2 Under WP/20, the Meeting recalled the States support for the ICAO position for ITU WRC-2015, emphasizing ICAO and the NAM/CAR Regions support to this position. ICAO activities for assisting the States are the following:

- a) ICAO participation in the Interamerican Commission of Telecommunication CITEL meetings like the XXIV Meeting of the Permanent Consultative Commission: Radio communications (XXIV PCC.II) (Merida, Mexico) and the XXV Meeting of the Permanent Consultative Commission II: Radio communications (XXV PCC.II) (Medellin, Colombia);
- b) keeping State Points of Contact (PoCs) list in support of the ICAO WRC-15 Position for coordination and mutual support;
- c) keeping the Regional Frequency Assignment List available for States and general public: ICAO Website: <http://www.icao.int/NACC/Pages/frequency.aspx>; and
- d) the results from the MEVA/TMG/30 Meeting for the registration of the Very Small Aperture Terminal (VSAT) nodes in the ITU master register (following Conclusion MEVA TMG/26/21 - *Review and agreement on actions to Follow-Up on AN-CONF/12 Recommendation 1/14 and Recommendations from the Regional Preparatory Workshop for ITU WRC-15*).

3.5.3 The Meeting also took note that in the most recent CITELE meeting held in Medellin, Colombia (XXV PCC.II), and although some supports to ICAO position were completed, such as: flight tracking initiative and the Agenda Items 1.7 and 1.17; the participation of the Civil Aviation Authorities from the CAR Region was very low. The next CITELE meeting is scheduled for August 2015 in Ottawa (XXVI PCC.II).

3.5.4 Finally, it was commented that the ICAO Position as introduced in 2013 will in all likelihood have some updates in time before the WRC-15. None of the updates will however change the position; they will merely be clarifications in light of studies within ICAO and ITU-R. In light of this new update, the Meeting urged the States to coordinate this information with their corresponding Spectrum regulators, following the NACC/WG/4/5 - *Active Support from States for ICAO ITU WRC-2015 Position*, adopting the following Draft conclusion:

DRAFT CONCLUSION

ANI/WG/2/2

**COORDINATION FOR UPDATED VERSION OF THE ICAO
WRC-2015 POSITION**

That in order to ensure an effective coordination for the support of the ICAO Position for WRC-2015 considering the update of this position, the ICAO NAM/CAR States:

- a) timely coordinate that this update of the ICAO Position is shared with their national Spectrum regulators; and
- b) attend as possible, with their National Spectrum Regulators to attend the last 2015 Regional CITELE (Ottawa, Canada, August 2015) and vote for the Interamerican proposals related with the ICAO position

3.5.5 Under IP/06, United States informed on the Mini-Global Demonstration, collaborative effort between the Federal Aviation Administration (FAA) and other ANSPs around the globe to enhance and streamline the flow and management of information. The collaboration and participation to the demonstration varies by levels.

3.5.6 The first Mini-Global Demonstration was conducted from 16 to 17 September 2014, at the NextGen Florida Test Bed in Daytona Beach, and plans are underway for the Mini-Global II Demonstration planned for April/May 2016, which will focus on initial applications and services in support of varying scenarios and use cases.

3.5.7 The Meeting was invited to participate contacting the listed below FAA officials for additional information. FAA will inform the ICAO NACC Regional Office on this invitation for consideration of all NAM/CAR States/ANSPs/users.

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Agenda Item 4 Follow-up on the NAM/CAR Regional Performance Based Air Navigation Implementation Plan (NAM/CAR RPBANIP)

4.1 Follow-up on the NAM/CAR Regional Performance Based Air Navigation Implementation Plan (NAM/CAR RPBANIP)

4.1.1 *Regional Air Navigation Implementation- ANI/WG Action Plans follow-up*

4.1.1.1 Under NE/05 and DP/01, the ANI/WG Chairman followed-up on the progress achieved by the ANI/WG, including the endorsed action plans.

4.1.1.2 During the meeting, the inputs of the Eastern Caribbean implementation groups and the MEVA group were reviewed through the following papers:

- WP/22: Eastern Caribbean: Progress report of the Fifth Eastern Caribbean Network Technical Group Meeting (E/CAR/NTG/5) and Third Eastern Caribbean Radar Data Sharing Group Meeting (E/CAR/RD/3), highlighting:
 - a) E/CAR Aeronautical fixed service (AFS), Network Performance
 - b) Surveillance Improvements
 - c) Radar Data Exchange activities review
 - d) Radar monitors presentation requirements

- WP/25: AIM, ATM, and CNS Committees activities of the Eastern Caribbean Technical Group of Civil Aviation (E/CAR/CATG), highlighting:
 - a) AIM Familiarization Programme: the Meeting was informed that Trinidad and Tobago hosted this programme for AIM specialists from E/CAR States. This event was convened from 30 September to 2 October 2014. Matters discussed included the POS, the Roadmap for the Transition from AIS to AIM, Flight Planning issues, Digital NOTAM, electronic Terrain and Obstacle Data (e TOD) and Quality Management System (QMS) in AIM. The Summary of Discussions is available at: <http://www.icao.int/nacc/Pages/meeting-2014-ecaraim.aspx>.
 - b) Flight Planning and Related Issues: the Eastern Caribbean is represented in the Flight Plan Ad hoc Group of the ANI/WG, and has participated in two exercises related to data gathering on erroneous/missing /duplicate flight plans.
 - c) In terms of the Centralized Flight Planning System (CFPS) the Meeting was informed about the extensive investigations into the problem of missing and duplicate flight plans carried out by the E/CAR AIS Committee, a centralized flight planning system was identified as a possible solution.

- d) Regarding the QMS, Trinidad and Tobago is at an advanced stage in the development of a QMS that meets the standards established by ICAO for a QMS in AIM. The documentation phase is substantially complete (approx. 90 %) and the deployment and implementation phases (including training and assessment) are ongoing. It is estimated that the QMS will be fully implemented by August 2015 and receipt of ISO 9001:2008 Certificate by March 2016. Thereafter it is expected that Trinidad and Tobago use the knowledge and experience gained to assist other E/CAR in this process.
- e) Regarding the eTOD in the E/CAR there has been little progress in this area, due largely to a lack of expertise in this field. ICAO NACC Regional Office will host an eTOD implementation seminar during the second half of 2015, in the Regional Office in Mexico City.
- f) In addition in 2014, Trinidad and Tobago acquired an eTOD suite. The Site acceptance Test was completed in September 2014 and training of six AIS Staff members took place from 2 to 13 March 2015.
- g) Curacao and Trinidad and Tobago signed a Letter of Intent to develop a NOTAM contingency plan for the Eastern Caribbean States and Curacao. The Plan will be achieved using the services of IDS North America. IDS North America has a NOTAM software package in both States called SPATIA. Technical discussions are taking place at this time with the service provider. This project is expected to be completed by the first quarter 2016.
- h) Finally, the Implementation of the Air Traffic Services Message Handling System (AMHS) in the PIARCO FIR and its testing in the Eastern Caribbean is currently taking place. Testing is taking place using the E/CAR node in Tobago. After this testing is successfully completed deployment in the rest of the E/CAR states will be effected. The cutover for the E/CAR States is expected for July 2015.

- IP/15: General overview of the MEVA III Network Implementation.

4.1.1.3 The Meeting was informed of the ANI/WG action plans progress based on the inputs presented by the Task Forces, detailed in **Appendix C** to this report.

4.1.2 PBN Implementation

4.1.2.1 Under WP/06 and DP/02, the PBN Rapporteur presented the updated progress report of the PBN Task force taking into consideration deliberations of the PBN Task force during the ANI/WG/2 Meeting.

4.1.2.2 The PBN TF also announced the presentation of an updated work programme (Appendix C) to the ICAO NACC Regional Office by 30 June 2015, which will include the necessary tasks to improve the effectiveness of the regional PBN implementation. The Meeting deliberated on a number of actions aimed at improving the implementation of PBN in the CAR Region and proposed the following draft conclusion:

DRAFT CONCLUSION
ANI/WG/2/3

**IMPROVEMENT OF THE EFFECTIVENESS OF THE PBN
TASK FORCE**

That, in order to improve the effectiveness of the PBN Task Force, CAR States:

- a) update the PBN Task force PoCs information by **30 June 2015**; and
- b) provide the appropriate resources to the nominated members of the task force in order for them to participate in Telcons/Web meetings, attend meetings/training events and contribute to group activities.

4.1.2.3 Based on the magnitude of the CAR PBN Airspace harmonization Project the CAR States will nominate experts from each Sub Region to coordinate PBN implementation activities and ICAO NACC Regional Office will ensure the coordination of PBN activities of the CAR Region with the PBN TF.

DRAFT CONCLUSION
ANI/WG/2/4

REPORTING OF FUEL SAVING INITIATIVES

That, order to quantify the effectiveness of proposed PBN initiatives within the CAR Region,

- a) the PBN Task Force in coordination with IATA, submit to ICAO by **30 June 2015** the final version of the form to report fuel saving from PBN initiatives;
- b) the ICAO NACC Regional Office submit States/Territories this reporting form capable of reflecting predicted fuel savings resulting from proposed PBN initiatives by **30 July 2015**;
- c) CAR States/Territories submit information relating to predicted fuel savings based on proposed PBN implementation in the agreed to standardized format every 6 months, as applicable; and
- d) the PBN Task Force to collaborate with IATA for validation and processing of information received from States.

4.1.2.4 Under IP/22, Haiti presented the premise of following ICAO guidance on the requirement of a harmonious PBN implementation within the region and in line with the complete POS Declaration. Haiti has achieved important progress in Performance based navigation implementation within the FIR. Similarly, under IP/23, the Meeting was informed that Haiti has designed Performance Based Navigation (PBN) procedures, which resulted in the implementation of Required Navigation Performance (RNP)-1 Standard Instrument Arrivals (STARs), Standard Instrument Departure (SIDs) and Area Navigation (RNAV) Global Navigation Satellite System (GNSS) approaches for two airports.

4.1.2.5 Following-up Conclusion DGAC/CAP/98/4 - *Central American FIR PBN Airspace Redesign Project* and in accordance with the agreement of the Workshop on Regional Implementation on Performance-Based Navigation (PBN) Airspace Redesign for the CAR Region, held in Mexico City, Mexico, from 4 to 8 May 2015, the Meeting was informed on the Central American FIR PBN airspace redesign project named ARESAC 15, which start date of activities is July 2015 and it is expected to finish it in December 2016.

4.1.2.6 United States presented IP/20 which is associated with discussions between FAA headquarters, airspace users, and FAA facilities that manage the offshore airspace in the Caribbean. The FAA also identified the need for a comprehensive approach to improving operational performance in the region.

4.1.2.7 United States requested the Eastern Regional Task Group (ERTG), a working group of the Tactical Operations Committee (TOC), to provide recommendations on the highest priority infrastructure upgrades and airspace modifications to improve operations in the Caribbean. These recommendations are due to FAA headquarters in July 2015 and will be evaluated carefully in an effort to develop a broad-reaching strategy and funding plan that addresses the identified improvements in the region

4.1.2.8 Since January 2015, the ERTG of the TOC has engaged airspace users and operational personnel from Miami Air Route Traffic Control Center (ARTCC) and San Juan CERAP in robust discussions in an effort to brainstorm on the challenges of the Caribbean airspace.

4.1.2.9 The FAA is also supporting other activities in the Caribbean such as the NACC PBN implementation project, which will enhance the operation in the region by streamlining and harmonizing enroute and terminal routes that will optimize operations as aircraft transition CAR Region FIRs.

4.1.2.10 In addition, the FAA is ensuring that their efforts will harmonize with the initiatives that are currently being pursued in the NAM/CAR Regions. The ICAO NACC Regional Office will receive formal notification from the FAA of the intended actions to improve operational efficiencies resulting from the report.

4.1.2.11 Under WP/26, United States provided an update on the mitigations that Miami ARTCC has implemented to improve operations in the Miami High Sector 40. Air Traffic Flow Management (ATFM) mitigation factors that Miami Air Traffic Control Center utilizes to control the sector capacity levels were also explained. It was mentioned that the sector can certainly be managed with traffic management initiatives but inefficiencies are starting to impact the operations. This is particularly evident during peak seasonal traffic.

4.1.2.12 It was also mentioned that the route structure is antiquated, and to have positive results on increased sector capacity levels and efficiency, a new PBN route structure should be developed not only for sector 40 but throughout the region. This recommendation will be coordinated with the PBN TF.

4.1.2.13 Under WP/28, Cuba explained the complexities associated with the funnelling effect of air traffic associated with active Military Warning Areas on the Miami/Havana FIR. The areas of concern are KW174B&C and KW465A&B which are active for more than 80% of the time per year. In addition to the constraints associate with the current route structure and complexities associated with climb and descent operations along with the significant increase of coordination, the operations have significantly increased the workload for Miami and Havana Air Traffic Controllers, resulting on an increase of safety risks.

4.1.2.14 In this regard, Cuba recommended that the airspace be redesigned with the creation of a new PBN route structure with continuous climb and/or descent operations, reducing fuel consumption and CO₂ emissions. In addition, an airspace redesign will also reduce ATS staff workload and safety events. The PBN TF has taken note of Cuba's recommendation for improving/resolving this situation.

4.1.2.15 Under WP/27 IATA presented a proposal for reduction and harmonization of the Longitudinal Separation Minima in the FIR boundaries of the NAM/CAR Regions, using the current ATC systems and infrastructure. IATA mentioned that the applied separation minima within the CAR/SAM Regions is certainly having an impact on the stakeholders as optimal aircraft altitudes cannot be maintained due to the requirement of extended longitudinal separation.

4.1.2.16 IATA showed that the complexities of complying with the current separation minima is also having an adverse effect on sector capacities as the workload is substantially increased due to additional ATC transmissions and coordination.

4.1.2.17 The Meeting agreed that this matter deserves high priority and that under ICAO Document 4444, paragraph 5.4.2.3.3.1, longitudinal separation of 20 NM may be applicable under the specified condition. The meeting recommended that the issue can be dealt through bilateral discussions under the guidance of the ATM Regional Officer of the ICAO NACC Office.

4.1.2.18 It was informed that, during the SAM/CAR ATFM workshop held in Panama City, Panama, 25-29 May 2015, the participants proposed to reduce the ATC separation 40 NM by December 2016, 20 NM by December 2017 and 10 NM by December 2018.

4.1.2.19 In addition to the proposed reduction of longitudinal separation, PBN route design between NACC and SAM Regions should also be developed to facilitate controller workload and increase capacity levels and efficiency. The PBN TF took note of this action.

4.1.2.20 The Meeting was informed on the result of the meeting among Trinidad and Tobago, United States and IATA, IATA offered to host a working group meeting between relevant FIRs from Brazil, Guyana, Suriname, Trinidad and Tobago and United States, aimed at optimizing the upper route airspace structure that flows between North America, Eastern Caribbean and South America. Teleconferences will be held prior to the actual meeting in order to create the platform for the design concept.

4.1.3 ATFM Implementation

4.1.3.1 Under WP/07 and DP/03, the ATFM TF Rapporteur presented the progress achieved by the ATFM Implementation TF since its creation in the ANI/WG/1 Meeting, informing of its deliverables and recommendations for improving the Task Force function and coordination.

4.1.3.2 The ATFM TF deliberated during the ANI/WG/2 Meeting on a number of actions aimed at facilitating the implementation of ATFM in the Region, such as two specific implementation meetings in 2016 and 2017, ATFM/CDM Workshop in 2016 and definition of the PoC/ATFM lead role, etc. The ATFM TF will review their ToRs and work programme and submit it to revision by the ANI/WG Chairman by 31 July 2015. The following draft conclusion was adopted:

DRAFT CONCLUSION
ANI/WG/2/5

**THE IMPROVEMENT OF THE EFFECTIVENESS OF THE ATFM
TASK FORCE**

That, in order to improve the effectiveness of the ATFM TF, CAR States/Territories:

- a) update the POCs for the ATFM TF by **31 July 2015**;
- b) provide to the nominated Task Force members appropriate time and resources in order to participate in Telcons/GoTo Webinars and attend meetings/training events that contribute to ATFM; and
- c) based on the ATFM TF work programme, report their current ATFM implementation status by **14 August 2015** to the ICAO NACC Regional Office.

4.1.4 AIDC Implementation / FPL error monitoring/resolution

4.1.4.1 Under WP/08, WP/23 and DP/04 the Air traffic services inter-facility data communication (AIDC) Task Force presented the activities and progress of the AIDC TF including the activities corresponding to the FPL Monitoring Group Meeting outcomes.

4.1.4.2 The last report and agreements made by the AIDC/TF were reported in the AIDC/TF/02 Meeting, which was approved as fast track via ICAO State Letter EMX0268 since 12 April 2015. The final AIDC/TF/02 Report is available on the ICAO NACC Regional Office Website at: <http://www.icao.int/NACC/Pages/meetings-2015-aidctf2.aspx>. From this meeting several decisions and a conclusion were adopted:

- Decision 2/1 Update of AIDC Regional Implementation Plan
- Conclusion 2/2 AIDC Implementation Checklist
- Decision 2/3 Comparison of Existing AIDC Interface control documents (ICDs)
- Decision 2/4 NAM ICD for use as Regional ICD
- Decision 2/5 LOA Annex for AIDC implementation using NAM ICD

4.1.4.3 The AIDC TF outcomes are:

- AIDC Regional Implementation Plan: The AIDC Regional Plan shows the intended AIDC testing and implementation dates for each State, as well as other useful information (such as system to be used, adjacent FIRs with which implementation will take place, and Point of Contact information). The updated regional implementation plan is presented as **Appendix D**.
- The Task Force has carried out six teleconferences, and held meetings in April of 2014 and at the end of February of 2015. In these events there have been several results obtained
- An implementation checklist to serve as guidance for the region as established in AIDC/TF Conclusion 2/2. It is general in nature, and can be customized by each State depending on particular needs. The checklist includes many of the important tasks not to be overlooked during the implementation process, and is presented in **Appendix E**.

- Two AIDC *Go-Teams* missions were carried out during 2014.
- The status of the use of converters, one of the deliverables of the PBN implementation action plans, was reviewed during the meeting in February 2015. The update table is presented in **Appendix F**.
- The definition of the Terms of Reference (ToRs) and action plan for the FPL Monitoring Group; an Ad hoc group created to direct and follow up on flight plan error mitigation measures.

4.1.4.4 A follow up to the AIDC/TF/2 decisions was made as presented in DP/04, highlighting the report on Decision AIDC/TF/3/3 - *Regional ICD comparison* (**Appendix G** – available only in Spanish).

4.1.4.5 Regarding the AIDC Implementation Performance Indicator, the AIDC-TF reported that the implementation of AIDC in the NAM/CAR Regions currently meets the target performance goal of 80% with a 81.40%; however it was noted that this target shall be reviewed in the update of metrics mentioned in Agenda Item 5. The updated AIDC TF work programme is provided in **Appendix H**.

4.1.4.6 Following the above mentioned progress, and that the AIDC-TF/02 Meeting report was approved by the ANI/WG by fast track, the following conclusions from the AIDC/TF/2 Meeting are adopted as ANI/WG/2 Conclusions:

DRAFT CONCLUSION
ANI/WG/2/6

AIDC IMPLEMENTATION CHECKLIST

That, in order to support the implementation of AIDC, States/Territories in the CAR Region, adopt the attached AIDC Implementation checklist (Appendix E refers) as a guidance for planning and implementing AIDC service.

DRAFT CONCLUSION
ANI/WG/2/7

AIDC IMPLEMENTATION AND MONITORING

That in order to accurately monitor and report the operational benefits and implementation progress as well as to facilitate the harmonious AIDC implementation:

- a) the ICAO NACC Regional Office upload the AIDC Regional Implementation Plan into the ANI/WG Webpage;
- b) the NAM/CAR States/Territories review and inform the AIDC TF and ICAO of any update to the AIDC Regional Implementation Plan by the ANI/WG/03 Meeting; and
- c) the AIDC TF track the implementation progress of AIDC as shown in the AIDC Implementation Performance Indicator, including operational benefits information by the ANI/WG/03 Meeting.

DRAFT CONCLUSION
ANI/WG/2/8

AIDC PLANNING IMPLEMENTATION

That, in order to promote successful AIDC implementation planning, the CAR States/Territories update the status of their Filed Flight Plan (FPL) System and the dis-use of converters (Appendix F refers) by the ANI/WG/3 Meeting.

4.1.4.7 Finally regarding the FPL Monitoring Group the following progress was reported:

- It carried out nine teleconferences, two rounds of flight plan error data collection, and a meeting at the end of February 2015.
- A list of suggested actions for the mitigation of flight plan errors was drafted and approved, and later reviewed and modified.
- A series of aids was also approved, such as contact lists for feedback to the operators and ATS units for the purpose of correcting errors detected, and an FPL Guidance document to contribute to the uniformity of procedures in the filing of flight plans.

4.1.4.8 From the analysis of the second phase of data collection, the following observations were made:

- FPL duplication remains as the most frequent error, followed by inconsistent ATS route, missing flight plans, and incorrect ICAO format, in that order, among others.
- There was no visible trend indicating increase or decrease in errors rate.
- The differences in percentage of each error between the first and second phases of data collection, although appreciable in some cases, must be evaluated in light of the variations of the methods, tools and experience used in each phase.

4.1.4.9 From these observations, the following conclusions were made by the FPL Monitoring Group:

- a) The actions taken up to date have not been as effective as expected, due to the difficulty in their application by the FIRs (lack of personnel that can be dedicated to this activity being one of the main reasons).
- b) Feedback to the operators remains an important factor in reducing errors in flight plans.
- c) The sheer number of errors of all types makes the task of mitigating and reporting a difficult one for the FIRs (the first round collected over 44,000 errors, and the second well over 20,000).

4.1.4.10 In order to begin obtaining positive results in the reduction of errors and, consequently, a significant positive impact on safety, the following actions were discussed and agreed:

- a) Change the focus of mitigation, monitoring and reporting from encompassing all errors at the same time to concentrating on one error at a time. To do this, an updated action plan is described as follows:

- i. The group will consider one error at a time. The first error to be taken into account will be duplication, being the most frequent error.
 - ii. The group will adopt a limited number of measures (two to four) to implement during a defined period of time. These measures will be taken from the suggested actions, although any additional measure can be added, and will be the actions considered to have the most positive impact in mitigation.
 - iii. Data collection and analysis will circumscribe to the error being treated.
 - iv. Once there is evidence that the error has been reduced to an agreed level, the next error will be considered, and the cycle repeats.
- b) The most frequent errors identified from the analysis of the second phase of data collection will be extracted, and feedback given to the operators via IATA to correct these already detected situations.
 - c) Follow up on actions will be done by means of teleconferences, where difficulties and suggestions for improvement can be considered.

4.1.4.11 Another task that was approved during the FPL Monitoring Group Meeting was a safety assessment to determine the impact of flight plan errors. An Ad hoc group was formed to perform this assessment, and the results will be discussed at the next group teleconference on 16 June 2015.

4.1.4.12 From the two conclusions drafted during the FPL/AD/MON/1 meeting, Conclusion 1/1 - *Omission of alternate Aerodrome in FPL messages* was requested by the Meeting to be reviewed with Cuba in the next teleconference of 16 June 2015. Another draft conclusion adopted by the ANI/WG/2 is as follows:

DRAFT CONCLUSION
ANI/WG/2/9

PROVISION OF FPL SUPPLEMENTAL INFORMATION

That, in order to control and ensure the provision of FPL supplemental information the CAR States/ANSPs establish agreements with operators to provide FPL supplemental information to the ANSPs when needed, and the complete contact information be used at any time for this purpose, or to provide this information for each flight plan by means of the local dispatch office. The agreement to provide the information on demand would only apply to those operators that have 24/7 availability of personnel to attend the request.

4.1.5 ADS-B Implementation Progress

4.1.5.1 Under WP/09 and DP/06, the ADS-B Implementation Task Force reported their progress.

4.1.5.2 Activities undertaken by the ADS-B Task Force:

- a) the Task Force held in 2015 a teleconference in January and its Second Implementation Meeting on April 2015;

- b) Updated membership and follow-up to ADS-B TF working programme (**Appendix I**).
- c) Follow-up to ADS-B/TF/2 meeting decisions (**Appendix J**). Decision ADS-B/TF/2/7 to be considered under new review of RPBANIP agreed on Agenda Item 5.

4.1.5.3 Regarding the report from the ADS-B/IMP/2 meeting, the Meeting identified the need to update some dates (Software delivery and Concept of Operations (CONOPS)). In this regard, the following decision was adopted:

DECISION
ANI/WG/2/10

AMENDMENT TO ADS-B/IMP/2 MEETING REPORT

That in order to approve the ADS-B/IMP/02 Meeting Report, the ADS-B TF amends the report to reflect the changes in Software delivery dates and CONOPS conclusion by **20 June 2015**.

4.1.5.4 The following conclusions were adopted from the ADS-B/IMP/2 meeting for the ANI/WG/2:

DRAFT CONCLUSION
ANI/WG/2/11

ADS-B/MLAT SURVEILLANCE PLAN

That, in order to support the implementation of ADS-B and MLAT in the CAR Region:

- a) the Surveillance System Plan (**Appendix K** refers) be taken as a reference for the planning and implementation of MLAT and ADS-B systems; and
- b) States/Territories in coordination with ICAO update this plan by **20 December 2015**.

DRAFT CONCLUSION
ANI/WG/2/12

ADS-B IMPLEMENTATION REFERENCE DOCUMENTATION

That in order to support and guide implementation of ADS-B in the CAR Region and to achieve regional milestone date of December 2018 for the implementation of ADS-B OUT:

- a) the Regional ADS-B CONOPS document version 1.0 be adopted as a guide to planning and implementation of ADS-B service to the States/ANSPs in the region; and
- b) Technical Specification document be adopted as a guide for the acquisition and implementation of ADS-B service.

DRAFT CONCLUSION
ANI/WG/2/13

DATA PROCESSING CAPABILITIES FOR ADS-B

That in order to follow-up and guide the ADS-B implementation in the CAR Region, and to achieve the regional milestones by December 2018 for ADS-B Out implementation:

- a) the ADS-B Data Processing Capabilities Table (**Appendix L**) be adopted as a guidance on the status of the ATS Automation System to process ADS-B data; and
- b) the CAR States/Territories confirm these capabilities to ICAO by **December 2015**.

DRAFT CONCLUSION
ANI/WG/2/14

ADS-B TRIALS KICK OFF IN CAR REGION

That, in order to promote ADS-B implementation, States/Territories that have not yet conducted trials coordinate the implementation/planning test of ADS-B with ADS-B TF in order to obtain the operating benefits identified.

4.1.6 AIM Implementation

4.1.6.1 Under WP/10 and DP/05, the AIM Task Force Rapporteur presented the improvements to the work programme and the ToRs. The reviewed AIM Task Force Work Programme is shown in **Appendix M** to the report.

4.1.6.2 Based on the AIM ToRs and the AIM work programme that includes all AIM activities for the implementation in terms of requirements of support documentation and ICAO guidelines in some AIM transition topics, necessary adjustments for updating activities of the Task Force were carried out. One of the recognized issues is the lack of participation/contribution of some of the members.

4.1.6.3 Under WP/24, the Meeting was informed on the requirements of aerodrome mapping data which should be included by States regarding aerodromes data and geographic information directed to the applications that improve user situational awareness and/or complement surface navigation, increasing the safety margins and operational efficiency with the eTOD Area 3 inclusion.

4.1.6.4 The Meeting was also informed on Aerodrome Mapping Datasets with the accuracy required under ISO Standards for geographical data as part of a QMS that must provide support to the requirements for collaborative decision-making, common situational awareness and airport guide applications.

4.1.6.5 The Secretariat emphasized to the Meeting on the interoperability of databases and the uniform application of global comprehensive and coherent standards. These systems are principles of System Wide Information Management (SWIM).

4.1.6.6 Under IP/09, the Meeting received the draft version of the new PANS-AIM. This document could be used as initial reference to States of the CAR Region and mainly consists of material related with standardized specifications for products, services and protocols for its promulgation as Air Navigation Services (ANS) Procedures.

4.1.6.7 Under IP/17, Cuba informed on the implementation progress for the transition from AIS to AIM. The information shows the status of the elements that have been completed or are in process to be completed for each phase. The Cuban AIM plan is as follows:

Phase 1: Completed

Phase 2: To be completed in 2018 (estimated date)

Phase 3: To be completed in 2018 (estimated date)

Phase 1. Consolidation			
Step No.	Element	State	Reviews
S-05	Implementation of WGS - 84	implemented	The system is completed since 1998
S-17	QMS	implemented and certified	The system has been certified several times
S-03	Monitoring of the compliance of the AIRAC Standards	implemented	Amendments and pertinent publications are carried out with the AIRAC system
S-04	Monitoring of the differences between States with regard to Annexes 4 and 15	implemented	A monitoring system of the differences has been implemented, and even differences related with SARPS and PANS are reported through the new EFOD tool. Differences are also published through the AIP.

Phase 2. Digital transition			
Step No.	Element	State	Reviews
S-11	e-AIP	in process	The digital AIP is available in a web site of the AIS in the Civil Aviation Intranet and we have been working to have it available on the Internet. Charts published in the AIP are also digitized and available in the same website. By 2015, an e-AIP module will be acquired as a complement to the database that includes the AIXM. See 5.1.
S-06	Integrated databases		
S-08	Aeronautical information conceptual model		
S-13 S-14	e - TOD	in process	Data from the obstacles of the Area 1 are already published in the AIP. For the moment, the digital model of the terrain of this area won't be implemented. For Areas 2 and 3, the uprisings of the obstacles are only made at airports with more than 1000 operations per month, such as: José Martí International Airport in Havana and Juan Gualberto Gómez in Varadero. It is expected to be published in 2015. Up to date, is not intended to take field measurements for these areas.
Phase 3. Information management			
Step No.	Element	State	Reviews
S-10	Communications networks	in process	The Cuban AMHS is being developed to conduct the 2015 interoperability testing
S-16	Training	in process	The Course AIM New Concept has been delivered to all the personnel, Seminars on ICAO's roadmap have been carried out for the transition to the AIM and national requirements have been applied to the AIM staff for reaching an appropriate English level by 2016
S-18	Agreements with the data originators	in process	Existing agreements with data originators have been deepened, improving quality procedures

4.1.6.8 From the above, the Meeting adopted the following draft conclusions:

DRAFT CONCLUSION

ANI/WG/2/15

AERODROME MAPPING DATA BASE (AMDB)

That, States/Territories/International Organizations:

- a) take into account the applications based on the aerodromes data publication, including the new air-ground collaborative systems applying SWIM principles according with ASBU dates for Block DATM (AIM);
- b) accelerate the adoption of aerodrome mapping databases provision and maintain close coordination with other Aeronautical Authorities related with the implementation of the AMDB; and
- c) participate in the Terminal Procedures and Aerodrome Mapping Seminar to be held at the ICAO NACC Regional Office, Mexico City, Mexico, 24 to 28 August 2015.

DRAFT CONCLUSION

ANI/WG/2/16

**PROCEDURES FOR AIR NAVIGATIONS SERVICES (PANS) –
AERONAUTICAL INFORMATION MANAGEMENT (AIM)**

That States/Territories:

- a) review the draft version of the mentioned document as shown in Appendix to IP/09; and
- b) send to ICAO NACC Regional Office their comments no later than **31 December 2015**.

4.1.6.9 In regard to the AIM training matter, it was recognized the lack of specialized and advanced AIM training for the region, especially in English language. For this reason, the ANI/WG will request the NAM/CAR Civil Aviation Training Centres Working Group (CATC/WG) to provide assistance in this area.

4.1.7 AMHS Implementation

4.1.7.1 Under WP/11 and DP/07, the AMHS Implementation Task Force reported that there has been little but positive results in the implementation in AMHS:

4.1.7.2 The Task Force held a Teleconference on April 2015 to review the AMHS Regional Implementation Plan.

- up to date, only Dominican Republic has successfully transition to AMHS.
- Curacao received in 2014 the assistance of a Go-Team mission from the CAR RLA/09/801 Project, advancing in their preparation and to test now that the MEVA III network is operative.
- Mexico is scheduled for a similar AMHS Go-Team mission for 2015.
- Other States such as Cuba, Cayman Island and Trinidad and Tobago continue requiring testing prior to implementation

4.1.7.3 The AMHS Task Force updated the existing CAR Region Implementation Matrix with information provided by the Members attending the Meeting and by emails exchanged, resulting in the updated version of the AMHS Regional Implementation Matrix as shown in **Appendix N**.

4.1.7.4 The Meeting noted that regarding the RPBANIP target on AMHS implementation: “4 States with Air Traffic Services Message Handling Services (AMHS) interconnected with other AMHS by December 2014”, was not accomplished since only 2 States had interconnected. The Meeting emphasized the importance of the upcoming Aeronautical Telecommunications Network (ATN) Applications Workshop scheduled for 2016 in Sint 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 advance in the implementation of AMHS.

4.1.7.5 Based on the abovementioned results, the Meeting adopted the following Conclusion

DRAFT CONCLUSION

ANI/WG/2/17

AMHS IMPLEMENTATION PROCESS IN THE CAR REGION

That in order to streamline the implementation of AMHS Systems, CAR Region States/ANSPs:

- a) update accordingly the CAR Region Implementation Matrix of Appendix N by **31 December 2015**; and
- b) participate in the ATN Application Workshop (2016, Sint Maarten) to exchange information and advance the implementation.

4.1.8 CPDLC/ADS-C Implementation

4.1.8.1 Under WP/12 and DP/08, the Meeting was informed of the progress achieved by the Global Operational Data Link Document (GOLD) Task Force (TF) since its creation in the ANI/WG/1 Meeting and its follow-up made in the NACC/WG/4 Meeting.

4.1.8.2 The GOLD TF deliverables were:

- a) considerations for the implementation of Controller-Pilot Data Link Communication (CPDLC) (**Appendix O**); and
- b) Action Plan template for CPDLC/ADS-C implementation (**Appendix P**)

4.1.8.3 The Meeting was recalled that the implementation of CPDLC, ADS-C is planned for continental remote and oceanic airspaces, identifying the oceanic areas of PIARCO FIR, Central American FIR, Mexico FIR, Mazatlán FIR and Curacao FIR.

4.1.8.4 Due to the discrete group of FIRs implementing CPDLC/ADS-C, the assistance to the implementation is being planned through the support of the CAR RLA/09/801 Project Technical Assistance Missions (TEAM). The Meeting was informed of the two TEAMS that has been scheduled, one for COCESNA (Central American FIR) and PIARCO FIR.

4.1.8.5 Under DP/08, the GOLD TF Rapporteur presented the following Draft conclusion which was adopted:

DRAFT CONCLUSION

ANI/WG/2/18

CPDLC/ADS-C IMPLEMENTATION GUIDANCE AND CONSIDERATIONS

That, in order to support the implementation of CPDLC, ADS-C, the States/Territories involved adopt as references the CPDLC Implementation Considerations; and a CPDLC/ADS-C implementation Action Plan shown in Appendix O and Appendix P, respectively.

4.1.8.6 The Meeting considered that in light of the progress report and results of the GOLD TF presented above and the agreement that the CAR RLA/09/801 Project Technical Assistance Missions (TEAM) is the most efficient means to support implementation, the GOLD TF had fulfilled its mandate. The Meeting therefore, in order to support the CPDLC, ADS-C implementation, proposed the following Draft conclusion:

DRAFT CONCLUSION

ANI/WG/2/19

GOLD TASK FORCE DISBANDMENT

That, the GOLD TF, based on the ANI/WG ToRs, Work Programme, and established ANI/WG structure to facilitate the implementation of FANS 1/A Service, namely ADS-C and CPDLC, has fulfilled its mandate as outlined in its terms of reference and work programme, therefore the GOLD TF is disbanded.

4.1.8.7 The Meeting congratulated the GOLD Task Force for its timely and effective assistance to CPDLC/ADS-C implementation and thanked Canada and the GOLD TF Rapporteur, Mr. Noel Dwyer for such successful assistance and support to the States.

4.1.8.8 Finally Trinidad and Tobago and COCESNA confirmed their commitment to implement the CPDLC/ADS-C Services by 2015 or early 2016.

4.1.8.9 Under IP/16, Trinidad and Tobago provided an update to the meeting of the work done in towards the implementation, and operational use of CPDLC and ADS-C detailing the analysis, the implementation plan, the multidisciplinary team, the testing ongoing, the regulatory activities, the training planned and ATC system customization conducted. It is anticipated that by December 2015 full CPDLC/ADS-C implementation would be achieved.

4.1.9 Other Implementation Matters

4.1.9.1 Under WP/16, the Secretariat proposed the need to define and work toward implementing actions for planning and implementation of Global Navigation Satellite System (GNSS) activities in support of the Performance-Based Navigation (PBN) and Automatic Dependent Surveillance - Broadcast (ADS-B) implementation.

4.1.9.2 The meeting acknowledged the need for familiarization on how the GNSS equipment supports PBN and ADS-B service. In addition, the Meeting discussed the need to implement systems such as Space/Satellite-based Augmentation System (SBAS) or Ground-based Augmentation System (GBAS) to support PBN and also discussed the need to improve Global Positioning Systems (GPS).

4.1.9.3 The meeting also supported ICAO's proposal to held a GNSS implementation workshop for the second semester of 2016 to strategize and develop an action plan for the effective implementation of GNSS to support PBN. The United States informed that they support the workshop.

4.1.9.4 Under IP/08, the Secretariat informed of the result of the SACCSA Project with respect to the study of an own SBAS system for the CAR/SAM Regions, detailing activities carried out, the conclusion of the Work Packages and compliance with objectives.

4.1.9.5 The objective of the SACCSA Project was "to develop and plan technical, financial, operational and institutional aspect of a SBAS system for the CAR/SAM Regions" referred as a whole as the Study for an own SBAS in the CAR/SAM Regions. The benefits obtained with the participation in SACCSA were presented in the IP/08 Appendix A and more detailed of the SACCSA Project outcomes were available in the IP08 Appendix B.

4.1.9.6 Under IP/12, United States informed of their Wide Area Augmentation System (WAAS) from its commission by the FAA in July of 2003 up to the current Phase IV of the programme, where system modifications will support future dual-frequency user capabilities (near Cat-I levels of service (LPV Approach) over Canada, Mexico and United States, and in South America).

4.1.9.7 WAAS currently provides a CAT I equivalent approach service known as Lateral Precision with Vertical guidance (LPV), with decision heights down to 200 ft.

4.1.9.8 Currently, over 80,000 aircraft in the United States have equipped with WAAS and there are over 4,000 LPV procedures published. WAAS service area extends over Canada and Mexico (http://www.faa.gov/about/office_org/headquarters_offices/ato/service_units/techops/navservices/gnss/approaches/). There are currently four airports in Mexico that have completed surveys that would support the development of future procedures. Mexico had informed of their interest to publish LPV procedures.

4.1.9.9 Under WP/21, the representative of DW International gave a presentation of their application on GNSS RAIM Prediction System (GRPS), which provides RAIM/RNP predictions requirements as required in the PBN Manual for different navigation specifications on any required defined service volume. The GRPS has been implemented in the Asia/Pacific, Europe and recently in the SAM region (SATDIS Service)

4.1.9.10 Considering the above and its potential benefits, the Meeting recommended that the information of the GRPS be analyzed by each State/ANSPs as deem necessary for further discussion of the ANI/WG.

4.1.9.11 Under IP/24, Trinidad and Tobago presented the operational requirements and solution for communication between the FIRs of PIARCO and Dakar through the deployment of AFISNET (African and Indian Ocean Satellite Network), and Very Small Aperture Terminal (VSAT) stations to link the FIR of PIARCO to Dakar kindly offered by ASECNA. This same proposal was made to French Guyane. Training was provided and the equipment was shipped. Installation will commence in June 2015 with commissioning tentatively in July 2015.

4.1.9.12 Under WP/15 the Secretariat presented implementation progress of the ICAO Technical Cooperation Project– *Implementation of Performance-Based Air Navigation Systems for the CAR Region (RLA/09/801)* in support to the implementation of air navigation issues on behalf of Project member States.

4.1.9.13 The Secretariat emphasized supporting CAR Region States for national implementation of future systems and services in accordance with the NAM/CAR Regional Performance-Based Air Navigation Implementation Plan (RPBANIP), through *ICAO Regional Project for the Caribbean Region – Implementation of Performance-Based Air Navigation Systems (RLA/09/801)*.

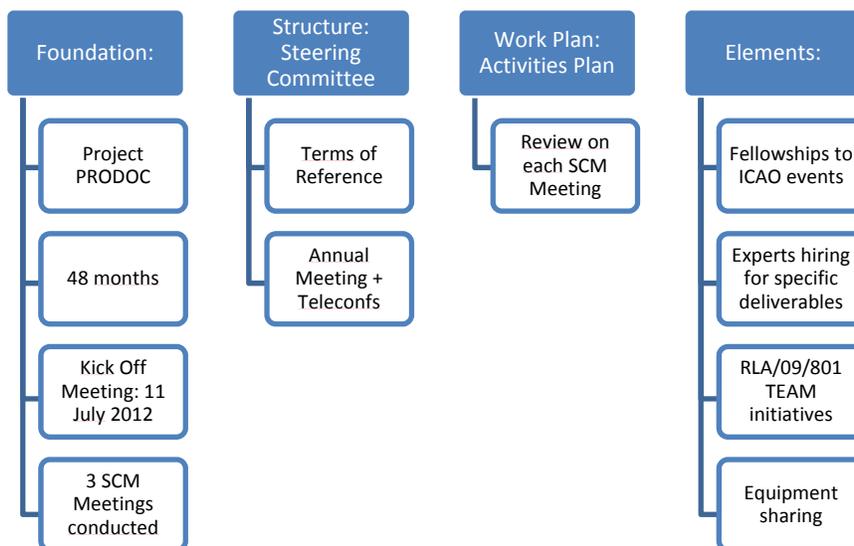
4.1.9.14 The Secretariat indicated to the Meeting that this Project is a tool for member States to implement air navigation requirements and contributes to increase safety and efficiency.

4.1.9.15 Current project members are: Bahamas, Barbados, Cuba, Curaçao, Dominican Republic, Haiti, Jamaica, Mexico, OECS States Organization of Eastern Caribbean States (OECS) (Antigua and Barbuda, Grenada, Saint Kitts and Nevis, Saint Lucia and Saint Vincent and the Grenadines), Trinidad and Tobago, and Central American States (Belize, Costa Rica, El Salvador, Guatemala, Honduras and Nicaragua) through COCESNA. United States participates providing in-kind support.

4.1.9.16 The Secretariat presented an analysis of the project activities to 12 May 2015, with an approximate progress of 56% with the following activities:

Sub-Projects	Events
<i>Sub-Project 1</i> <i>Implement a CAR Region PBN Airspace Concept</i>	3 Workshops 1 Course 2 <i>RLA/09/801 TEAMs</i>
<i>Sub-Project 2</i> <i>Implement Regional Air Traffic Flow Management (ATFM)</i>	1 <i>RLA/09/801 TEAM</i>
<i>Sub-Project 3</i> <i>Implement Flexible Use Airspace (FUA)</i>	1 Seminar
<i>Sub-Project 4</i> <i>Enhance ATS situational awareness and improve operational efficiency of ATS Unit(s)</i>	3 Meetings / Workshops 1 Meeting 10 <i>RLA/09/801 TEAMs</i>
<i>Sub-Project 5</i> <i>Enhance Aerodrome Operations Capacity and Efficiency</i>	4 Meetings / Workshops 1 <i>RLA/09/801 TEAM</i>
<i>Sub-Project 6</i> <i>Improve Regional Safety</i>	1 Course 2 Meetings / Workshops 1 <i>RLA/09/801 TEAM</i>
<i>Sub-Project 7</i> <i>Improve Search and Rescue System</i>	1 Seminar in conjunction with Sub-Project 3
<i>Sub-Projects 1 to 7</i>	3 Meetings

4.1.9.17 The Meeting recalled the management basics of the Project:



4.1.9.18 Likewise, the Meeting took note of the *RLA/09/801 TEAM* missions for 2015, in key air navigation areas:

- *Runway Safety Team (RST)* – requested by Cuba
 - Dates to be confirmed/agreed
- *Air Traffic Flow Management (ATFM)* – requested by Cuba
 - July 2015
- *Controller-Pilot Data Link Communication (CPDLC)* – requested by COCESNA
 - July 2015
- *Controller-Pilot Data Link Communication (CPDLC)* – requested by Trinidad and Tobago
 - October 2015
- *Aeronautical Information Management (AIM)* – requested by Barbados
 - November 2015 or the beginning of 2016 (first trimester)
- *MEVA III* – México
 - June 2015
- *Aeronautical message handling system (AMHS)* – Mexico
 - August 2015

4.1.9.19 The Secretariat asked to the participants of the Meeting to send an official letter to the ICAO NACC Regional Office to officially request a *RLA/09/801 TEAM* Mission.

4.1.9.20 The Secretariat mentioned that all the documentation related to Project *RLA/09/801*, is available for the State Members in <http://www.icao.int/NACC/Pages/edocs-tc.aspx>, website that includes the following documentation:

- Reports of the Steering Committee Meetings
- Project Members (SCM PoCs)
- 2015-2016 Plan of Activities
- Organizational Chart
- Steering Committee Terms of Reference
- Fellowships Granted per Project Member
- Steps to Apply for a Fellowship
- ICAO Fellowship Nomination Form
- ICAO Fellowship Termination Form
- ICAO Guide for Fellowship Holders

4.2 National Plans Reports on Aviation System Block Upgrade (ASBU) (AIM, ATM and CNS)

4.2.1 The United States, under IP/13, presented the status of their implementation of the ICAO Aviation System Block Upgrades (ASBUs), highlighting that to date, all of the modules in Block 0 have been implemented, either across the National Airspace System (NAS) or at select locations, and are working on additional Blocks. The tables presented in the IP/13 show the list of ASBU Block 0 modules and their elements, identifying 47 elements for the 18 Block 0 modules.

4.2.2 Under NI/18, Cuba presented its experience to comply with the metrics and targets related to the RPBANIP and Block 0 of the ASBU, with the definition of their National Performance Objectives (NPO) and the Block 0 14 modules of the ASBU methodology adopted. Similarly, they informed of its two ASBU TRAINAIR *Plus* Courses in 2014, of the TRAINAIR *Plus* course on ASBU given in May 2015, the activities plan of the ASBU Methodology Implementation National Group, and the current elaboration of the Air Navigation National Plan based on the performance for Cuba v.1.

4.2.3 Under IP/21, the Meeting was informed of the IATA/RTCA proposal made in the GREPECAS/17 Meeting for the establishment of a State/industry collaboration project with the objective to provide fundamental input to the State or regional implementation plan(s) using the methodology based on the ASBU and aligned with the GANP strategic objectives.

4.2.4 The Meeting took note that this proposal has been first reviewed by the SAM/IG meeting in October 2014 and not by the ANI/WG in 2014. Both RTCA and IATA are working to secure funding to source the project through industry, looking for an alternative approach that might be able to be funded and can be used as a “proof of concept” to the original project.

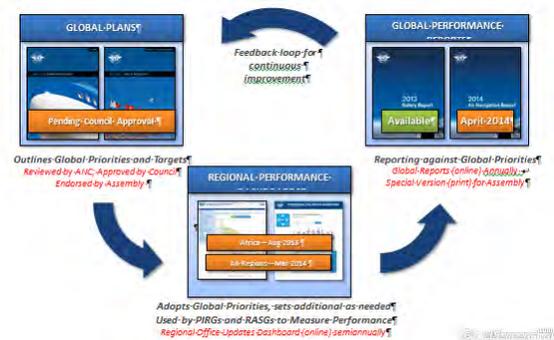
4.2.5 The strategy and scope will be used but on a smaller scale in order to reduce the amount of investments by selecting a single country within the region with the goal of modelling a regional approach. IATA will notify the ICAO NACC Regional Office on the results and actions whenever they are available.

Agenda Item 5 Performance Monitoring of Air Navigation Systems

5.1 Air Navigation Report Form (ANRF) Review-Regional Level 5.2 Progress Report by States

5.1 Under WP/13, the Secretariat expressed the concern for the lack of use of the ANRFs adopted with the RPBANIP and proposed several ideas for review and improvements for this form to be implemented, including an analysis of the air navigation metrics.

5.2 The Meeting reminded the agreements achieved from the ANI/WG/01 and NACC/WG/04 meetings to monitor the implementation through the ANRF contained in the ICAO ASBU Modules, whose information is part of the regional input to the global follow-up made in the Annual Global Air Navigation Report and feedback for the global Air Navigation Plan (GANP) and the Regional dashboards.



5.3 ICAO highlighted its 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.

5.4 At the ANI/WG/2 meeting, an Ad hoc Group was formed to discuss metrics and performance reporting. Along with the information above and DP/09, the Ad hoc Group considered WP/14 in which Canada and the United States proposed revisions to the ANRF to be used by States in the NAM/CAR Regions.

5.5 The Meeting discussed the difficulty for Regions and States to correlate their plans with the ICAO ASBU planning framework. In particular, the information about the ASBU Modules provided in the GANP was not sufficiently detailed to permit simple mapping to existing regional and national plans. The Meeting agreed that the module descriptions were of high level and were not suitable to guide specific implementations. To determine implementations, it is necessary a level of detail that was not provided in the GANP.

5.6 The Meeting reviewed a working document used by some of its members to map their national air navigation implementation plans to ASBU implementation. The document consisted of the basic Module information provided in the GANP, plus the elements for each Module, determined by careful review of the ASBU Working Document.

5.7 The Meeting provided a straightforward tool for States and Regions to determine how their particular air navigation improvements would address ASBU implementation. It was noted that the ASBU Working Document (Attachment to 12TH ANCONF/12 Report) dated March 2013 is very large, not generally available and inconsistently written. Additionally, the Module elements were only sometimes directly listed; for many Modules, it is necessary to extract the elements from the descriptive text, which is repetitive.

5.8 The Meeting examined the performance needed to be measured, particularly in regard to ICAO's No Country Left Behind initiative. The Ad hoc Group agreed that the first indicator to be measured is if a State has assessed the requirement and feasibility of implementing a specific operational improvement. The Meeting agreed that a flow chart description of the assessment, planning and implementation process would assist States in reporting their actual implementation status and also ICAO in monitoring if a State was being "Left Behind" at critical steps of the implementation process.

5.9 The Meeting agreed a metrics table for all ASBU Block 0 elements and then reviewed the RPBANIP and inserted already agreed metrics in the appropriate places in the reviewed ANRF as shown in DP/09 (Appendix A). All metrics from the RPBANIP were highlighted. This was possible for all ASBU Block 0 Modules except APTA (Airport Accessibility), for which the RPBANIP descriptions were not technically correct. It is therefore suggested that this section is reviewed by matter experts.

5.10 In this regard, a preliminary analysis for completing the air navigation targets was conducted as shown in **Appendix Q**, where several metrics need to be defined starting with the definition of the success, selection and application criteria.

5.11 The Meeting concurred that the new approach for the ANRFs was a more practical and simple way of using the ANRFs for States and Regions to determine how their particular air navigation improvements would address ASBU implementation. Also the Meeting considered that training and more practical exercises on the new ANRFs will facilitate its understanding and application.

5.12 In this regard, the Meeting agreed on the following Draft conclusion:

DRAFT CONCLUSION
ANI/WG/2/20

**ADOPTION OF NEW ANRF AND REPORTING APPROACH TO
ASBU IMPLEMENTATION**

That, in order to provide a straightforward tool for States/Territories/International Organizations to determine their operational air navigation improvements:

- a) the NAM/CAR States/Territories review and adopt the proposed new ANRFs for application by **June 2016 (Appendix R)**;
- b) the NAM/CAR States/Territories assess their status of implementation and report to ICAO NACC Regional Office by **30 July 2016**; and
- c) ICAO organize by the first semester of 2016 a hands-on ANS/ASBU ANRF workshop for the use and understanding of the new ANRFs with the participation of CANSO, IATA , Civil Aviation Training Centers and air navigation planning experts.

Agenda Item 6 Human Factor and Training Issues

6.1 Under IP/10, the Secretariat presented the results of the Second NAM/CAR Civil Aviation Training Centres Working Group Meeting (NAM/CAR/CATC/WG/2).

6.2 The Meeting stressed the importance that training is an essential element for skill development and human performance as well as a key element for all planning, implementation, operation and improvement phases of aeronautical activities.

6.3 The Meeting took note about ICAO's training policy. The specific mechanisms available to support the NAM/CAR/CATC/WG, Civil Aviation Training Centres (CATCs) and States were also presented, and concrete proposals for joint and coordinated work among the States, CATCs, the ICAO NACC Regional Office and the ICAO Headquarters Global Aviation Training (GAT) Office were offered.

Agenda Item 7 Terms of Reference (ToRs) and Work Methodology Review

7.1 Under WP/17, the Meeting reviewed and approved the ANI/WG Chairman's update to the current Terms of Reference and the Work Programme (**Appendix S**), reflecting the support to the ICAO campaign for No Country Left Behind (NCLB) and the new development of the eANP. In this regard the following draft conclusion was proposed:

DRAFT CONCLUSION

ANI/WG/2/21

APPROVAL OF ANI/WG TERMS OF REFERENCE AND WORK PROGRAMME

The Terms of reference and Work programme as shown in Appendix S are considered approved.

Agenda Item 8 Other Business

8.1 Under IP/07, the Secretariat included information for the Meeting on the Aerospace Symposium, which main objective was oriented to brought together representatives of the aviation community and the space community at governmental and non-governmental level, considering the commercial and private space sector, to explore existing regulatory mechanisms and practices in aviation and space transportation. The Symposium explored challenges and opportunities of emerging space activities, in particular commercial space transportation and suborbital flights.

8.2 Under IP/11, the Secretariat presented to the Meeting the conclusions of the 5th CAPSCA Global Coordination Meeting and 4th CAPSCA Middle East Meeting, which took place in Cairo last November. It is important to emphasize that the World Health Organization (WHO) continues leading in public health matters, including information exchange facilitation improvement and cooperation in strengthening safety of health. Likewise, the efforts to control public health threats require that all the interested parties adjust to the new challenges to continuously improve coordination and cooperation respectively.

8.3 Under IP/19, the Secretariat informed on the importance of the ICAO Second High-Level Safety Conference (HLSC) 2015, held at ICAO Headquarters, Montreal, Canada, from 2 to 5 February 2015, which has 3 main topics:

- Reviewing the current situation
- Future approach to manage aviation safety
- Facilitating increased regional cooperation

8.4 Some of the important recommendations from the Conference related to the following areas were presented:

- Improving the effectiveness of the implementation of the State safety oversight and the State Safety Programme (SSP) as well as developing new safety management provisions
- The support of Regional Aviation Safety Groups (RASGs) to assist States in implementing safety management provisions in order to achieve Global Aviation Safety Plan objectives.
- Supporting safety information protection, sharing and exchange, to ensure a safe international aviation system.

8.5 The Secretariat informed that based on the Meeting Rotational scheme, the next ANI/WG Meeting, ANI/WG/3 will be held at the ICAO NACC Regional Office, tentatively in July 2016.

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

Number	Conclusion/Decision	Deliverable	Responsible for action	Deadline
2/1	MEETING/WORKSHOP ON ATM, AIM AND MET COORDINATION That, in preparation of the Meeting/Workshop on ATM/AIM/MET Coordination (May 2016), and in order to promote coordination to improve safety during natural events with major aviation impact, States/Territories of the CAR Region and COCESNA provide information on coordination among ATM, AIM and MET services to the ICAO NACC Regional Office by 28 December 2015..	Provide information for workshop	CAR States and COCESNA	28 Dec 2015
		Conduct Workshop	ICAO NACC Office	May 2016
2/2	COORDINATION FOR UPDATED VERSION OF THE ICAO WRC-2015 POSITION That in order to ensure an effective coordination for the support of the ICAO Position for WRC-2015 considering the update of this position by ICAO NAM/CAR States:			
	a) timely coordinate that this update of the ICAO Position is shared with their national Spectrum regulators; and	Coordination with National Spectrum Regulator	NAM/CAR States	August 2015
	b) attend as possible, with their National Spectrum Regulators to attend the last 2015 Regional CITEL (Ottawa, Canada, August 2015) and vote for the Interamerican proposals related with the ICAO position	Attendance to last 2015 Regional CITEL (Ottawa, Canada)	NAM/CAR States	August 2015
2/3	IMPROVEMENT OF THE EFFECTIVENESS OF THE PBN TASKFORCE That, in order to improve the effectiveness of the PBN Task Force, CAR States:			
	a) update the PBN Taskforce PoCs information by June 30 2015; and	Update PBN TF PoC	CAR States/Territories	30 June 2015
	b) provide the appropriate resources to the nominated members of the taskforce in order for them to participate in Telcons/Web meetings, attend meetings/training events and contribute to group activities.	Provide resources to PBN TF PoC	CAR States/Territories	ANI/WG/3
2/4	REPORTING OF FUEL SAVING INITIATIVES In order to quantify the effectiveness of proposed PBN initiatives within the CAR Region			
	a) PBN Task Force in coordination with IATA, submit to ICAO by 30 June 2015 the final version of the form to report fuel saving from PBN initiatives;	Submit final fuel saving form	PBN Task Force	30 June 2015
	b) ICAO NACC Regional Office to submit States/Territories this reporting form that is capable of reflecting predicted fuel savings resulting from proposed PBN initiatives by 30 July 2015;	Submit fuel saving reporting form	ICAO NACC Regional Office	30 July 2015
	c) CAR States/Territories submit information relating to predicted fuel savings based on proposed PBN implementation in the agreed to standardized format every 6 months, as applicable; and	Submit fuel saving form complete	CAR States/Territories	Every 6 months
	d) PBN Task Force to collaborate with IATA for validation and processing of information received from States.	Validate and process information	PBN Task Force	Every 6 months

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Appendix A to the Report

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Number	Conclusion/Decision	Deliverable	Responsible for action	Deadline
2/5	THE IMPROVEMENT OF THE EFFECTIVENESS OF THE ATFM TASK FORCE That, in order to improve the effectiveness of the ATFM TF, CAR States/Territories			
	a) update the POCs for the ATFM TF by 31 July 2015;	Update ATFM TF PoC	CAR States/Territories	31 July 2015
	b) provide to the members of the taskforce nominated the appropriate time and resources in order to participate in Telcons/GoTo Webinars and attend meetings/training events that contribute to ATFM; and	Provide resources to ATFM TF PoC	CAR States/Territories	ANI/WG/3
	c) based on the ATFM TF work programme, report their current ATFM implementation status by 14 August 2015.	Inform ATFM implementation progress	CAR States/Territories	14 August 2015
2/6	AIDC IMPLEMENTATION CHECKLIST That, in order to support the implementation of AIDC, States/Territories in the CAR Region, adopt the attached AIDC Implementation checklist (Appendix E refers) as a guidance for planning and implementing AIDC service.	Adopt AIDC Implementation Checklist	CAR States/Territories	ANI/WG/03
2/7	AIDC IMPLEMENTATION AND MONITORING That in order to accurately monitor and report the operational benefits and implementation progress as well as to facilitate the harmonious AIDC implementation:			
	a) the ICAO NACC Regional Office upload the AIDC Regional Implementation Plan into the ANI/WG Webpage;	Upload AIDC Regional Implementation Plan into ANI/WG Webpage	ICAO NACC Office	Upon approval of ANI/WG/02 report
	b) the NAM/CAR States/Territories review and inform the AIDC TF and ICAO of any update to the AIDC Regional Implementation Plan by the ANI/WG/03 Meeting; and	Review and report updates to AIDC Regional Implementation Plan	NAM/CAR States	ANI/WG/3
	c) the AIDC TF track the implementation progress of AIDC as shown in the AIDC Implementation Performance Indicator, including operational benefits information by the ANI/WG/3 Meeting.	Track AIDC implementation progress	AIDC TF	ANI/WG/3
2/8	AIDC PLANNING IMPLEMENTATION That, in order to promote the planning of successful AIDC implementation the CAR States/Territories update the status of their FPL System and the dis-use of converters (Appendix F refers) by ANI/WG/03 Meeting..	Update status of FPL system and converters	CAR States/Territories	ANI/WG/3
2/9	PROVISION OF FPL SUPPLEMENTAL INFORMATION That, in order to control and ensure the provision of FPL supplemental information the CAR States/ANSPs establish agreements with operators to provide FPL supplemental information to the ANSPs when needed, and the complete contact information be used at any time for this purpose, or to provide this information for each flight plan by means of the local dispatch office. The agreement to provide the information on demand would only apply to those operators that have 24/7 availability of personnel to attend the request.	Provision of FPL supplemental Information	CAR States/Territories	ANI/WG/03

Number	Conclusion/Decision	Deliverable	Responsible for action	Deadline
2/10	<p>AMENDMENT TO ADS-B/IMP/2 MEETING REPORT That in order to approve the ADS-B/IMP/02 Meeting Report, the ADS-B TF amends the report to reflect the changes in Software delivery dates and CONOPS conclusion by 20 June 2015.</p>	Amend ADS-B/ IMP Report	ADS-B TF	20 June 2015
2/11	<p>ADS-B/MLAT MONITORING PLAN That, in order to support the implementation of ADS-B and MLAT in the CAR Region:</p>			
	<p>a) the Surveillance System Plan (Appendix K refers) be taken as a reference for the planning and implementation of MLAT and ADS-B systems; and</p>	Take Surveillance System Plan as reference	CAR States/Territories	ANI/WG/03
	<p>b) States/Territories in coordination with ICAO to update this plan by 20 December 2015.</p>	Update Surveillance System Plan	CAR States/Territories	20 December 2015
2/12	<p>ADS-B IMPLEMENTATION REFERENCE DOCUMENTATION That in order to support and guide implementation of ADS-B in the CAR Region and to achieve regional milestone date of December 2018 for the implementation of ADS-B OUT:</p>			
	<p>a) the Regional ADS-B CONOPS document version 1.0 be adopted as a guide to planning and implementation of ADS-B service to the States/ANSPs in the region; and</p>	Take as reference the ADS-B CONOPS document	CAR States/Territories	December 2018
	<p>b) Technical Specification document be adopted as a guide for the acquisition and implementation of ADS-B service.</p>	Take Technical Specification document as a guide	CAR States/Territories	December 2018
2/13	<p>DATA PROCESSING CAPABILITIES FOR ADS-B That in order to follow-up and guide the ADS-B implementation in the CAR Region, and to achieve the regional milestones by December 2018 for ADS-B Out implementation:</p>			
	<p>a) the ADS-B Data Processing Capabilities Table (Appendix L) be adopted as a guidance on the status of the ATS Automation System to process ADS-B data; and</p>	Take ADS-B Data Processing Capabilities Table as guidance	CAR States/Territories	December 2018
	<p>b) CAR States/Territories to confirm these capabilities to ICAO by December 2015.</p>	Inform Status of ADS-B Data Processing capabilities	CAR States/Territories	December 2015
2/14	<p>ADS-B TRIALS KICK OFF IN CAR REGION That, in order to promote ADS-B implementation States/Territories that have not yet conducted trials coordinate the implementation/planning test of ADS-B with ADS-B TF in order to obtain the operating benefits identified.</p>			

Number	Conclusion/Decision	Deliverable	Responsible for action	Deadline
2/15	AERODROME MAPPING DATA BASE (AMDB) That States/Territories/International Organizations:			
	a) take into account the applications based on the aerodromes data publication, including the new air-ground collaborative systems applying SWIM principles according with ASBU dates for Block DATM (AIM);	Take into account the applications based on the aerodromes data publication	NAM/CAR States/Territories	ANI/WG/3
	b) accelerate the adoption of aerodrome mapping databases provision and maintain close coordination with other Aeronautical Authorities related with the implementation of the AMDB; and	Accelerate the adoption of aerodrome mapping databases provision and maintain close coordination with other Aeronautical Authorities	NAM/CAR States/Territories	ANI/WG/3
	c) participate in the Terminal Procedures and Aerodrome Mapping Seminar to be held at the ICAO NACC Regional Office, Mexico City, Mexico, 24 to 28 August 2015.	Participate in the Terminal Procedures and Aerodrome Mapping Seminar	NAM/CAR States/Territories	24 August 2015
2/16	PROCEDURES FOR AIR NAVIGATIONS SERVICES (PANS) – AERONAUTICAL INFORMATION MANAGEMENT (AIM) The That States/Territories:			
	a) review the draft version of the mentioned document as shown in Appendix to IP/09; and	Review document on PANS-AIM	NAM/CAR States/Territories	31 December 2015
	b) send to ICAO NACC Regional Office their comments no later than 31 December 2015.	Send comments	NAM/CAR States/Territories	31 December 2015
2/17	AMHS IMPLEMENTATION PROCESS IN THE CAR REGION That in order to streamline the implementation of AMHS Systems, CAR Region States/ANSPs			
	a) update accordingly the CAR Region Implementation Matrix by 31 Dec 2015; and	Update CAR Region Implementation Matrix	CAR States/ANSPs	31 Dec 2015
	b) participate in the ATN Application Workshop (2016, Sint Maarten) to exchange information and advance the implementation.	Participate in workshop	CAR States/ANSPs	2016
2/18	CPDLC/ADS-C IMPLEMENTATION GUIDANCE AND CONSIDERATIONS That, in order to support the implementation of CPDLC, ADS-C, the States/Territories involved adopt as references the CPDLC Implementation Considerations; and a CPDLC/ADS-C implementation Action Plan shown in Appendix O and Appendix P, respectively.	Adopt as references the CPDLC Implementation Considerations; and a CPDLC/ADS-C implementation Action Plan	CPDLC/ADS-C involved States-ANSPs	December 2018

Number	Conclusion/Decision	Deliverable	Responsible for action	Deadline
2/19	<p>GOLD TASK FORCE DISBANDMENT That, the GOLD TF, based on the ANI/WG ToRs, Work Programme, and established ANI/WG structure to facilitate the implementation FANS 1/A Service, namely ADS-C and CPDLC, has fulfilled its mandate as outlined in its terms of reference and work programme; therefore the GOLD TF is disbanded</p>	Dissolution of TF	GOLD TF	Immediately
2/20	<p>ADOPTION OF NEW ANRF AND REPORTING APPROACH TO ASBU IMPLEMENTATION That, in order to provide a straightforward tool for States/Territories/International Organizations to determine their operational air navigation improvements:</p>			
	a) NAM/CAR States/Territories to review and adopt the proposed new ANRFs for application by June 2016 (Appendix R);	adopt the proposed new ANRFs	NAM/CAR States/Territories and ANSPs	June 2016
	b) NAM/CAR States/Territories to assess their status of implementation and report to ICAO NACC Regional Office by 30 July 2016; and	Assess implementation Status	NAM/CAR States/Territories	July 2016
	c) ICAO to organize by the first semester of 2016 a hands-on ANS/ASBU ANRF workshop for the use and understanding of the new ANRFs with the participation of CANSO, IATA , Civil Aviation Training Centers and air navigation planning experts.	Organize ASBU ANRF workshop	ICAO	First semester 2016
2/21	<p>APPROVAL OF ANI/WG TERMS OF REFERENCE AND WORK PROGRAMME The Terms of reference and Work programme as shown in Appendix S are considered approved.</p>	Approval of updated ToRs and work programme	ANI/WG Members	Final report of ANI/WG/02

**APPENDIX B
VALID NACC/WG/4 CONCLUSIONS RELATED TO THE ANI/WG**

No.	CONCLUSIONS	FOLLOW-UP	STATUS
<p>CONCLUSION NACC/WG 4/1 APPROVAL OF THE NAM/CAR REGIONAL PERFORMANCE-BASED AIR NAVIGATION IMPLEMENTATION PLAN (RPBANIP) VERSION 3.0</p>	<p>That, considering that the NAM/CAR Regional Performance Based Air Navigation Implementation Plan (NAM/CAR RPBANIP), is the basis for air navigation implementation in the NAM/CAR Regions, where regional targets and milestones have been agreed and regional air navigation priorities are reflected, the Civil Aviation Directors approved the RPBANIP version 3.0</p>	<p>Directors of Civil Aviation accepted version 3.1 after final reviewed by the NACC/WG members</p>	<p>Superseded by Conclusion NACC/DCA 5/3</p>
<p>CONCLUSION NACC/WG 4/2 UPDATE OF NATIONAL AIR NAVIGATION IMPLEMENTATION PLANS IN ACCORDANCE TO THE RPBANIP VERSION 3.0</p>	<p>That, for the effective and timely development and implementation of air navigation in the NAM/CAR Regions ensuring harmonization and coordination of efforts aimed at improving international civil aviation safety, capacity and efficiency, the States/Territories and International Organizations of the NAM/CAR Regions:</p> <p>a) review and update their national Air Navigation Implementation Plans in accordance to their national needs and RPBANIP regional framework; and b) inform and submit ICAO these national plans by 31 December 2014.</p>	<p>Version to follow is RPBANIP 3.1 as approved by the Conclusion NACC/DCA/5/4</p> <p>To be followed-up in ANI/WG/2 Meeting for national AN Plans</p>	<p>Superseded by Conclusion NACC/DCA 5/3</p>
<p>CONCLUSION NACC/WG 4/3 FUEL SAVINGS AND CO₂ GAS EMISSION RESULTS IN THE NAM AND CAR REGIONS</p>	<p>That, considering the importance of obtaining effective information on the consumption of fuel, IATA:</p> <p>a) coordinate with Canada, Dominican Republic, Mexico and United States regarding effective fuel savings information resulting from the implementation of RNAV routes as well as PBN approach procedures at peak hours in 10% of airports in States with the largest number of operations, as applicable, in accordance with the format included in Appendix A to this report; and b) provide the ICAO NACC Regional Office with information on fuel savings and reduction of CO₂ emission obtained from implementation of PBN routes and approach procedures in the NAM and CAR Regions not later than 31 December 2014.</p>	<p>A new conclusion was adopted in the ANI/WG/02 for collecting/processing the fuel saving and CO₂ emission reductions.</p>	<p>Valid</p>

No.	CONCLUSIONS	FOLLOW-UP	STATUS
CONCLUSION NACC/WG 4/4 ATS INCIDENTS SAFETY ASSESSMENT	<p>That, considering the need to improve safety in the ATS airspace, States and Territories which have not already done so, are urged to implement by 31 May 2015:</p> <p>a) training programmes on flight plan coordination messages in ATC units; and b) ATS incidents and LHD occurrences safety assessment processes in accordance with the ICAO safety management system and timely reporting of the assessment tendencies to their corresponding civil aviation authorities.</p>	<p>Was noted by the ANI/WG/02 Meeting and PBN TF will review this conclusion under their tasks.</p>	<p>Valid</p>
CONCLUSION NACC/WG 4/5 ACTIVE SUPPORT FROM STATES FOR ICAO ITU WRC-2015 POSITION	<p>That NAM/CAR States/Territories, in order to ensure their active support for the ICAO WRC-15 position for the protection of the aeronautical frequency spectrum and satisfy future frequency spectrum aviation needs:</p> <p>a) include the main points addressed by the ICAO International Telecommunication Union (ITU) WRC-15 position for the protection of the C-band when used for aeronautical purposes and the ICAO WRC-15 position as a whole, including any amendments, when preparing national ITU WRC-15 proposals in coordination with the National Spectrum Management Authority; b) include representatives from civil aviation administrations and aviation experts from national delegations, to the extent possible, when participating in the ITU Radio and regional preparatory activities for WRC-15; and c) if not already done so, nominate their focal point for WRC-2015 to ICAO by December 2014.</p>	<p>A new conclusion was adopted by the ANI/WG/02 for a final follow-up for the last 2015 WRC Meeting in Ottawa.</p>	<p>Valid</p>
CONCLUSION NACC/WG 4/6 REPORTING ON THE PROGRESS ACHIEVED IN THE IMPLEMENTATION OF THE AERONAUTICAL INFORMATION EXCHANGE MODEL (AIXM)	<p>That NAM/CAR States and international organizations:</p> <p>a) adopt the AIXM 5.1 information exchange model; and b) report on the progress achieved with application of the conceptual model and aeronautical information exchange to the ICAO NACC Regional Office by 31 December 2014.</p>	<p>AIM TF is following up this task. No major progress was reported.</p>	<p>Valid</p>

No.	CONCLUSIONS	FOLLOW-UP	STATUS
CONCLUSION NACC/WG 4/7 AIM ACTION PLANS FOR THE AIS TO AIM TRANSITION	That CAR States that have not yet done so: a) develop/update and execute the Action Plans for the transition from AIS to AIM taking into consideration the latest AIM developments, and the AIM TF work until AIM is completed according the AIM RPO of the RPBANIP; and b) inform the ICAO NACC Regional Office of all the AIM progress to be presented at the upcoming GREPECAS/17 Meeting.	The progress from AIS to AIM was reported by the AIM TF as part of phase I of the POS targets.	Valid
CONCLUSION NACC/WG 4/8 AMENDMENT TO REGIONAL SUPPLEMENTARY PROCEDURES (DOC 7030) ON THE AIR TRAFFIC FLOW MANAGEMENT (ATFM) IMPLEMENTATION IN THE NAM/CAR REGIONS	That: a) ICAO, with CAR and NAM States support, takes the necessary actions to publish the required information on Air Traffic Flow Management (ATFM) in the Regional Supplementary Procedures (Doc 7030) for NAM and CAR by 31 December 2014 ; and b) States timely publish corresponding information on Air Traffic Flow Management (ATFM) applicable in their ATS airspace jurisdiction in the corresponding AIP.	ATFM TF has taken note of this and will follow up in their work programme	Valid
CONCLUSION NACC/WG 4/9 ADOPTION OF NAM INTERFACE CONTROL DOCUMENT (ICD)	That the NAM ICD is adopted as the preferred ICD in the CAR Region, not precluding the use of other ICDs under circumstances favourable to the latter.	A NAM ICD implementation checklist was recommended by the ANI/WG/02	Valid
CONCLUSION NACC/WG 4/10 ADS-B OUT IMPLEMENTATION IN THE NAM/CAR REGIONS	That all States/Territories in the NAM/CAR Regions adopt/include the ADS-B implementation date of 31 December 2018 in their implementation plans to finalize operational implementation of ADS-B OUT.	Actions have been taken by the ANI/WG/02 toward this regional milestone of Dec 2018	Valid

No.	CONCLUSIONS	FOLLOW-UP	STATUS
CONCLUSION NACC/WG 4/11 ADOPTION OF THE GOLD DOCUMENT, VERSION 2, FOR DATALINK APPLICATIONS IN THE NAM/CAR REGIONS	<p>That, in order to promote and facilitate implementation of data link applications in the NAM and CAR Regions, the respective States and Territories adopt the GOLD Document, Version 2, as the guidance material and reference document for implementation of data link applications.</p>	<p>ANI/WG/02 has adopted the use of the GOLD Document and has proposed some consideration and implementation template on this respect.</p>	<p>Valid</p>
CONCLUSION NACC/WG 4/12 APPROVAL OF IPV4 ADDRESSING SCHEME, VER 1.0	<p>That, in order to expedite and facilitate the implementation of the IPv4 ATN in the CAR Region, States/Territories of the CAR Region:</p> <p>a) approve the revised version of the CAR IPv4 addressing scheme, version 1.0;</p> <p>b) implement their Aeronautical Telecommunication Networks (ATNs) in accordance with the IPv4 addressing scheme ver. 1.0, where applicable; and</p> <p>c) report use/planned use to the ICAO NACC Regional Office no later than December 2015.</p>	<p>New version was updated as V 1.1</p> <p>This addressing scheme is being use for AMHS interconnections</p>	<p>Valid</p>
CONCLUSION NACC/WG 4/13 APPROVAL OF ANI/WG ACTION PLANS AND TASK FORCE(S) ToRs AND WORK PROGRAMMES	<p>That, in order to align implementation activities with regional NAM/CAR RPBANIP air navigation and optimize implementation working groups coordination and results of the Task Forces, the NAM/CAR States/Territories:</p> <p>a) approve the ANI/WG Action Plans and revised ToRs and work programme of its Task Forces; and</p> <p>b) urge all sub-regional working groups to align their work programme by December 2014 with the ANI/WG Action Plans and Task Force work programmes.</p>	<p>The ANI/WG Action Plans were approved by the Conclusion NACC/DC 5/2.</p> <p>The ANI/WG Chairman reported on the progress of these Action Plans</p>	<p>Completed</p>
CONCLUSION NACC/WG 4/15 AIR NAVIGATION REPORTING/ MONITORING IN THE NAM/CAR REGIONS	<p>That no later than December 2014, for the harmonized and efficient collection of data for reporting and monitoring air navigation implementation progress and achieved performance/benefits, NAM/CAR States/Territories:</p> <p>a) invite all air navigation stakeholders to participate in the data collection and reporting process;</p> <p>b) use the RPBANIP Air Navigation Report Forms (ANRFs) to the extent possible to report their national, sub-regional and regional implementation and performance progress; and</p> <p>c) periodically report to the ICAO NACC Regional Office on the air navigation implementation status.</p>	<p>A new revised ANRF was proposed from the ANI/WG/02 and a review of the existing metrics was made to improve its understanding and application.</p>	<p>Valid</p>

APPENDIX C

Status	Not started/ no iniciado		Lack of progress/ falta de avance		Behind scheduled/ retrasada		Ongoing- as scheduled/ Ok segun programa	
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Revision: June / Junio 2015

ACTION PLAN FOR PBN IMPLEMENTATION/

Task Name/ Tarea	Start/ Inicio	Finish/ Final	Deliverables/ Resultados	Follow-up/ Seguimiento	Responsible/ Responsables	Observations/ Comments- Observaciones/ Comentarios
a) Implement Collaborative Decision-Making (CDM) process in coordination with stakeholders	Abril 2008	Dec 2016	CDM implementation	ATFM/CDM Workshop conducted in 2015. Completed	PBN TF States, Territories, Int. Orgs	
b) Implement PBN Airspace Redesign Project for oceanic, continental and terminal areas in of CAR Region in accordance with the ICAO PBN Manual Doc 9613 and Doc 9992	Abril 2015	Dec 2017	Up-to-date the regional PBN Airspace concept with implementation activities for the period 2015-2017	PBN Workshop conducted in 2015 to update the Regional PBN Airspace Concept	PBN TF States, Territories, Int. Orgs	States to develop a PBN Airspace Redesign Project including: a) revision of regional ATS Route network, b) implementation of CDOs/CCOs c) TMA redesign d) Implementation of PBN approach procedures
c) Analyze GNSS implementation in accordance with PBN airspace concept requirements	Abril 2016	Dec 2018	SACSA Project completed a feasibility study (2015) on the use of GNSS Introduction of GNSS (GBAS and SBAS- lonosphere matters)	GNSS workshop agreed for 2016	SACCSA Project support / WAAS States, Territories, Int. Orgs	
d) GNSS mitigations Plannings	April 2016	Dec 2018	Mitigation means	GNSS workshop agreed for 2016 RAIM Prediction topic presented in ANI/WG/02 Meeting DW Presentation	States, Territories, Int. Orgs	
e) Develop and implement PBN training programme for pilots, ATCOs, operators and regulators	Abril 2014	Dec 2018	PBN training programme	ICAO PBN Manual includes guidelines to develop training programmes	States, Territories, Int. Orgs	PBN TF to support Training Centers WG to develop PBN training programmes for pilots and controllers
f) Optimize the ATS route structure through implementation of RNAV routes between major city pairs with navigation specification RNAV-5 /2 for en-route operations	Abril 2015	Dec 2017	Develop a proposal for amendment (PFA) to Doc 8733 in Dec 2015	A Workshop on Regional Implementation on Performance-Based Navigation PBN Airspace Redesign was conducted on May 2015 States will submit proposals not later than 31 st August 2015	PBN TF States, Territories, Int. Orgs	On-going revision of ATS route network States to send proposals to ICAO NACC Regional Office by 31 st August 2015
g) Implement CDOs/CCOs for SIDs/STARS in terminal areas based on RNAV 1-2 and RNP 1-2/2 navigation specification, as required	Abril 2015	Dec 2016	Implement CDOs/CCOs in TMAs	States continue implementation of CDOs and CCOs	PBN TF States, Territories, Int. Org	
h) Design and implement PBN APV in accordance with Assembly Resolution A37-11	2008	Dec 2016	PBN Instrument Approach Procedures implementations (APV, etc.)	Completed	PBN TF States, Territories, Int. Orgs	
i) Efficient application of longitudinal separation across the NAM/CAR/SAM regions.	Abril 2014	Dec 2017	Analysis of applicable separation minima for transfer traffic between FIRs	ANSPs of States, Territories, Int. Orgs to update existing Letters of Agreement (LOAs) between ATC units	ANSPs of States, Territories, Int. Orgs	PBN TF to support ANSPs While some FIRs were using as low as 5NM in their own airspace, based on existing procedures

ANI/WG/2
Appendix C to the Report

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Task Name/ Tarea	Start/ Inicio	Finish/ Final	Deliverables/ Resultados	Follow-up/ Seguimiento	Responsible/ Responsables	Observations/ Comments- Observaciones/ Comentarios
						and LOAs, in most cases, ten (10) minutes (80NM) were required for transfer from one FIR to the next.
j) Conduct PBN safety assessment based ATC simulations (fast time and/or real time), live trials, etc., as required	Abril 2014	Dec 2016	States to conduct PBN safety assessment	Completed	PBN TF States, Territories, Int. Orgs	
k) Develop performance measurement programme	2008	Dec 2016	performance measurement programme	PBN Targets have been defined in the RPBANIP and the Port of Spain Declaration as Performance metrics. Completed	States, Territories, Int. Orgs	Reviewed by the NACC/DCA Meetings
l) Develop post-implementation PBN Safety Assessment Programme	2010	Dec 2016	States to conduct post-implementation PBN Safety Assessment	Permanent On going activity conducted by States	States, Territories, Int. Orgs	
m) Monitor implementation progress	2008	Dec 2018	Annual review of PBN implementation	On-going activity conducted by ICAO	ICAO, States, Territories, Int. Orgs	

**ACTION PLAN FOR DEMAND AND CAPACITY MANAGEMENT/
PLAN DE ACCION PARA DEMANDA Y GESTION DE LA CAPACIDAD**

Task Name/ Tarea	Start/ Inicio	Finish/ Final	Deliverables/ Resultados	Follow-up/ Seguimiento	Responsible/ Responsables	Observations/ Comments- Observaciones/ Comentarios
a) Identify key stakeholders (ATC service providers and users, military authorities, airport authorities, aircraft operators and relevant organizations) for purposes of coordination and cooperation - using a CDM process	Apr 2014	Dec 2016	CDM implementation	completed	ATFM TF States, Territories, Int. Orgs	Coordination with PBN
b) Analyze traffic flow problems	Apr 2014	Dec 2016	Analysis of traffic flows	A Workshop on Air Traffic Flow Management (ATFM) Implementation for the CAR and SAM Regions was conducted in May, 2015. Completed	ATFM TF States, Territories, Int. Orgs	Established 3 traffic flows in CAR Region in coordination with PBN TF
c) Define common elements of situational awareness between FMUs: i. Common traffic displays ii. Common weather displays iii. Communications (teleconferences, web) iv. Daily teleconference/messages methodology advisories	Apr 2014	Dec 2016	Identify common elements of ATM situational awareness between FMUs	To be reviewed by ATFM TF and report progress	ATFM TF States, Territories, Int. Orgs	Being Follow-up by AIDC TF
d) Develop methods to establish demand/capacity forecasting	Apr 2014	Dec 2016	Identify electronic tools to establish demand/capacity forecasting	To be reviewed by ATFM TF and report progress	ATFM TF States, Territories, Int. Orgs	
e) Define common electronic information and databases required for decision support and alerting systems for interoperable situational awareness between centralized ATFM units	Apr 2014	Dec 2016	ATFM common electronic information and databases and alerting systems required	To be reviewed by ATFM TF and report progress	ATFM TF States, Territories, Int. Orgs	Being Follow-up by AIDC TF
f) Develop regional procedures for efficient and optimum use of aerodrome and runway capacity	Apr 2014	Dec 2016	Develop regional procedures for efficient and optimum use of aerodrome and runway capacity	To be reviewed by ATFM TF and report progress	ATFM TF States, Territories, Int. Orgs	
g) Develop a national ATFM Procedures Manual to manage demand/capacity balancing	Apr 2014	Dec 2016	States to publish their national ATFM Manual	ATFM Manual available	GREPECAS	
h) Develop operational agreements between ATFM units for interregional demand/capacity balancing	Apr 2014	Dec 2016	Develop a model of ATFM LOAs	The ICAO Doc 9971 includes a Model of ATFM LOA. Completed	States, Territories, Int. Orgs	
i) Monitor implementation progress	Apr 2014	Dec 2016	Annual review of ATFM implementation	On-going activity conducted by ICAO	ICAO	

**ACTION PLAN FOR FLEXIBLE USE OF AIRSPACE/
PLAN DE ACCION PARA USO FLEXIBLE DEL ESPACIO AEREO**

Task Name/ Tarea	Start/ Inicio	Finish/ Final	Deliverables/ Resultados	Follow-up/ Seguimiento	Responsible/ Responsables	Observations/ Comments- Observaciones/ Comentarios
a) Establish civil/military coordination bodies	Apr 2014	Dec 2016	civil/military coordination bodies	On-going activity	States, Territories	
b) Arrange for permanent liaison and close cooperation between civil ATS units and appropriate air defence units	Apr 2014	Dec 2016	Permanent liasons	On-going activity	States, Territories	
c) Conduct a regional review of Special Use Airspace: i. assess use of airspace management processes; ii. improve current national airspace management to adjust dynamic changes in tactical stage to traffic flows; and iii. introduce improvements in ground support systems and associated procedures for the extension of FUA with dynamic airspace management processes	Apr 2014	Dec 2016	Special use of Aispace review	A NAM/CAR/SAM Meeting/Workshop to Improve Regional Search and Rescue (SAR) System and Civil/Military Coordination was conducted in Havana, Cuba, 13 to 17 April 2015, several Presentations about FUA were discussed. On-going activity	States, Territories, Int. Orgs, ICAO	
d) implement dynamic ATC sectorization in order to provide the best balance between demand and capacity to respond in real-time to changing situations in traffic flows and to accommodate the preferred routes of users in short-term	Apr 2014	Dec 2018	dynamic ATC sectorization	On-going activity	States, Territories, Int. Orgs, ICAO	
e) Develop performance measurement programme	Apr 2014	Dec 2016	performance measurement programme	On-going activity	States, Territories, Int. Orgs	
f) Monitor implementation progress	Apr 2014	Dec 2016	Annual review of FUA implementation	On-going activity conducted by ICAO	ICAO	

**ACTION PLAN FOR SITUATIONAL AWARENESS IMPROVEMENTS/
PLAN DE ACCION PARA MEJORAS A LA CONSCIENCIA SITUACIONAL**

Task Name/ Tarea	Start/ Inicio	Finish/ Final	Deliverables/ Resultados	Follow-up/ Seguimiento	Responsible/ Responsables	Observations/ Comments- Observaciones/ Comentarios
a) Identify the automation level required according to the ATM service provided in airspace and international aerodromes, assessing: i. Operational architecture design ii. Characteristics and attributes for interoperability iii. Data bases and software iv. Technical requirements	Abril 2014	Dic 2018	Review status of automation	ongoing	States, Territories, Int. Orgs	
b) Implement flight plan data processing systems and electronic transmission tools	Abril 2014	Dic 2018	Full FPL2012 processing/ no converters Reduced lack/duplicate FPLs	Being Follow-up by AIDC TF	AIDC TF States, Territories, Int. Orgs	ICAO Model 2012 FPL – converters removal plan Lack/duplicate FPL Action Plan
c) Implement radar data sharing programmes where benefits can be obtained	Abril 2014	Dic 2017	Radar Data Sharing in all continental areas	Radar data sharing Cuba-Jamaica- COCESNA Radar Data sharing on going in E/CAR	States, Territories, Int. Orgs	Bilateral agreements ECAR Radar Data Sharing Project
d) Develop situational awareness training programmes	Abril 2014	Dic 2018	Identify and inform of training needs	To be reviewed by ADS-B TF and report progress	Training Centers Working Group States, Territories	
e) Identify and implement additional ATM surveillance systems to improve accuracy and coverage of traffic situational information (ADS-B, MLAT, etc.) and associated procedures	Abril 2014	Dic 2018	MLAT implementation ADS-B Implementation	Progress reported by ADS-B TF Report	ADS-B TF States, Territories	ADS-B Implementation Plan
f) Implement ATS automated message exchanges as required (FPL, CPL, CNL, DLA, etc.)	Abril 2014	Dic 2015	AIDC implementation-initial phase	Progress reported by AIDC TF Report	AIDC TF States, Territories, Int. Orgs	AIDC TF to review target date Regional AIDC Plan
g) Implement automated radar handoffs where possible	Enero 2016	Dic 2017	AIDC implementation-second phase	Being Follow-up by AIDC TF: currently only phase 1	AIDC TF States, Territories, Int. Orgs	AIDC TF to review target date Regional AIDC Plan
h) Implement ground and air electronic warnings as needed: i. Conflict prediction ii. Terrain proximity iii. MSAW iv. DAIW v. Surveillance system for surface movement	Abril 2014	Dic 2017	Improvement in electronic alarms / warnings	Need to be reviewed by ADS-B TF and GREPECAS C Project	GREPECAS C Project States, Territories, Int. Orgs	
i) Implement data link surveillance technologies and applications as required: ADS , CPDLC, AIDC	Abril 2014	Dic 2018	CPDLC/ ADS-C Implementation	Being Follow-up by AIDC TF and ANI/WG RLA/09/801 TEAMS	GOLD TF States, Territories	CPDLC implementation Plan (IDEM COM g)
j) Implement additional/ advanced automation support tools to increase aeronautical information sharing i. ETMS or similar ii. MET information iii. AIS/NOTAM dissemination iv. Surveillance tools to identify airspace sector constraints	Abril 2014	Dic 2018	Increase Automation applications	Needs from ATFM, MET and AIS to be defined	States, Territories, Int. Orgs	
k) Training in the application and implementation of automated surveillance technologies and ATS	Abril 2014	Dic 2018	Identify and inform of training needs	ADS-B and AIDC TFs to coordinate with CATC/WG	States, Territories	

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Task Name/ Tarea	Start/ Inicio	Finish/ Final	Deliverables/ Resultados	Follow-up/ Seguimiento	Responsible/ Responsables	Observations/ Comments- Observaciones/ Comentarios
system automation						
l) Enhance the training infrastructure of the region and the training programmes related to surveillance and automated systems	Abril 2014	Dic 2018	Support training centers and Train Air Plus	ADS-B and AIDC TFs to coordinate with CATC/WG	Training Centers Working Group States, Territories	
m) Implement ACAS 7.1	Abril 2014	Dic 2018	ACAS 7.1 implementation	Not started	States, Territories	
n) Monitor implementation progress	Abril 2014	Dic 2018		ADS-B/ AIDC TFs	ICAO	

AERONAUTICAL COMMUNICATION ACTION PLAN
PLAN DE ACCION PARA COMUNICACIONES AERONAUTICAS

Task Name/ Tarea	Start/ Inicio	Finish/ Final	Deliverables/ Resultados	Follow-up/ Seguimiento	Responsible/ Responsables	Observations/ Comments- Observaciones/ Comentarios
a) Review the performance status of current AFS services and identify deficiencies or improvements (AFTN, oral ATS services, A/G communications)	April 2014	Dec 2015	Improvements to A/G Communications Plan	To follow-up Regional AMS Communication Improvement Plan	States, Territories in Plan (Mexico, Jamaica and Haiti)	Identify improvements into Regional AMS Communication Improvement Plan
b) Implement communication service improvements as required to support current and planned Air Navigation applications, including Required Communication Performance (RCPs).	April 2014	Dec 2018	Improvements to A/G Communications Plan RCP application- 2015	No RCP has been implemented	States, Territories	Follow-up Regional AMS Communication Improvement Plan
c) Develop regional ATN planning documents	April 2014	Dec 2015	ATN and applications documents	Completed	GREPECAS Project D AMHS TF	
d) Coordinate and test ATN G-G application implementation aspects (AMHS, AIDC, etc.)	April 2014	Dec 2018	Test G-G Applications	Being track by AMHS and AIDC TFs	AMHS TF AIDC TF States, Territories	Regional AMHS Plan Regional AIDC Plan
e) Conduct planning, trial and implementation activities for A-G data applications (DCL, D-ATIS, etc.)	April 2014	Dec 2018	Update regional plan D-ATIS implementation	Lack of progress	GREPECAS Project D States, Territories	CAR/SAM ANP CNS TABLE 1Bc
f) Carry out technical review of regional telecommunication networks for ATN implementation	April 2014	Dec 2015	MEVA III implementation	Completed	MEVA TMG States, Territories	
g) Implement available technologies in order to facilitate ground and airborne applications (CPDLC, ADS-C, ADS-B)	April 2014	Dec 2018	CPDLC/ ADS-C Implementation	Completed	States, Territories	CPDLC implementation Plan This Task has been concluded by GOLD TF.
h) Implement the necessary communications network for ACDM	April 2015	Dec 2018	Communications for ACDM	Need to be defined by AGA	States, Territories	
i) Support ICAO position during the ITU WRC and ensure regional coordination for the protection of the aviation spectrum	April 2014	Dec 2018	WRC-2015 support WRC-2018 support Support for C- Band	Ongoing work	States, Territories	
j) Ensure participation of civil aviation experts in State delegations to ITU WRC meetings	April 2014	Dec 2018	Participation by States	Ongoing work	States, Territories	
k) Disseminate ICAO policy statements on aeronautical radio frequency spectrum requirements	April 2014	Dec 2018	CAA and National Spectrum Authority coordination	Ongoing work	States, Territories	
l) Implement frequency spectrum management for protection and new services	April 2014	Dec 2018	•Optimum use of frequencies •No interferences	Ongoing work	States, Territories	COM Lists
m) Support training on the application and implementation of advanced communication related technologies and ATN	April 2014	Dec 2018	Identify and inform of training needs	AMHS TF reported training needs, this information was passed to the CATC/WG	States, Territories	
n) Enhance the regional training infrastructure and training programmes related to communications	April 2014	Dec 2018	Support training centers and Train Air Plus	ongoing	Training Centers Working Group States, Territories	
o) Monitor implementation and improvement of telecommunications and ATN application issues	April 2014	Dec 2018	ATN implementation	MEVA TMG	ICAO	

**ACTION PLAN FOR IMPLEMENTATION OF AERONAUTICAL INFORMATION MANAGEMENT (AIM)/
PLAN DE ACCION PARA LA GESTION DE LA INFORMACION AERONAUTICA (AIM)**

Task Name/ Tarea	Start/ Inicio	Finish/ Final	Deliverables/ Resultados	Follow-up/ Seguimiento	Responsible/ Responsables	Observations/ Comments- Observaciones/ Comentarios
a) Comply with the process to introduce and implement Annex 15 and 4 amendments to the Chicago Convention	April 2014	Dec 2015	Implementation of the Annexes referred AIS and MAP Standards and Requirements	AIM TF to report progress	States / Territories	Comply with all Steps from Phase 1 for the transition to AIM according with ICAO Roadmap for the transition to AIM
b) Periodically report on the generation and distribution of Integrated IAP aeronautical information that improves the safety of ATS in the Region to the ICAO NACC Office	April 2014	Dec 2016	Provide the proper Report requested	Lack of progress	States / Territories	Implement AIM QMS
c) Develop a method to measure the performance and outcomes from States, Territories and international organizations with distribution of quality aeronautical information to improve recognition of ATM requirements, safety, and effectiveness related to the electronic distribution of information	April 2014	Dec 2016	Survey to States / Territories	AIXM defined from NACC/WG AIM TF to report progress	ICAO, GREPECAS	Consider AIXM implementation as basic requirement
d) Assist States, Territories and international organizations to improve decision making related to their transition to AIM	April 2014	Dec 2016	Provide respective guidance material on AIM issues	AIM TF to report progress	ICAO	ANConf/12 Rec 3/6
e) Assist States, Territories and international organizations with the AIM, in order to implement ICAO Standards for aeronautical information products, services, and technologies in electronic format, as required	April 2014	Dec 2018	Identify training needs and Support training centers and Train Air Plus	AIM TF to report progress	ICAO, GREPECAS	Development and implementation of AUTO AIS/AIM project
f) Support AIM developments to achieve the ATM system improvements in the Global Air Traffic Management Operational Concept; including NOTAM contingency plans	April 2014	Dec 2018	Complete implementation of all AIM Transition phases (1 to 3)	AIM TF to report progress	States / Territories	Including all AIM developments associated with SWIM for ASBU Block 1 module B-31
g) Ensure that AIM requirements harmonize and integrate at a regional and international level, on-board electronic management of aeronautical information for the requirements or the use of ground systems	April 2014	Dec 2018	Complete implementation of all AIM Transition phases (1 to 3)	AIM TF to report progress	ICAO States / Territories	Including all AIM developments associated with SWIM for ASBU Block 1 module B-31
h) Share experience and resources with implementation of e-TOD through establishment of an e-TOD regional working group	April 2014	Dec 2018	Prepare and Establish LoAs	AIM TF to report progress	GREPECAS States / Territories	-----
i) Implement ICAO Doc 9881 technical requirements as required	April 2014	Dec 2018	Identify personnel and training needs and prepare a Report to ICAO for assistance	AIM TF to report progress	States / Territories	-----
j) Report requirements to the ICAO NACC Regional Office and monitor implementation status of e-TOD using electronic media	April 2014	Dec 2018		AIM TF to report progress	States / Territories	-----
k) Develop a high-level agreement for the management of a national e-TOD programme	April 2014	Dec 2018	Establish permanent liasons and coordination among all bodies involved	AIM TF to report progress	States / Territories	-----

APPENDIX D
NAM/CAR AIDC REGIONAL IMPLEMENTATION PLAN
 Update: 24 May 2015

State	1 FDP capability / Implementation date / manufacturer/model	2 Adjacent FIR	3 Testing and Implementation Date for Adjacent FIR	4 Point(s) of Contact	5 Bilateral Agreement or ICD	6 Circuit/Bandwidth used	7 Comments
Cuba	yes - Oracle Version 9 modified by LITA- CUBA	FIR Miami	Operational, December 15, 2011	Manuel Castillo Velasco, Operation Management Havana ACC (537)-649-7281, email: mcastillo@aeronav.ecasa.avianet.cu	NAM-ICD Version D	19200 BPS	Cuba has 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
		FIR Merida	Operational, March 9, 2012				
		FIR Kingston	TBD				
		FIR CENAMER	March/April 2015				
		FIR Haiti	TBD				
Dominican Republic	Yes TopSky-ATC, Thales ATM	KZMA/Miami ARTCC	Q4 2015	Julio Cesar Mejia A. Enc. ATM, jmejia@idac.gov.do, 809 274-4322. Ext. 2103 + Fernando Casso, fernando.casso@idac.gov.do	NAM-ICD Version D	AMHS: 64 Kbps	
		Curacao	TBD		NAM-ICD Version D	TBD	
Mexico	Yes- FDP=Topsky, Producer= THALES ATM, INFO= Four Control Centres, all Mexico covered	Central America (COCESNA/CENAMER)	may-15	Ing. Jose de Jesus Jimenez Director de Sistemas Digitales SENEAM/SCT/MÉXICO disda@sct.gob.mx 55 57 86 55 32	NAM-ICD Version D	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
United States	Yes - The domestic FDP is integrated into the Host Automation / En Route Automation Modernization (ERAM) systems. Lockheed- Martin (LMCO) is the	Seattle ARTCC- Vancouver ACC	Operational	Dan Eaves, Federal Aviation Administration Air Traffic Control Specialist, Dan.Eaves@FAA.gov, 202- 385-8492	NAM-ICD Version D	US- Mexico: NADIN/AFTN 64 kbps X.25 US- Cuba : MEVA II 19.2 kbps connection to NADIN	
		Salt Lake ARTCC- Edmonton ACC/Winnipeg ACC;	Operational				
		Minneapolis ARTCC-	Operational				

1. Does your current Flight Data Processing System (FDP) have the capacity to process CPL-LAM messages? (Y/N) If not, when will your FDP have this capacity? Indicate date If yes, please indicate FDP model, manufacturer and any relevant equipment information to identify the system.
2. Indicate with what adjacent FIR/ATS Unit is the CPL-LAM implementation required
3. Please indicate intended date for CPL-LAM testing and implementation
4. Please provide Point of Contact for further CPL-LAM coordination (name, title, e-mail, phone number)
5. If CPL-LAM has been implemented, please provide bilateral agreement(s) for its operation, if applicable (for example ICD document)
6. CPL-LAM messages are transmitted through AFTN circuits, what is the current AFTN circuit speed and, if any, upgrade for CPL-LAM implementation
7. Provide comment or concerns for CPL-LAM implementation

State	1 FDP capability / Implementation date / manufacturer/model	2 Adjacent FIR	3 Testing and Implementation Date for Adjacent FIR	4 Point(s) of Contact	5 Bilateral Agreement or ICD	6 Circuit/Bandwidth used	7 Comments
	prime contractor for the Host/ERAM system. 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. Ocean21 provides its own FDP processing in the oceanic environment. LMCO is also the contractor for Ocean21.	Winnipeg ACC/Toronto ACC;					
		Cleveland ARTCC-Toronto	Operational				
		Los Angeles ARTCC-Mazatlan ACC	Operational				
		Miami ARTCC – Havana ACC.ACC	Operational				
		Boston ARTCC-Montreal ACC/Moncton ACC.	Operational				
		Houston ARTCC-Merida ACC/Monterrey ACC;	Operational				
		Albuquerque ARTCC-Monterrey	Operational				
		Class I Miami ARTCC - Havana ACC	Operational				
		Miami ARTCC – Havana ACC (Class II)	Q4 2015				
		Oakland - Mazatlán	March 2015			PAN ICD V.1	
		Vancouver - Oakland	April 2015			NAM-ICD Versión D	
		Miami - Nassau	TBD			NAM-ICD Versión D	
		San Juan – Santo Domingo	Q4 2015			NAM-ICD Versión D	
		Miami - Santo Domingo	Q4 2015			NAM-ICD Versión D	
COCESNA (CENAMER)	INDRA Aircon 2100 Renovado	Havana	Operational	Roger Perez (roger.perez@cocesna.org) Mayda Avila (mayda.avila@cocesna.org)	NAM-ICD Versión D	N/A (the current AFTN circuit speed	

- Does your current Flight Data Processing System (FDP) have the capacity to process CPL-LAM messages? (Y/N) If not, when will your FDP have this capacity? Indicate date If yes, please indicate FDP model, manufacturer and any relevant equipment information to identify the system.
- Indicate with what adjacent FIR/ATS Unit is the CPL-LAM implementation required
- Please indicate intended date for CPL-LAM testing and implementation
- Please provide Point of Contact for further CPL-LAM coordination (name, title, e-mail, phone number)
- If CPL-LAM has been implemented, please provide bilateral agreement(s) for its operation, if applicable (for example ICD document)
- CPL-LAM messages are transmitted through AFTN circuits, what is the current AFTN circuit speed and, if any, upgrade for CPL-LAM implementation
- Provide comment or concerns for CPL-LAM implementation

State	1 FDP capability / Implementation date / manufacturer/model	2 Adjacent FIR	3 Testing and Implementation Date for Adjacent FIR	4 Point(s) of Contact	5 Bilateral Agreement or ICD	6 Circuit/Bandwidth used	7 Comments
		Panama	TBD(PAC)		PAC ICD	is 1.2 kbps internally and 9.6 kbps the internationals)	
		Guatemala	Q4 2015 (NAM)		NAM-ICD Version D		
		El Salvador	October 2015(PAC)		PAC ICD		
		Nicaragua	September 2015(pac)		PAC ICD		
		Merida	In test		NAM-ICD Version D		
		Kingston	TBD(?)				
		Bogota	TBD(PAC)		PAC ICD		
		Guayaquil	TBD(PAC)		PAC ICD		
Nassau	Indra Aircon 2100 - TBD	Miami	TBD		NAM-ICD Version D		
Port-au-Prince	TBD				NAM-ICD Version D		
PIARCO	SELEX ATM System	SAL ACC	TBD	TBD	NAM-ICD Version D		
		NEW YORK ACC	TBD		PAN ICD		
		French Guyanne,	TBD		???		
		Maiquetia,	TBD				
		San Juan (Miami)	TBD		NAM-ICD Version D		
Curacao		Maiquetia ACC		Jacques Lasten, ATS Manager, DC-ANSP, j.lasten@dc-ansp.org			
		Kingston ACC			NAM-ICD Version D		
Costa Rica	No - FDP Server must upgrade – Q1 2018	FIR CENAMER	TBD	Warren Quirós navegacionaerea.cns@dgac.go.cr +50622314924 Fernando Naranjo Elizondo fer_nar_eli@hotmail.com	NAM-ICD Version D	1200 bps	AIDC may be implemented until the upgrade of el Coco Center

1. Does your current Flight Data Processing System (FDP) have the capacity to process CPL-LAM messages? (Y/N) If not, when will your FDP have this capacity? Indicate date If yes, please indicate FDP model, manufacturer and any relevant equipment information to identify the system.
2. Indicate with what adjacent FIR/ATS Unit is the CPL-LAM implementation required
3. Please indicate intended date for CPL-LAM testing and implementation
4. Please provide Point of Contact for further CPL-LAM coordination (name, title, e-mail, phone number)
5. If CPL-LAM has been implemented, please provide bilateral agreement(s) for its operation, if applicable (for example ICD document)
6. CPL-LAM messages are transmitted through AFTN circuits, what is the current AFTN circuit speed and, if any, upgrade for CPL-LAM implementation
7. Provide comment or concerns for CPL-LAM implementation

**APPENDIX E
AIDC IMPLEMENTATION CHECKLIST**

ICD NAM Implementation	
ACTIVITY	Status
• Duplicate/Erroneous Flight Plans EFFORT	
• General Planning issues	
• Construct Overview Briefing Strategy	
• Identify Operational Impacts/Changes	
• Definition of Internal Coordination Requirements	
• Identify facility (ies) Areas/Sectors Involved	
• Identify/assess known issues (ex. MEVA, etc.)	
• Construct Requirement Matrix (resources, staff, etc.)	
• Construct Fallback /Recovery Plan	
• Interfacing facility impacts	
• Risk assessment	
• Identify System Metrics (Performance)- track progress	
• Define project milestones (scope- gradual implementation)	
• Identify key personnel for Site Implementation. ATC, Automation, Data Spec, Labor Relations, Service POCs	
• Identify Existing /Required Telecommunications	
• Identify limitations/impacts of other projects or Implementations	
• Coordinate project /facility / interfacility POC list/contact numbers	
• Review/coordinate site unique Implementation documents	
• Review LOAs existing/changes Advantages of Automation Appendix	
• Develop a procedure to capture/document problems or lessons learned Non-Ops/Automation Ops	
• PreCoordinate Test Support Needed: Site Automation - Comm POCs	
• SOFTWARE/HARDWARE ADAPTATION	
• Airspace/Routes/Fixes/ coordination points/ Special Use	
• message class/ type is used/times/errors/triggers, etc.	
• Systems Field differences between sites - What is an error to each type message - Common errors from lessons learned, how does system react to those issues	
• Identify any System Configurations and/ or Settings needed to enable/disable processing	
• Dedicated Test Bed	
• TESTING – Three Phases Non-Operational Offline Non-Operational Operational	
• Non Operational Testing – Offline Configurations which need testing: Test Facility A to Test Facility B Test Facility A to Test Facility C	
• Define Non-Ops Offline Testing Capability Testing with FAA Technical Center - Can test configuration be isolated from operational system? - Can telecommunications test line and operational line be shared without impact - Use of Test AFTN addresses	
• Test Prep Adaptation parameters: Time /distance/display/etc Prepare Test procedures Construct test scenarios that duplicate actual traffic Determine/use system ability to capture test results Identify Test Coordinator & personnel (Cadre if needed)	
• Setup Test Specifics Facility Scheduling Start time Duration CPL scenario exchange/review Confirm Implementation POCs	

ICD NAM Implementation	
ACTIVITY	Status
<ul style="list-style-type: none"> • Conduct Non-Ops Offline Testing (Document Test Results Data Reduction Data Analysis Test Review) 	
<ul style="list-style-type: none"> • Non Operational Testing 	
<ul style="list-style-type: none"> • Test Prep Adaptation parameters: Time /distance/display/etc Prepare Test procedures Construct test scenarios that duplicate actual traffic Determine/use system ability to capture test results Identify Test Coordinator & personnel (Cadre if needed) 	
<ul style="list-style-type: none"> • Setup Test Specifics Facility Scheduling Start time Duration CPL scenario exchange/review Confirm Implementation POCs 	
<ul style="list-style-type: none"> • Conduct Non-Ops Testing (Document Test Results Data Reduction Data Analysis Test Review) 	
<ul style="list-style-type: none"> • OPERATIONAL/LIVE - TESTING 	
<ul style="list-style-type: none"> • Test Prep Tailor Ops Test Plan for Facility Identify Test Coordinator & personnel (Cadre), Coordinate test effort (Pre-test Meeting) Subject Matter Experts Site XXX Site YYY Support including Comm Tailor test procedure to capture problems and lessons 	
<ul style="list-style-type: none"> • Setup Test Specifics Start time/Stop Time Duration Review test procedures Verify Contacts Identify Sectors/Personnel Document test results - 	
<ul style="list-style-type: none"> • Pre-Test Meeting Coordinate test 	
<ul style="list-style-type: none"> • Conduct Non Ops/Ops Test Conduct Test Familiarization Conduct external & internal coordination (Document Test Results Data Reduction Data Analysis Operations Analysis) 	
<ul style="list-style-type: none"> • Final Operational Implementation 	
TRAINING	
<ul style="list-style-type: none"> • Initial Facility Tech Ops Familiarization 	
<ul style="list-style-type: none"> • Develop Site Unique Ops Familiarization 	
<ul style="list-style-type: none"> • Update of Training courses/plan 	
<ul style="list-style-type: none"> • Complete Interface specific Training Identify any Needed Training Updates 	
<ul style="list-style-type: none"> • Complete training course refresher if necessary 	
Initial Performance Monitoring	

APPENDIX F
FPL2012 POST IMPLEMENTATION CHECKLIST AND
FOLLOW-UP TO FPL2012 FULL COMPLIANCE ACTIVITIES
FPL2012 CONVERTERS TABLE

State	Solution	
	AFTN Terminal – FPL	ATC Automated System – FDP
Anguilla	Implemented	Manual
Antigua and Barbuda	Implemented	Manual
Aruba	Implemented	Implemented
Bahamas	Implemented	Implemented
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	Full upgrade planned (converter in use)
French Antilles	Implemented	Implemented
Haiti	Manual	Manual
Honduras	Implemented	Implemented
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 G
ICD REGIONAL COMPARISON
(available only in Spanish)

		Mensajes de Notificacion							
		Unidad anterior (nuestro centro para vuelos salientes de la FIR)			APAC	NAN	SAM		
Fase de Notificacion	Automatico	ABI	Mensaje de avance de informacion en la frontera	Notificacion	X		FPL	Antes del COP el sector anterior envia automaticamente un mensaje ABI para notificar la coordinacion que se acerca. ABI notifica a la unidad siguiente. Con cada modificacion de la ruta el sector anterior debe enviar una revision de ABI al sector siguiente. Cambia el estado del plan de vuelo a Notificado. Inicia el calculo de la trayectoria.	
		LAM	Mensajes logicos de acuse de recibo		X	X	X	Al recibir el LAM en campus status pasa a NTF (ABI recibido) para el vuelo correspondiente. Si no se recibe el LAM el campo status pasa a NTF LTO (ABI LAM expirado) para el vuelo correspondiente	
	Manual	PAC	Mensaje de activacion preliminar	Notificacion	X			Para iniciar una notificacion y coordinacion antes de la salida del mismo con el sector siguiente, Cuando el tiempo de vuelo (desde la salida al COP) sea menor que el requerido para cumplir con los parametros de tiempo de la transmision del mensaje de activacion. Cambia el estado de un plan de vuelo a Activo. Iniciar el calculo de la trayectoria.	
		LAM	Mensajes logicos de acuse de recibo		X			Al recibir el LAM en campus status pasa a COORG (PAC recibido) para el vuelo correspondiente. Si no se recibe el LAM el campo status pasa a COORG LTO (PAC LAM expirado) para el vuelo correspondiente	
	Manual	MAC	Mensaje de derogacion de la coordinacion	Notificacion	X			Cancelacion de la notificacion. Cambia el estado del plan de vuelo a Inicial o Notificado dependiendo del estado del MAC. No hace mas actualizaciones en los datos del SFPL.	
			Unidad siguiente (nuestro centro para vuelos entrantes en el FIR)						
			ACP	Mensajes de aceptacion	Negociacion	X			Si los mensajes ABI o PAC recibidos son correctos, el sector siguiente devuelve un ACP a la unidad anterior
			LRM	Mensaje de rechazo logico	Negociacion	X		X	Si un ABI o PAC contiene errores, el sector siguiente envia un LRM a la unidad anterior Si un MAC contiene errores, el sector siguiente envia un LRM a la unidad anterior

		Mensajes de Coordinación						
		Unidad anterior (nuestro centro para vuelos salientes de la FIR)			APAC	NAN	SAM	
Fase de Coordinación	Automatico	EST	Mensaje de estimados	Coordinacion	X	X	X	Un tiempo antes del COP el sector anterior envia automaticamente un mensaje EST al siguiente sector para iniciar la coordinacion. Actualiza los ETOS del plan de vuelo. Cambia el estado del plan de vuelo a Activo.
		LAM	Mensajes logicos de acuse de recibo		X			Al recibir el LAM en campus status pasa a COORG (EST recibido) para el vuelo correspondiente. Si no se recibe el LAM el campo status pasa a COORG LTO (EST LAM expirado) para el vuelo correspondiente
	Automatico	CPL	Mensaje de plan de vuelo actual	Coordinacion	X	X	X	Un tiempo antes del COP, el sector anterior envia automaticamente un mensaje CPL al sector siguiente para iniciar coordinacion. Si existe en la bd un SFPL que se corresponda, cambia su estado a Activo. Sino existe crea un SFPL.
		LAM	Mensajes logicos de acuse de recibo		X			Al recibir el LAM en campus status pasa a NEGG (CPL recibido) para el vuelo correspondiente. Si no se recibe el LAM el campo status pasa a NEGG LTO (CPL LAM expirado) para el vuelo correspondiente
	Manual	CDN	Mensaje de coordinacion	Coordinacion	X			Al introducir un comando el controlador, el sector anterior envia un mensaje CDN para modificar los datos de Coordinacion con el sector siguiente.
		LAM	Mensajes logicos de acuse de recibo		X			Al recibir el LAM en campus status pasa a RENEGG (CDN recibido) para el vuelo correspondiente. Si no se recibe el LAM el campo status pasa a RENEG LTO (CDN LAM expirado) para el vuelo correspondiente
	Manual	MAC	Mensaje de derogacion de la coordinacion	Notificacion	X	CNL		Cancelacion de la notificacion. Cambia el estado del plan de vuelo a Inicial o Notificado dependiendo del estado del MAC. No hace mas actualizaciones en los datos del SFPL.
			Unidad siguiente (nuestro centro para vuelos entrantes en el FIR)					
	Automatico	ACP	Mensajes de aceptacion	Coordinacion	X		X	Si los mensajes EST, CPL o CDN recibidos son correctos, el sector siguiente devuelve un ACP a la unidad anterior. Si un EST contiene errores, el sector siguiente envia un LRM a la unidad anterior.
		LRM	Mensaje de rechazo logico	Coordinacion	X		X	Si un MAC contiene errores, el sector siguiente envia un LRM a la unidad anterior.

		Mensajes de Transferencia							
		Unidad anterior (nuestro centro para vuelos salientes de la FIR)			APAC	NAN	SAM		
Fase de transferencia	Manual	TOC	Mensaje de transferencia de control	Transferencia	X	RTT		Un tiempo antes del COP el sector anterior envia automaticamente un mensaje EST al siguiente sector para iniciar la coordinacion. Actualiza los ETOs del plan de vuelo. Cambia el estado del plan de vuelo a Activo.	
		LAM	Mensajes logicos de acuse de recibo		X		X	Al recibir el LAM en campus status pasa a COORG (EST recibido) para el vuelo correspondiente. Si no se recibe el LAM el campo status pasa a COORG LTO (EST LAM expirado) para el vuelo correspondiente	
	Manual	CDN	Mensaje de coordinacion	Coordinacion	X			Al introducir un comando el controlador, el sector anterior envia un mensaje CDN para modificar los datos de Coordinacion con el sector siguiente.	
		LAM	Mensajes logicos de acuse de recibo		X		X	Al recibir el LAM en campus status pasa a RENEGG (CDN recibido) para el vuelo correspondiente. Si no se recibe el LAM el campo status pasa a RENEG LTO (CDN LAM expirado) para el vuelo correspondiente	
			Unidad siguiente (nuestro centro para vuelos entrantes en el FIR)						
	Automatico		ADC	Mensaje de asuncion de control	Transferencia	X	RTA		Si los mensajes CDN recibidos son correctos, el sector siguiente devuelve un ACP a la unidad anterior
		REJ	Mensaje de rechazo	Transferencia	X		X	Si un contiene errores, el sector siguiente envia un REJ	

		Mensajes con informacion general						
		Unidad anterior (nuestro centro para vuelos salientes de la FIR)			APAC	NAN	SAM	
Mensajes con informacion general	Manual	EMG	Mensaje de emergencia		X			
					X			
	Manual	MIS	Mensaje miscelaneo		X			
					X		X	
		Unidad siguiente (nuestro centro para vuelos entrantes en el FIR)						

APPENDIX H

AIDC TASK FORCE WORK PROGRAMME

Description	Start	Finish	Status	Deliverable	Responsible
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
1.5.3 Submit comments to the testing guideline	30/03/2015	10/04/2015	Valid	Comments to the testing guideline	Task Force

Description	Start	Finish	Status	Deliverable	Responsible
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

**APPENDIX I
ADS-B MEMBERSHIP AND WORK PROGRAMME**

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TASK NAME	DELIVERABLE	DATE START	DATE END	PERCENTAGE COMPLETED	RESPONSIBLE	REMARKS
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	Completed
2. Terms and references	present Terms of Reference of the Working Group	1/8/13	1/8/13	100 %	Cuba (Rapporteur)	Completed
3. Develop Work Plan	Work Plan	2/8/13	14/8/13	100%	Cuba (Rapporteur)	Completed
3.1 Provide to ICAO the Work Programme		14/8/13	14/8/13	100%	Cuba (Rapporteur)	Completed
4.0 Approve ADS- B TF Work Programme in Block 0		24/01/14	30/10/14	100%	Group Members	Completed
5.0 Begin implementation of the Work Programme		31/10/13	31/12/18		Group Members	
5.1 Develop ADS- B survey	States survey on ADS -B status	23/01/14	14/02/14	100%	COCESNA	Completed
TASK NAME	DELIVERABLE	DATE START	DATE END	PERCENTAGE COMPLETED	RESPONSIBLE	REMARKS

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5.1.1 Send ICAO survey for distribution to the States of the region		18/02/14	18/02/14	100%	COCESNA	Completed
5.1.2 Collect survey results	Current situation of ADS- B in the States	18/02/14	30/4/14	100%	ICAO NACC	Completed: Superseded by Surveillance Plan
5.2 Submit survey on the implementation of ADS –B aircraft	survey on the status of ADS –B aircraft	23/01/14	30/4/14	100%	IATA	Completed
5.2.1 Collect information on implementation of ADS –B aircraft	ICAO Current Status of ADS- B aircraft (Recommendation of target dates for the ADS –B)	30/04/14	29/05/15	¿?	IATA	On-going
6.0 Implementation of ADS- B trials	Recommendations / testing improvements towards operational implementation	8/2/13	5/20/15		States/Territories from the Region	
6.1 ADS –B trials are ongoing	List of States that are under process	30/10/13	31/12/17	25%	Canada, Cuba, Dominican Republic, Jamaica, México, Trinidad and Tobago, United States, and COCESNA,	On-going
6.2 Send to the members of the task group the Guide for testing	Guide for testing	13/02/14	13/02/14	100%	Cuba (Rapporteur)	Completed
6.3 Begin ADS- B trials in States that have not started	Support for those who wish to trials	30/10/14	31/12/17	75%	States/Territories in the region that have not yet done so	On-going
6.4 Sending quarterly to ICAO trials deficiencies	Test quarterly results	30/10/13	31/12/17	10%	Canada, Cuba, Dominican Republic, Jamaica, México, Trinidad & Tobago and COCESNA	On-going
6.5 Deliver results of comparisons of ADS- B statistics	results of comparisons ADS-B statistics	23/05/14	31/12/17	10%	Cuba, México, Jamaica, Trinidad & Tobago and COCESNA	On-going
7.0 Follow-up meetings for the development of ADS- B	Final Report		At the end of each meeting	100%	ICAO NACC	Completed
TASK NAME	DELIVERABLE	DATE START	DATE END	PERCENTAGE COMPLETED	RESPONSIBLE	REMARKS

8.0 Develop relevant operational requirements for the ADS-B implementation		15/11/13	30/04/14	100%	Create Ad Hoc Group	Completed
8.1 Creation of ad hoc group for the creation of the proposal	Op Ad Hoc Group members	23/05/14	23/05/14	100%	CONOPS Ad Hoc Group	Completed
8.2 Development the regional operational concept for the implementation ADS-B	CONOPS draft	23/05/14	30/10/14	100%	CONOPS Ad Hoc Group	Completed
8.3 Deliver the regional operational concept for the implementation ADS-B	CONOPS	27/04/15	15/05/15	100%	Rapporteur Ad hoc CONOPS Group	On-going
9.0 develop technical requirements to purchase equipment for ADS-B trials	Tec Ad hoc Group	23/05/14	15/05/15	100 %	Spec Ad hoc Group	Completed
9.1 Creation of Ad hoc group for the formation of the proposal	Op Ad Hoc Group members	23/05/14	23/05/14	100%	Create Spec Ad hoc Group	Completed
9.2 Development of technical requirements for ADS-B equipment	Technical requirements draft for ADS-B equipment	30/06/14	08/05/15	100%	Spec Ad hoc Group	Completed
9.3 Deliver technical requirements for ADS-B equipment	Technical requirements for ADS-B equipment	30/06/14	08/05/15	100%	Spec Ad hoc Group Relator	Completed
10. Assist the process of implementation ADS-B operational	Letters of agreement between States regional and Metrics	29/5/15	31/12/18		ADS-B TF	To be started
11 follow-up process of ADS-B operational implementation	ANRFs	29/5/15	31/12/18		ADS-B TF	To be started

**APPENDIX J
FOLLOW-UP ON ADS-B/TF/2 MEETING DECISIONS**

The ADS-B TF met at its second meeting in April 2015, tracking the tasks related to ADS-B and recommending actions to expedite implementation, testing and promotion of ADS-B as well as work to define RPBANIP metrics related to ADS-B. The final report of this meeting was submitted for approval ANI / WG, by letter of EMX 475 state, requesting the review and approval of the Draft Conclusions not later than the meeting of the ANI/WG/2 (1 to 4 June 2015). The final report is available at: <http://www.icao.int/NACC/Pages/meetings-2015-adbsimp.aspx> and the following conclusions and decisions are proposed for the ANI/WG approval:

Number	Description	Contents
<i>DECISIÓN ADS-B/TF/2/1</i>	<i>ADS-B IN MEXICO</i>	That in order to expedite and support the implementation of ADS-B in Mexico, Mexico DGAC, SENEAM and ICAO NACC Office: a) out the coordination and discussion needed for this application; and b) report its progress to the next ADS-B Implementation Meeting / teleconference. VALID
<i>CONCLUSION ADS-B/ TF/2/2</i>	<i>MONITORING IMPLEMENTATION PLAN MONITORING ADS-B / MLAT</i>	That, in order to support the implementation of ADS-B and MLAT in the CAR Region: a) the accompanying Monitoring Plan (Appendix A refers) will be taken as a reference for the planning and implementation of MLAT and ADS-B systems; and b) request ICAO to update the monitoring plan for the December 20, 2015. VALID
<i>DECISION ADS-B/TF/2/3</i>	<i>SOFTWARE FOR STATISTICAL DATA ANALYSIS SURVEILLANCE (ADS- B)</i>	That, in order to support ADS-B trials and data analysis on the implementation of the ADS-B: a) Cuba define and inform the ICAO NACC Office on the conditions for the exchange, installation and use of its software statistical processing of ADS-B signals; by 30 July 2015; b) ICAO inform States of the above conditions; and c) States interested in using the software, send an official letter to the ICAO. VALID
<i>CONCLUSION ADS-B/TF/2/4</i>	<i>APPLICATION OF THE CONCEPT OPERATIONAL ADS-B</i>	That in order to support and guide implementation of ADS-B in the CAR Region and to achieve regional milestone date of December 2018 for the implementation of ADS-B OUT, the Regional ADS-B CONOPS document (Appendix C) be adopted as a guide to planning and implementation of ADS-B service to the States / ANSPs in the region. VALID
<i>CONCLUSION ADS-B/TF/2/5</i>	<i>TECHNICAL SPECIFICATIONS FOR EQUIPMENT ADS-B</i>	To support and guide the implementation of ADS-B in the CAR Region and to achieve regional milestone date of December 2018 for the operational implementation ADS-B OUT, Technical Specification document (Appendix B) be adopted as a guide for the acquisition and implementation of ADS-B service. VALID

Number	Description	Contents
CONCLUSION ADS-B/TF/2/6	DATA PROCESSING CAPABILITIES FOR ADS-B	That in order to follow-up and guide the ADS-B implementation in the CAR Region, and to achieve the regional milestones by December 2018 for ADS-B Out implementation: a) the ADS-B Data Processing Capabilities Table (Appendix F to this report) be adopted as a guidance on the status of the ATS Automation System to process ADS-B data; and b) ICAO requests the confirmation of these capabilities to all the CAR States by December 2015. VALID
DECISION ADS-B/TF/2/7	DEVELOPMENT OF SELECTION FOR METRIC CRITERIOS ADS-B	That, in order to follow-up and measure the progress of the ADS-B related metrics and targets of the RPBANIP, Dominican Republic (Julio Mejia), Mexico (Jose de Jesus Jimenez) and United States (Alex Rodriguez, Doug Arbuckle), assisted by ICAO NACC Office (Victor Hernandez): a) develop the requirements (criteria) for the definition of selected Airports for the ADS-B related metrics; and b) inform the ADS-B TF Rapporteur for this proposal to the ANI/WG/2 Meeting.(Appendix A) CONCLUDED
CONCLUSION ADS-B/TF/2/8	INVITATION TO STATES / TERRITORIES TO BEGIN CONDUCTING TRIALS	Invitation to States / Territories that have not yet conducted trials to acquire the necessary equipment in order to join the test implementation / planning of ADS-B and ADS-B TF in order to obtain the operating profit identified. VALID

APPENDIX K/APÉNDICE K
Taken from TABLE CNS 4A – Tomado de TABLA CNS 4A
SURVEILLANCE SYSTEMS - SISTEMAS DE VIGILANCIA

EXPLANATION OF THE TABLE

Column

- 1 Name of State/Territory and location of the surveillance station
- 2 Air traffic services unit served by the facility
- 3 PSR/Function - Primary surveillance radar/Function
E - En-route area control centres
T - Terminal
- 4 Coverage of primary surveillance radar in nautical miles
- 5 PSR/Status - Primary surveillance radar/Status of implementation
- 6 SSR/MSSR/Function - Secondary surveillance radar/Monopulse secondary surveillance radar/Function
E - En-route area control centres
T - Terminal
- 7 SSR/MSSR/Modes - Modes A, C or S
- 8 Coverage of secondary surveillance radar in nautical miles
- 9 SSR/MSSR/Status - Secondary surveillance radar/Monopulse secondary surveillance radar/Status of implementation
- 10 ADS-B Function
- 11 ADS-B Implementation Status
- 12 ADS-C Function
- 13 ADS-C Implementation Status
- 14 MLAT Function
- 15 MLAT Implementation Status

Note.- The following codes are to be used for columns 5, 9, 11, 13 and 15:

5, 9, 11,13 and 15 I – Implementation of the surveillance system (this includes the ATS automation capability to present the information in the ATC)
I* - Partially implemented (indicate in column 16)
I/P - (Implemented/foreseen) Indicates implemented and a surveillance improvement/replacement to be done in the next two years
P (date) - Planned – not implemented- Include implementation date
NP - (Not planned)
T- Test (end date)

Note.- The following codes are to be used in columns 10, 12 and 14

E – enroute ATC
T - Terminal
SM- Surface Movement Control / Control de Movimiento de Superficie

16 Remarks
Associated to field I* of column 15: A- Automation no concluded / C- required communications not completed

EXPLICACIÓN DE LA TABLA

Columna

- 1 Nombre del Estado/Territorio y ubicación de la estación de vigilancia
- 2 Dependencia de los servicios de tránsito aéreo servida por la instalación
- 3 Función PSR - Función/Radar primario de vigilancia
E - Centros de control de área en ruta
T - Terminal
- 4 Cobertura del radar primario de vigilancia en millas marinas
- 5 Situación PSR - Situación de la implantación/Radar primario de vigilancia
- 6 Función SSR/MSSR - Función/Radar secundario de vigilancia/Radar secundario de vigilancia de monoimpulso
E - Centros de control de área en ruta
T - Terminal
- 7 Modos SSR/MSSR - en Modos A, C o S
- 8 Cobertura del radar secundario de vigilancia en millas marinas
- 9 Situación SSR/MSSR - Situación de la implantación/Radar secundario de vigilancia/Radar secundario de vigilancia de monoimpulso
- 10 Función en que se proveerá servicio ADS-B
- 11 Situación de la implantación
- 12 Función en que se proveerá servicio ADS-C
- 13 Situación de la implantación
- 14 Función en que se proveerá servicio MLAT
- 15 Situación de la implantación

Nota.- Los códigos siguientes se utilizan en las Columnas 5, 9, 11, 13 y 15:

- 5, 9, 11,13 y 15 I - Implantado el sistema de vigilancia indicado (esto incluye la capacidad de automatización requerida para su representación en el Control de Tránsito Aéreo)
- I* - Implantado parcialmente (indicar en la casilla 16)
- I/P - (Implantado/previsto) implantada y ampliación o reemplazo del sistema de vigilancia indicado a corto plazo (dos años)
- P (fecha) - Previsto - Sin implantar- Incluir fecha de implementación
- NP - (No previsto) Indica que el Estado no ha previsto la implantación del sistema de vigilancia indicado
- T- Test (fecha limite)

Nota.- Los códigos siguientes se utilizan en las Columnas 10, 12 y 14

- E - Centros de control de área en ruta
- T - Terminal
- SM- Control de Movimiento de Superficie

16 Observaciones a sistemas de vigilancia
Asociada a I* de campo 15: A- no se ha concluido la automatización / C- no se cuenta con las comunicaciones requeridas

State(Territory)/Location Estado(Territorio)/Ubicación	ATS Unite Served Unidad ATS Servida	PSR			SSR				ADS-B		ADS-C		MLAT		Remarks Observaciones
		Function Función	Coverage Cobertura (NM)	Status Impl. Estado	Function Función	Modes Modos (A,C& S)	Coverage Cobertura (NM)	Status Impl. Estado	Function Función	Status Impl. Estado	Function Función	Status Impl. Estado	Function Función	Status Impl. Estado	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
ANGUILLA (UK)								NP							
ANTIGUA & BARBUDA Airport (4 NM North)	V.C. Bird APP				T	A/C	180	I*							*MSSR
ARUBA (Kingdom of the Netherlands)	Reina Beatrix APP	T	80	I	T	A/C	256	I*							*MSSR
BAHAMAS Nassau	Miami ACC Nassau APP	E/T		I	E/T	A/C	200	I							
BARBADOS Airport	Adams APP				T	A/C	250	I*							*MSSR
BELIZE	Belize APP				E/T	A/C	250	I*							*MSSR
COSTA RICA El Coco	El Coco APP	E/T	60	I	E/T	A/C	245	I*							*MSSR
CUBA Camagüey	Habana ACC Camagüey APP				E/T	A/C	200	I/P*							*MSSR
Habana	Habana TMA Habana APP	T	60	P	T	A/C	200	I/P*							*MSSR
Holguín	Habana ACC Santiago de Cuba TMA Holguín APP				E/T	A/C	200	I/P*							*MSSR

State(Territory)/Location Estado(Territorio)/Ubicación	ATS Unite Served Unidad ATS Servida	PSR			SSR				ADS-B		ADS-C		MLAT		Remarks Observaciones
		Function Función	Coverage Cobertura (NM)	Status Impl. Estado	Function Función	Modes Modos (A,C& S)	Coverage Cobertura (NM)	Status Impl. Estado	Function Función	Status Impl. Estado	Function Función	Status Impl. Estado	Function Función	Status Impl. Estado	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Menocal	Habana ACC Habana TMA Habana APP Varadero APP				E/T	A/C	200	I/P*							*MSSR
San Julián	Habana ACC				E	A/C	200	I/P*							*MSSR
Sta. Clara	Habana ACC				E	A/C	200	I/P*							*MSSR
DOMINICA				NP				NP							
DOMINICAN REPUBLIC															
Puerto Plata	Puerto Plata APP	T	70	I											
Punta Cana	Santo Domingo ACC Punta Cana APP	T	70	P	E/T	A/C	250	P*							*MSSR
Santo Domingo	Santo Domingo ACC Santo Domingo APP	E/T	70	I	E/T	A/C	250	I*							*MSSR
EL SALVADOR															
El Salvador	El Salvador APP	T		I	T E/T	A/C A/C	200 250	I* P*							*MSSR *MSSR
FRENCH ANTILLES															
Fort-de-France	Fort-de-France APP				T	A/C	250	I*							*MSSR
Point-à-Pitre	Point-à-Pitre APP				T	A/C	250	I*							*MSSR
GRENADA															
	Point Salines APP							NP							
GUATEMALA															
C. Guatemala	La Aurora APP	T	80	I	T	A/C	250	I*							*MSSR
San José Escuintla	San José APP				T	A/C	250	P*							
Santa Elena	Tikal APP				T	A/C	250	I*							
Quetzaltenango	Quetzaltenango APP				T	A/C	250	P*							
GUYANA															

State(Territory)/Location Estado(Territorio)/Ubicación	ATS Unite Served Unidad ATS Servida	PSR			SSR				ADS-B		ADS-C		MLAT		Remarks Observaciones
		Function Función	Coverage Cobertura (NM)	Status Impl. Estado	Function Función	Modes Modos (A,C& S)	Coverage Cobertura (NM)	Status Impl. Estado	Function Función	Status Impl. Estado	Function Función	Status Impl. Estado	Function Función	Status Impl. Estado	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
	Georgetown ACC							NP							
HAITI															
	Port-au-Prince ACC				E/T	A/C		P*							*MSSR
	Port-au-Prince APP				T	A/C		P*							*MSSR
HONDURAS															
San Pedro Sula	La Mesa APP				T	A/C	250	I*							*MSSR
JAMAICA															
Kingston	Kingston APP	T	60	I	E/T	A/C	250	I*							*MSSR
Montego Bay	Montego Bay APP	T	60	I	T	A/C	250	I*							*MSSR
Mount Denham	Kingston ACC	E	120	I	E	A/C	250	I*							*MSSR
MEXICO															
Acapulco	Acapulco APP				T	A/C	240	I*							*MSSR
Bajío Gto	México ACC				E/T	A/C, S	240	I*							*MSSR
	Bajío APP														
Cancún	Mérida ACC	E/T	60	I	E/T	A/C	240	I*							*MSSR
	Cancún APP														
Cerro Gordo	México ACC				E	A/C	240	I*							*MSSR
	Monterrey ACC														
Cerro Potosi	Monterrey ACC				E	A/C	240	I*							*MSSR
	México ACC														
Cerro Rusias	Mazatlán ACC				E	A/C	240	I*							*MSSR
	México ACC														
	Monterrey ACC														
Cerro Los Gallos	Mazatlán ACC				E	A/C	240	I*							*MSSR
	México ACC														
	Monterrey ACC														
Cerro Santa Eulalia	Monterrey ACC				E/T	A/C	240	I*							*MSSR
	Chihuahua APP														
Guadalajara	Guadalajara APP	T	80	I	T	A/C	240	I*							*MSSR
Hermosillo	Mazatlán ACC				E/T	A/C	240	I*							*MSSR
	Hermosillo APP														

State(Territory)/Location Estado(Territorio)/Ubicación	ATS Unite Served Unidad ATS Servida	PSR			SSR				ADS-B		ADS-C		MLAT		Remarks Observaciones
		Function Función	Coverage Cobertura (NM)	Status Impl. Estado	Function Función	Modes Modos (A,C& S)	Coverage Cobertura (NM)	Status Impl. Estado	Function Función	Status Impl. Estado	Function Función	Status Impl. Estado	Function Función	Status Impl. Estado	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
La Paz	Tijuana APP Mazatlán ACC San Jose del Cabo				E/T	A/C	240	I*							*MSSR
Los Mochis	Mazatlán ACC				E	A/C	240	I*							*MSSR
Mazatlán	Mazatlán ACC				E	A/C	240	I*							*MSSR
Mérida	Mérida ACC Mérida APP	E/T		I	E/T	A/C	240	I*							*MSSR
Monterrey	Monterrey ACC Monterrey APP	E/T	80	I	E/T	A/C	240	I*							*MSSR
Peñón	México APP	E/T	80	I	E	A/C	240	I*							*MSSR
Puerto Peñasco	Mazatlán ACC				E	A/C	240	I*							*MSSR
Puerto Vallarta	Puerto Vallarta APP				T	A/C	240	I*							*MSSR
San José del Cabo	Mazatlán ACC				E	A/C, S	240	I*							*MSSR
Tampico	México ACC Mérida ACC Monterrey ACC				E	A/C, S	240	I*							*MSSR
Tijuana	Tijuana APP				T	A/C	240	I*							*MSSR
Toluca	México ACC Toluca APP	E/T	80	I	E/T	A/C	240	I*							*MSSR
Veracruz	México ACC Mérida ACC				E	A/C	240	I*							*MSSR
Villahermosa	México ACC Mérida ACC				E	A/C, S	240	I*							*MSSR
MONTserrat (United Kingdom)								NP							
NETHERLANDS ANTILLES (Netherlands)															
Willemstad	Curaçao ACC Curaçao APP	E/T	120	I	E/T	A/C	256	I*							*MSSR
Saint Maarten	Juliana APP	T	60	I	T	A/C	256	I*							*MSSR

State(Territory)/Location Estado(Territorio)/Ubicación	ATS Unite Served Unidad ATS Servida	PSR			SSR				ADS-B		ADS-C		MLAT		Remarks Observaciones
		Function Función	Coverage Cobertura (NM)	Status Impl. Estado	Function Función	Modes Modos (A,C& S)	Coverage Cobertura (NM)	Status Impl. Estado	Function Función	Status Impl. Estado	Function Función	Status Impl. Estado	Function Función	Status Impl. Estado	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
NICARAGUA															
Managua	Managua APP	T	60	P	T	A/C	250	I/P*							*MSSR
Bluefields	Bluefields TWR				T	A/C	250	NI							
PANAMA															
Panamá	Panamá ACC Panamá APP	T	60	I	E/T	A/C	200	I*							*MSSR
PUERTO RICO (United States)															
Pico del Este	San Juan ACC	E/T	200	I	E/T	A/C	200	IP*							*MSSR
San Juan	San Juan APP	E/T	60	I	E/T	A/C	180	I							
SAINT KITTS AND NEVIS															
								NP							
SAINT LUCIA															
	Santa Lucia APP							NP*							* Radar data sharing with Martinica planned/ Proyecta compartir datos radar con Martinica.
SAINT VINCENT & THE GRENADINES															
	E.T.Joshua APP							NP							
SURINAME															
								NP							
TRINIDAD & TOBAGO															
Piarco (15 NM north)	Piarco ACC Piarco APP	E/T	60	I	E/T	A/C	230	I*							*MSSR

State(Territory)/Location Estado(Territorio)/Ubicación	ATS Unite Served Unidad ATS Servida	PSR			SSR				ADS-B		ADS-C		MLAT		Remarks Observaciones
		Function Función	Coverage Cobertura (NM)	Status Impl. Estado	Function Función	Modes Modos (A,C& S)	Coverage Cobertura (NM)	Status Impl. Estado	Function Función	Status Impl. Estado	Function Función	Status Impl. Estado	Function Función	Status Impl. Estado	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
TURKS & CAICOS IS. (United Kingdom) Grand Turks	Miami ACC San Juan ACC				E	A/C	250	IP*							*MSSR
VIRGIN IS. (United Kingdom)								NP							
VIRGIN IS. (United States) Saint Thomas	San Juan ACC San Juan APP	E/T	60	I	E/T	A/C	180	I							
COCESNA Cerro Santiago, Guatemala	CENAMER ACC				E	A/C/S*	250	I/P*							*MSSR-Modo S
Costa Rica	CENAMER ACC El Coco APP				E/T	A/C/S*	250	I/P*							*MSSR-Modo S
Grand Cayman, Cayman I.	CENAMER ACC Owen Roberts TWR				E/T	A/C/S*	250	I*							*MSSR-Modo S
Mata de Caña, Costa Rica	CENAMER ACC				E	A/C/S*	250	I/P*							*MSSR-Modo S
Puerto Cabezas, Nicaragua	CENAMER ACC				E	A/C/S*	250	I/P*							*MSSR-Modo S
Dixon Hill, Honduras	CENAMER ACC				E	A/C/S*	250	I*							*MSSR-Modo S
Monte Crudo, Honduras	CENAMER ACC				E	A/C/S*	250	I*							*MSSR-Modo S

**APPENDIX L
STATUS OF ATC SYSTEM READINESS TO PROCESS ADS-B DATA
FOLLOW-UP: FEBRUARY 2015**

ANSP	Status	
	ATC Automated System – Surveillance Data Processor	Remark
Anguilla	NIL	
Antigua and Barbuda	NIL	
Aruba	Implemented	
Bahamas	New ATC Automated System implemented 4 Q of 2015.	Mode S radar data processing
Barbados	Radar Data Processor only	RDP to be updated for ADS-B Data processing
Belize	Radar Data Processor available	RDP to be updated for ADS-B Data processing
British Virgin Islands	NIL	
Canada	Implemented	
Cayman Islands	Radar Data Processor available	RDP to be updated for ADS-B Data processing
COCESNA	Implemented	
Costa Rica	Radar Data Processor available	RDP to be updated for ADS-B Data processing
Cuba	Implemented	
Curacao	Radar Data Processor available	RDP to be updated for ADS-B Data processing
Dominica	NIL	
Dominican Republic	Implemented	
El Salvador	Implemented	
Grenada	NIL	
Guatemala	Implemented	
French Antilles	Implemented	
Haiti	NIL	
Honduras/San Pedro Sula	Radar Data Processor available	RDP to be updated for ADS-B Data processing
Jamaica	Implemented	
Mexico	Implemented	
Montserrat	NIL	
Netherlands (BES Islands)	NIL	
Nicaragua	Implemented	

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ANSP	Status	
	ATC Automated System – Surveillance Data Processor	Remark
Saint Kitts and Nevis	NIL	
Saint Lucia	NIL	
Saint Vincent and the Grenadines	NIL	
Sint Maarten	Implemented	
Trinidad and Tobago	Implemented	
Turks and Caicos	Radar Data Processor available	RDP to be updated for ADS-B Data processing
United States	Implemented	

APPENDIX M/APÉNDICE M

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

**GRUPO DE TAREA PARA LA
IMPLEMENTACIÓN DE LA GESTIÓN DE
INFORMACIÓN AERONÁUTICA (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 in consideration and support to the Global PBN implementation Plan. 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 consideration and support to the Global PBN implementation Plan, likewise 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

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 en consideración y apoyo al Plan Global de implementación PBN. 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 consideración y apoyo al Plan Global de implementación PBN, así como 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) Designate if so deemed Ad hoc groups to work on specific activities and issues and organize tasks and clearly defined activities
 - c) Coordinate tasks to maximize efficiency and reduce costs through electronic media including emails, phone and teleconferencing, and convene meetings where necessary
 - d) It will be notified and will coordinate the progress of the tasks assigned to the ANI/WG

- b) Designará si así lo considera Grupos Ad hoc para trabajar en temas y actividades específicas y organizar las tareas y actividades claramente definidas
- c) 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
- d) Notificará y coordinará el avance de las tareas asignadas al ANI/WG

4. 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 ANI/WG Informe al ANI/WG	15 October 2013	Completed Completado
2	Up-date AIM TF work programme Actualizar el programa de trabajo del AIM TF	Manage AIM/TF activities Gestionar actividades del AIM/TF	ICAO AIM/TF OACI AIM/TF	Report to ANI/WG Informe al ANI/WG	31 October 2013	Completed Completado
3	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 avance de informe	2016	
4	To support the development for a methodology for the implementation of QMS processes and quality management of the electronic automation in States that ensures the quality, safety and effectiveness related to the production and distribution of electronic aeronautical information Apoyar el desarrollo de una metodología para la implementación de los procesos QMS y gestión de la calidad en la automatización electrónica en los Estados que asegure la calidad, la seguridad operacional y la efectividad relacionada con la producción y distribución electrónica de la información aeronáutica	Ensure the quality in the aeronautical information management according to ISO and requirements of users Asegurar la calidad en la gestión de información aeronáutica de acuerdo a los requerimientos ISO y 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	
5	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, 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,	Assist States 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 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	2016	Pending for new ICAO Documents and new amendments to Annex 15 and Annex 4

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No	Activity Actividad	Objective Objetivo	Responsible Responsable	Deliverable Entregable	Date Fecha	Status Estado
6	<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 Seminar or Workshop</p> <p>Realizar Seminario o Taller</p>	2016	
7	<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, and publish the ASHTAM</p> <p>Desarrollar AIM para apoyar el Concepto Operacional de Gestión del Tránsito Aéreo; incluyendo los planes de contingencia NOTAM, y publicar el ASHTAM</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>	2015	
8	<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 in support to PBN implementation Plan</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 en apoyo al Plan de implementación PBN</p>	<p>Ensure that AIM solutions should be harmonized and integrated at a regional and international level, in support for the PBN implementation</p> <p>Asegurar que las soluciones AIM se armonicen e integren a nivel regional e internacional, en apoyo para la implementación del PBN</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>	2016	
9	<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>	2016	
10	<p>Develop an eTOD format for progress reports and propose it to the States</p> <p>Elaborar formato eTOD de avance de informes y proponerlo a los Estados</p>	<p>Report and monitor the status of eTOD implementation using electronic media to the ICAO NACC Regional Office</p> <p>Reportar 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>	2016	

No	Activity Actividad	Objective Objetivo	Responsible Responsable	Deliverable Entregable	Date Fecha	Status Estado
11	Provide and promote the aeronautical information management implementing exchange and conceptual models Proporcionar y promover la gestión de información aeronáutica implementando modelos conceptuales y de intercambio	Assist States, Territories and International Organizations in the implementation of the AICM and the AIXM 5.1 Asistir a los Estados, Territorios y Organizaciones Internacionales en la implementación del AICM y el AIXM 5.1	ICAO AIM/TF OACI AIM/TF	Perform Seminar or Workshop Realizar Seminario o Taller	2016	

5. Membresía/Membership:

Name of the Task Force Member Nombre del miembro del Grupo de Tarea	State/Territory/International Organization Estado/Territorio/Organización Internacional	E-mail address Correo-electrónico
Denisse Silston	Antigua y Barbuda/ Antigua and Barbuda	denissesilston@yahoo.com
Shirley Ford	Barbados	Shirley.Ford@barbados.gov.bb
Gilberto Torres	Belice/Belize	giltorres65@gmail.com
Chuck Montgomery	Canadá/Canada	montgoc@navcanada.ca
Edwin Quiros Vargas	Costa Rica	equiros@dgac.go.cr
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Pending/Pendiente	Estados Unidos/United States	Pending/Pendiente
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Julio Rodriguez	República Dominicana / Dominican Republic	jrodriguez@idac.gov.do
Steve Julien	Trinidad y Tabago/ Trinidad and Tabago	sjulien@caa.gov.tt
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Note: for an updated version of the Attachment to Appendix B of the WP – 10 (advances of the States of the Transition to AIM Phase 1 and Phase 2) please see Attachment to this Appendix.

Nota: para una versión actualizada del Adjunto al Apéndice B de la NE – 10 (avances de los Estados de la transición a AIM, Fase 1 y Fase 2) por favor vea el Adjunto a este Apéndice.

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Appendix M to the Report

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ADVANCES OF THE AIM TASKFORCE (AIM/TF) WORK PROGRAMME / AVANCES DEL PROGRAMA DE TRABAJO DEL GRUPO DE TAREA AIM 2013-2016

N o	Activity Actividad	Objective Objetivo	Responsible Responsable	Deliverable Entregable	Date Fecha	Status Estado
1	<p>Review of the AIM part for updating the draft of the NAM/CAR Regional Performance-Based Air Navigation Implementation Plan (NAM/CAR RPBANIP)</p> <p>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)</p>	<p>Comply with the requested in the DECISION ANI/WG/1/13</p> <p>Cumplir con lo solicitado en la DECISIÓN ANI/WG/1/13</p>	<p>ICAO AIM/TF</p> <p>OACI/AIM/TF</p>	<p>Report to ANIWG</p> <p>Informe al ANIWG</p>	<p>Dec 2015</p>	<p>In process</p> <p>RPBANIP's RPO will be reviewed</p> <p>en proceso</p> <p>Se revisarán los RPO del RPBANIP</p>
2	<p>Develop AIM TF work programme</p> <p>Elaborar programa de trabajo del AIM TF</p>	<p>Manage AIM/TF activities</p> <p>Gestionar actividades del AIM/TF</p>	<p>ICAO AIM/TF</p> <p>OACI AIM/TF</p>	<p>AIM TF work programme ANIWG</p> <p>Programa del AIM/TF ANIWG</p>	<p>31 October 2013</p>	<p>Completed</p> <p>Completado</p>
3	<p>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.</p> <p>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.</p>	<p>Comply with the process of introducing and implementing Amendments to Annexes 4 and 15 of the Chicago Convention and related Manuals</p> <p>Cumplir con el proceso de introducción e implementar enmiendas a los Anexos 4 y 15 del Convenio de Chicago y Manuales relacionados</p>	<p>ICAO</p> <p>OACI</p>	<p>Report to ANIWG</p> <p>Informe al ANIWG</p>	<p>2015</p> <p>Annex 4 and other AIM Manuals pending</p> <p>El Anexo 4 y otros Manuales AIM pendientes</p>	<p>Completed / see attachment to this Appendix for Draft Amendment Annex 15 and PANS - AIM</p> <p>Completado / ver adjunto a este apéndice para los borradores de la enmienda al Anexo 15 y del PANS - AIM</p>
4	<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 regularly on the generation and distribution of Integrated Aeronautical Information Package (IAIP)</p> <p>Informar periódicamente sobre la generación y distribución de la Documentación integrada de información Aeronáutica (IAIP)</p>	<p>States AIM/TF</p> <p>Estados AIM/TF</p>	<p>Progress report format</p> <p>Formato de informe de avance</p>	<p>2016</p>	<p>In process - ICAO Montreal proposed a MS Excel format for follow and advance. States will be surveyed</p> <p>En proceso - OACI Montreal propuso un formato de MS Excel para seguimiento y avance. Los Estados serán encuestados</p>
5	<p>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</p> <p>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</p>	<p>Ensure the quality in the aeronautical information management according to requirements of users</p> <p>Asegurar la calidad en la gestión de información aeronáutica de acuerdo a los requerimientos de los usuarios</p>	<p>ICAO AIM/TF</p> <p>OACI AIM/TF</p>	<p>QMS Survey to States</p> <p>Encuesta QMS a Estados</p>	<p>2016</p>	<p>ICAO AIM-QMS Manual (Doc 9839) in process</p> <p>En proceso el Manual AIM-QMS (Doc 9839)</p>

N o	Activity Actividad	Objective Objetivo	Responsible Responsable	Deliverable Entregable	Date Fecha	Status Estado
6	<p>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</p> <p>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</p>	<p>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</p> <p>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</p>	<p>ICAO AIM/TF OACI AIM/TF</p>	<p>Prepare periodic Bulletins Elaborar boletines periódicos</p>	<p>Pending / Pendiente</p>	<p>It is proposed to remove this task until ICAO defines AIM activities related with the SWIM</p> <p>Se propone quitar esta tarea hasta que la OACI defina las actividades AIM relacionadas con el SWIM</p>
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 OACI AIM/TF</p>	<p>Perform a Seminar or Workshop Realizar Seminario o Taller</p>	<p>2016</p>	<p>In process in 2015 – CAR/SAM eCharts for PBN Seminar, AIXM Seminar and eTOD Seminar</p> <p>En proceso en 2015 - Seminario Cartas electrónicas PBN, Seminario AIXM y Seminario eTOD</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 OACI AIM/TF</p>	<p>Generate support through reference OR. NACC. ICAO Generar apoyo mediante referencia de OR NACC OACI</p>	<p>2015</p>	<p>More States implemented ASHTAM in 2014 and first quarter of 2015.</p> <p>Más Estados implementaron el ASHTAN en 2014 y en el primer trimestre de 2105</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 OACI AIM/TF</p>	<p>ICAO Survey Encuesta OACI</p>	<p>Pending / Pendiente</p>	<p>It is proposed to remove this task until ICAO defines AIM activities related with the SWIM</p> <p>Se propone quitar esta tarea hasta que la OACI defina las actividades AIM relacionadas con el SWIM</p>

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N o	Activity Actividad	Objective Objetivo	Responsible Responsable	Deliverable Entregable	Date Fecha	Status Estado
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 Implement technical ICAO Doc 9881 requirements, as required</p> <p>Compartir experiencias y recursos con la implementación del eTOD a través del establecimiento de un Grupo de Trabajo Regional eTOD 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>	2016	<p>In process in 2015 – CAR/SAM eTOD Seminar</p> <p>En proceso en 2015 - Seminario eTOD CAR/SAM</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>	2016	<p>In progress</p> <p>En progreso</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>	Pending / Pendiente	<p>It is proposed to remove this task until States have activities related with the eTOD</p> <p>Se propone quitar esta tarea hasta que los Estados tengan actividades relacionadas con el eTOD</p>
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>	2015	<p>In process in 2015 – CAR/SAM AIXM Seminar</p> <p>En proceso en 2015 - Seminario AIXM CAR/SAM</p>

Update/Actualización

Roadmap for the Transition from AIS to AIM - Consolidation Phase - Implementation Status				
North American, Central American and Caribbean Office, Mexico City (NACC)				
Phase 1		Phase 1		
P-03 — AIRAC adherence monitoring			P-05 — WGS-84 implementation	
P-04 — Monitoring of States' differences to Annex 4 and Annex 15				
P-17 — Quality				
Instructions for completing the table:				
		FC	Fully Compliant	
		PC	Partially Compliant	
		NC	Not Compliant	
Phase 1 Consolidation (Amendment 36 November 2010)				
State	P-03 AIRAC	P-04 (EFCD)	P-05 WGS84	P-17 QMS
Antigua and Barbuda	FC	FC	FC	NC
Bahamas	FC	NC	FC	NC
Barbados	FC	FC	FC	NC
Belize	PC	PC	FC	NC
Canada	FC	NC	FC	FC
Costa Rica	FC	FC	FC	FC
Cuba	FC	FC	FC	FC
Dominican Republic	FC	FC	FC	FC
El Salvador	PC	FC	FC	NC
Grenada	NC	NC	FC	NC
Guatemala	NC	NC	FC	NC
Haiti	NC	NC	FC	NC
Honduras	FC	PC	FC	NC
Jamaica	FC	NC	FC	NC
Mexico	FC	FC	FC	FC
Nicaragua	FC	FC	FC	FC
Saint Kitts and Nevis	FC	NC	FC	NC
Saint Lucia	FC	NC	FC	NC
Saint Vincent and the Grenadines	FC	NC	FC	NC
Trinidad and Tobago	FC	FC	FC	PC
United States	FC	NC	FC	FC
COCESNA	FC	NA	NA	FC

Barbados

P17 QMS PC (Partially completed)

Jamaica

P17 QMS PC (Partially completed)

El Salvador

P03 AIRAC FC (Full completed)

Granada

P03 AIRAC FC (Full completed)

Guatemala

P03 AIRAC PC (Partially completed)

Update

	A	B	C	D	E	F	G	H	I	J
1	Roadmap for the Transition from AIS to AIM - Going Digital Phase II - Implementation Status									
2	North American, Central American and Caribbean Office, Mexico City (NACC)									
3										
4	Phase 2									
5	P-01 — Data quality monitoring									
6	P-02 — Data integrity monitoring									
7	P-06 — Integrated aeronautical information database									
8	P-07 — Unique identifiers									
9	P-08 — Aeronautical information conceptual model									
10	P-11 — Electronic AIP									
11	P-13 — Terrain									
12	P-14 — Obstacles									
13	P-15 — Aerodrome mapping									
14										
15										
16	Instructions for completing the table:									
17	FC	Fully Compliant								
18	PC	Partially Compliant								
19	NC	Not Compliant								
20										
21	Phase 2 Going Digital									
22										
23	State	P-01 Data quality monitoring	P-02 Data integrity monitoring	P-06 Integrated aeronautical info DB	P-07 Unique identifiers	P-08 AICM	P-11 Electronic AIP	P-13 Terrain	P-14 Obstacles	P-15 Aerodrome mapping
24	Antigua and Barbuda	NC	NC	NC	NC	NC	NC	NC	PC	NC
25	Bahamas	NC	NC	NC	NC	NC	NC	NC	PC	NC
26	Barbados	NC	NC	NC	PC	NC	NC	NC	FC	NC
27	Belize	NC	NC	NC	NC	NC	NC	NC	PC	NC
28	Canada	FC	FC	FC	FC	FC	FC	PC	FC	FC
29	Costa Rica	PC	PC	NC	PC	NC	NC	NC	PC	NC
30	Cuba	PC	PC	NC	PC	NC	NC	PC	FC	NC
31	Dominican Republic	PC	PC	PC	NC	PC	PC	NC	PC	PC
32	El Salvador	NC	NC	NC	NC	NC	NC	NC	NC	NC
33	Grenada	NC	NC	NC	NC	NC	NC	NC	NC	NC
34	Guatemala	NC	NC	NC	NC	NC	NC	NC	NC	NC
35	Haiti	NC	NC	NC	NC	NC	NC	NC	NC	NC
36	Honduras	NC	NC	NC	NC	NC	NC	NC	NC	NC
37	Jamaica	NC	NC	NC	NC	NC	NC	NC	NC	NC
38	Mexico	PC	PC	FC	FC	PC	PC	NC	PC	FC
39	Nicaragua	NC	NC	NC	PC	NC	NC	NC	PC	NC
40	Saint Kitts and Nevis	NC	NC	NC	PC	NC	NC	NC	PC	NC
41	Saint Lucia	NC	NC	NC	PC	NC	NC	NC	PC	NC
42	Saint Vincent and the	NC	NC	NC	NC	NC	NC	NC	NC	NC
43	Trinidad and Tobago	PC	PC	PC	PC	PC	PC	NC	PC	NC
44	United States	FC	FC	FC	FC	FC	PC	FC	FC	FC
45	COCESNA	PC	PC	FC	FC	PC	PC	NC	FC	PC
46										
47										

Barbados

P11 eAIP PC (Partially completed)

Jamaica

P11 eAIP PC (Partially completed)

P14 Obstacles PC (Partially completed)

APPENDIX N AMHS IMPLEMENTATION MATRIX

Update: May 2016														
CAR Region AMHS Implementation Matrix														
Administration	STATUS	System Description					System Implementation milestones				(COM CHART) Connection with	POC	Remarks	
		Location of Facility	AMHS Facility Type	AMHS Vendor	Current Facility Type	Current Vendor	AMHS System Procurement Date	AMHS System Implementation Date	AMHS Interoperability Test	AMHS Service Outover				
Aruba	Under Study	Aruba									United States	Josefelo 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	
Cayman Islands	Establishment of Testing Circuit	Grand Cayman	MTA + UA	Frequentis	AFTN switch	Frequentis	end 1Q2011	4Q 2014	2Q2015	TBD	United States	Wayne DaCosta	5-2015 System Implemented but not operational. Interoperability testing in process	
Dominican Republic	Implemented	Santo Domingo	AMHS - MTA/UA	Ubitech	AFTN Switch		already	Jan2011	May 2012	Sep 2012	United States	Fernando Casso	Originally implemented on MEVA II. Successfully transitioned to MEVA III	
Cuba	Interoperability Testing in process	La Habana	AMHS - MTA/UAs	ISOOE/ In-house	AFTN Switch	Own system	N/A	TBD	2014Q4 - 2015Q2	Sept 2015	United States	Carlos Jimenez y Layla Rodriguez, Carmen de Armas	5-2015 Parts of the Interoperability Testing was performed over a test circuit on MEVA II; Testing resumed once the test circuit was migrated to MEVA III	
Haiti	Under Study	Port-au-Prince	TBD	TBD	AFTN User	OSA	10/15	03/16	05/16	09/16	United States	Emmanuel Jacques	05/15 - Current vendor needs to be verify. Updated system implementation milestone.	
COCESNA	System Implemented- ready for testing	Tegucigalpa	AMHS Gateway	ISOOE/ In-house	AFTN Switch	COCESNA	N/A	TBD	TBD	TBD	TBD	Belize - MTA Guatemala - MTA Managua - MTA Mexico - MTA San Jose - MTA San Pedro Sula - MTA San Salvador - MTA United States	Mayda Avila Oscar Villa-c	5-15 Testing with FAA on hold pending pending notification from COCESNA
								TBD	TBD	TBD	TBD			
								TBD	TBD	TBD	TBD			
								TBD	TBD	TBD	TBD			
								TBD	TBD	TBD	TBD			
								TBD	TBD	TBD	TBD			
Jamaica	System Implemented - ready for testing	Kingston	AMHS G/W	TBD	AFTN Switch	TBD	Q2-2012		Aug 2012	Oct 2012	United States	Gordon/Derrick Grant	5-15 No updates	
Mexico	Coordination initiated	Mexico									Centro-America United States		5-2015 Initiated coordination with GENEAM	
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	Domsoft	AFTN Switch	Thales	Apr 2012	Sep 2012	Sep 12	Sep 12	Sep 12	Angilla Antigua Barbados-UA Caracas- MTA Dominica - UA Port-de-France- UA Georgetown-UA Grenada-UA Montserrat-UA Pointe-a-Pitre- MTA Saint Kitts and Nevis- UA Saint Lucia-UA Saint Vincent-UA United States	Veronica Ramdath Randy Gomez	5-15 Interoperability testing in process 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.
									Sep 12	Sep 12	Sep 12			
									Sep 12	Sep 12	Sep 12			
									Sep 12	Sep 12	Sep 12			
									Sep 12	Sep 12	Sep 12			
									Sep 12	Sep 12	Sep 12			
									Sep 12	Sep 12	Sep 12			
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									Sep 12	Sep 12	Sep 12			
									Sep 12	Sep 12	Sep 12			
									Sep 12	Sep 12	Sep 12			
									Sep 12	Sep 12	Sep 12			
Turks and Caicos	Scheduled for testing	Providenciales	MTA	Stonefield Sys	AFTN Term	Stonefield Sys	1Q 2012	2Q 2012	Feb 2013	Mar 2013	United States	Emmanuel Rigby John T. Smith	5-2015 No updates	
Sint Maarten	Coordination initiated		AMHS MTA	IDG	AFTN Switch		2014Q1		2015Q3	TBD	United States	Lloyd Hinds	Project to resume after implementation of MEVA III	
United States		Atlanta	AMHS G/W	U.S.A.	AFTN Switch	U.S.A.	now	now			Aruba Brazil Caracas Cayman Centro America Curacao Grand Turk La Habana Kingston Lima Mexico Nassau-B Panama Port-au-Prince Port-of-Spain Saint Maarten Santa Domingo Tortola	Duice Roses	5-15 see notes	

CPDLC Implementation Considerations
 (disponible únicamente en inglés)

Checklist Template

CPDLC Implementation Considerations

**Regulatory/Regional
 Coordination/Approval**

1	Advise purpose and use within present ATM concept
2.	Establish and reference GOLD as the source guidance material
3.	Coordinate safety implementation activities

This category involves any coordination with State or Regional stakeholders such as regulatory authorities or PIRGs

**Air Traffic Management
 Considerations**

1.	ATC and Technical Operations training
2.	Decision on which messages to support
3.	Pre-implementation live system testing
4.	Performance monitoring

This category involves activities to support overall ANSP system readiness

State/Operator Awareness

1.	State Letter development and promulgation.
2.	State AIP (ICAO)
	<ul style="list-style-type: none"> • Document amendment • Aeronautic Information Circular development and publication

This category involves activities to coordinate and advertise the addition of CPDLC services, includes procedures, flight planning, etc

Details and Examples

1	The specific use of CPDLC for ATC functions would be described.
2.	This would be necessary so that the State can be aware of the guidance for procedures and monitoring requirements.
3.	Incorporation of CPDLC would normally follow SMS practices for changes to operating procedures.

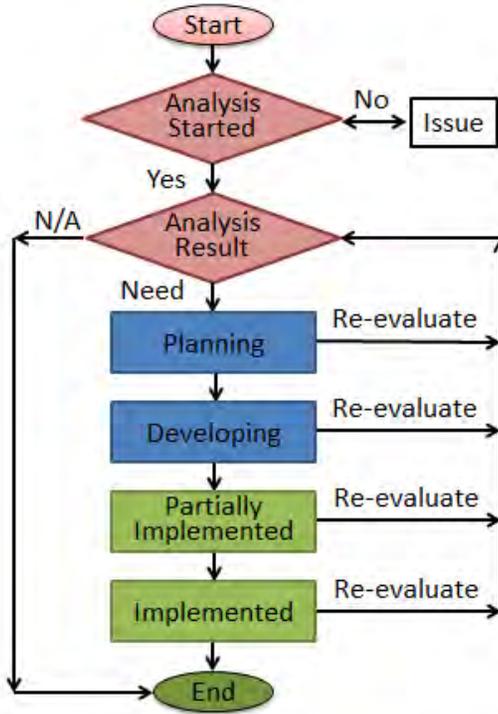
1.	To be determined by implementer - Example, 2 hours (1 hour theory, 1 hour practice in simulator).
2.	To be determined by implementer.
3.	To be determined by implementer.
4.	As per GOLD guidance

1.	Advisory to States
2.	Should contain all procedures, including coverage area, implementation timelines, AFN logon address, etc

**APPENDIX P
TITLE CPDLC/ADS-C IMPLEMENTATION ACTION PLAN**

Task Name	Duration	Start	Finish
CPDLC CONOPS			
use of GOLD Document as official guidance material			
Initial concept: scope/purpose within current ATM OPS concept			
Safety assessment of the CPDLC Concept			
Approval of CPDLC concept			
CPDLC Implementation			
Decision on which messages to support			
System evaluation for compliance and improvements			
Review of operational procedures regarding CPDLC			
Contracting of Data service provider			
ATC Training regarding CPDLC			
Technical Operations training regarding CPDLC			
State letter development and promulgation			
Pre-implementation live system testing			
AIP publication- AIC			
Evaluation of tests and preparation for operational use			
CPDLC operation start			
Performance Monitoring			

**APPENDIX Q
ANALYSYS FOR COMPLETING AN TARGETS**



Selection criteria:

Safety assessments need to be conducted to identify airports and FIRs where improvements are required for safety reasons. For example, where do runway incursions occur? Where do missed approaches occur? Where do separation losses occur?

Operational assessments need to be conducted to identify airports and FIRs where improvements are required for efficiency reasons. For example, where are there departure or arrival delays? Where are there flow restrictions?

Business case analyses need to be conducted to determine whether the identified improvements are feasible: are enough aircraft equipped, certified, approved, to participate in the new operation? Can the improvement be financed? Are the costs to implement justified/offset by the savings or safety improvements that are foreseen?

ICAO Guidance Documents often include material to assist States to assess whether a particular airspace or airport is suitable or should be considered for a specific implementation.

IATA and CANSO produce best practices guidance documents to assist ANSPs and operators to carry out operational benefits analyses.

ICAO provides implementation kits (iKits) at the following link:

<http://www.icao.int/safety/Implementation/Pages/iKITs.aspx>

CANSO and IATA have produced guidance and best practices on how to develop metrics and measure performance from implementations, in order to determine whether the intended improvements have been achieved.

Module Code	Module Title	Elements	Source	Metric	Target
B0-APTA	Optimization of Approach Procedures including vertical guidance	1. PBN Approach Procedures with vertical guidance (LPV, LNAV/VNAV minima, using SBAS and Baro VNAV)	Derived from 4.1.1	a. # out of # Table AOP I-1 airports which have assessed all runway ends for requirement b. # out of # required implementations planned c. # out of # required implementations completed	B0-APTA 1.a. 100% by Dec 31, 2015 B0-APTA 1.b. TBD B0-APTA 1.c. TBD
		2. PBN Approach Procedures without vertical guidance (LP, LNAV minima; using SBAS)	Derived from 4.1.1	a. # out of # Table AOP I-1 airports which have assessed all runway ends for requirement b. # out of # required implementations planned c. # out of # required implementations completed	B0-APTA 2.a. 100% by Dec 31, 2015
		3. GBAS Landing System (GLS) Approach procedures	Derived from 1.3.2	a. # out of # Table AOP I-1 airports that have assessed all runway ends for requirement b. # out of # required implementations planned c. # out of # required implementations completed	B0-APTA 3.a. 100% by Dec 31, 2015
The RPBANIP has: 1. APV with BARO VNAV, 2. APV with SBAS (WAAS), 3. APV with GBAS and 4. LNAV. This does not make sense, because LNAV refers to the approach limits possible, not an approach type. The types of PBN approaches are those with or without vertical guidance and another (less frequently implemented) type based on GBAS. We don't believe the stated targets are possible.					
B0-WAKE	Increased Runway Throughput through Optimized Wake Turbulence Separation	1. New PANS-ATM wake turbulence categories and separation minima	Defined: Element 1	a. publication of new minima	B0-WAKE 1.a. Applicable by Nov 2017?
		2. Dependent diagonal paired approach procedures for parallel runways with centrelines spaced less than 760 meters (2,500 feet) apart	Derived from Element 2	a. # out of # of Table AOP I-1 airports with such parallel runways that have been assessed for requirement b. # out of # required implementations planned c. # out of # required implementations completed	B0-WAKE 2.a. 100% by Dec 31, 2016
		3. Wake independent departure and arrival procedures for parallel runways with centrelines spaced less than 760 meters (2,500 feet) apart	Derived from Element 3)	a. # out of # of Table AOP I-1 airports with such parallel runways that have been assessed for requirement b. # out of # required implementations planned c. # out of # required implementations completed	B0-WAKE 3.a. 100% by Dec 31, 2016
		4. Wake turbulence mitigation for departures procedures for parallel runways with centrelines spaced less than 760 meters (2,500 feet) apart	Derived from Element 3	a. # out of # of Table AOP I-1 airports with such parallel runways that have been assessed for requirement b. # out of # required implementations planned c. # out of # required implementations completed	B0-WAKE 4.a. 100% by Dec 31, 2016
		5. 6 wake turbulence categories and separation minima	Identified by the United States	a. # of # selected airports at which this has been implemented	B0-WAKE 5.a. 100% by Dec 31, 2015

Module Code	Module Title	Elements	Source	Metric	Target
B0-RSEQ	Improve Traffic flow through Runway Sequencing (AMAN/DMAN)	1. AMAN via controlled time of arrival to a reference fix	Derived from Element 1	<ul style="list-style-type: none"> a. # out of # Table AOP I-1 airports assessed for requirement b. # out of # required implementations planned c. # out of # required implementations completed 	B0-RSEQ 1.a. All by 31 Dec, 2015 B0-RSEQ 1.b. All by 31 Dec, 2015 B0-RSEQ 1.c. 10% by 31 Dec, 2016
		2. AMAN via controlled time of arrival at the aerodrome	Derived from Element 1	<ul style="list-style-type: none"> a. # out of # Table AOP I-1 airports assessed for requirement b. # out of # required implementations planned c. # out of # required implementations completed 	B0-RSEQ 2.a. 100% by 31 Dec, 2015 B0-RSEQ 2.b. All by 31 Dec, 2015 B0-RSEQ 3.c. 10% by 31 Dec, 2016
		3. Departure management	Defined: Element 2	<ul style="list-style-type: none"> a. # out of # Table AOP I-1 airports assessed for requirement b. # out of # required implementations planned c. # out of # required implementations completed 	B0-RSEQ 3.a. 100% by 31 Dec, 2015 B0-RSEQ 3.b. All by 31 Dec, 2015 B0-RSEQ 3.c. 10% by 31 Dec, 2016
		4. Departure flow management	Derived from Element 2	<ul style="list-style-type: none"> a. # out of # Table AOP I-1 airports assessed for requirement b. # out of # required implementations planned c. # out of # required implementations completed 	B0-RSEQ 4.a. 100% by 31 Dec, 2016 B0-RSEQ 1.b. All by 31 Dec, 2015 B0-RSEQ 1.c. 10% by 31 Dec, 2016
		5. Point merge	Defined: Element 3	<ul style="list-style-type: none"> a. # out of # Table AOP I-1 airports assessed for requirement b. # out of # required implementations planned c. # out of # required implementations completed 	B0-RSEQ 5.a. 100% by 31 Dec, 2016

Module Code	Module Title	Elements	Source	Metric	Target
B1-RSEQ	Improved airport operations through departure, surface and arrival management	1. Surface movement optimization		a. # out of # Table AOP I-1 airports assessed for requirement b. # out of # required implementations planned c. # out of # required implementations completed	B1-RSEQ 1.a. 100% by Dec, 2015 B1-RSEQ 1.b. 100% by Dec, 2016 B1-RSEQ 1.c. 20% by Dec, 2016
B0-SURF	Safety and Efficiency of Surface Operations (A-SMGCS Level 1-2)	1. A-SMGCS with at least one cooperative surface surveillance system	Derived from Element 1	a. # out of # Table AOP I-1 airports assessed for requirement b. # out of # required implementations planned c. # out of # required implementations completed	B0-SURF 1.a. 100% by 31 Dec, 2016
		2. Including ADS-B APT as an element of A-SMGCS	Derived from Element 1	a. # out of # Table AOP I-1 airports assessed for requirement b. # out of # required implementations planned c. # out of # required implementations completed	B0-SURF 2.a. 100% by 31 Dec, 2016 B0-SURF 2.b. 100% by 31 Dec, 2017 B0-SURF 2.c. 30% by 30 June, 2018
		3. A-SMGCS alerting with flight identification information	Derived from Element 2	a. # out of # Table AOP I-1 airports assessed for requirement b. # out of # required implementations planned c. # out of # required implementations completed	B0-SURF 3.a. 100% by 31 Dec, 2016
		4. Airport vehicles equipped with transponders	Derived from 1.4.1	a. # out of # Table AOP I-1 airports assessed for requirement b. # out of # required airports where vehicle equipage planned c. # out of # required airports where vehicle equipage completed	B0-SURF 2.a. 100% by 31 Dec, 2015 B0-SURF 2.b. 100% by 31 Dec, 2017 B0-SURF 2.c. 20% by 30 June, 2018
B0-ACDM	Improved Airport Operations through Airport-CDM	1. Airport CDM procedures	Derived from 1.1.2	a. # out of # Table AOP I-1 airports assessed for requirement b. # out of # required airports where planning completed c. # out of # required airports where implementation completed	B0-ACDM 1.a. 100% by 31 Dec, 2016 B0-ACDM 1.b. 100% by 31 Dec, 2017 B0-ACDM 1.c. 60% by 31 Dec, 2018

Module Code	Module Title	Elements	Source	Metric	Target
		2. Airport CDM tools	Derived from 1.1.2	a. # out of # Table AOP I-1 airports assessed for requirement b. # out of # required airports where planning completed c. # out of # required airports where implementation completed	B0-ACDM 2.a. 100% by 31 Dec, 2016
		3. Collaborative departure queue management	Derived from 3.1 & 7.2.1	a. # out of # Table AOP I-1 airports assessed for requirement b. # out of # required airports where planning completed c. # out of # required airports where implementation completed	B0-ACDM 3.a. 100% by 31 Dec, 2016
B0-FICE	Increased Interoperability, Efficiency and Capacity through Ground-Ground Integration	% of FIRs within which all applicable ACCs have implemented at least one interface to use AIDC / OLDI with neighbouring ACCs			
		1. AIDC to provide initial flight data to adjacent ATSUs	Derived from 1.1.4	a. # out of # FIRs within which all ACCs have assessed requirement with all adjacent ACCs b. # out of # required implementations planned c. # out of # required implementations completed	B0-FICE 1.a. 100% by 31 Dec, 2015 B0-FICE 1.b. 100% by 31 Dec, 2016 B0-FICE 1.c. 50% by Dec, 2016
		2. AIDC to update previously coordinated flight data	Derived from 1.1.5	a. # out of # FIRs within which all ACCs have assessed requirement with all adjacent ACCs b. # out of # required implementations planned c. # out of # required implementations completed	B0-FICE 2.a. All by 31 Dec, 2015 B0-FICE 2.b. 100% by 31 Dec, 2016 B0-FICE 2.c. 50% by Dec, 2016
		3. AIDC for control transfer	Derived from 1.1.5	a. # out of # FIRs within which all ACCs have assessed requirement with all adjacent ACCs b. # out of # required implementations planned c. # out of # required implementations completed	B0-FICE 3.a. 100% by 31 Dec, 2015
		4. AIDC to transfer CPDLC logon information to the Next Data Authority	Derived from 1.1.6	a. # out of # FIRs within which all ACCs have assessed requirement with all adjacent ACCs b. # out of # required implementations planned c. # out of # required implementations completed	B0-FICE 4.a. 100% by 31 Dec, 2015

Module Code	Module Title	Elements	Source	Metric	Target
B0-DATM	Service Improvement through Digital Aeronautical Information Management	-% of States having implemented an AIXM based AIS database -% of States having implemented QMS			
		1. Aeronautical Information Conceptual Model (AICM) Aeronautical Information Exchange Model (AIXM)	Derived from 1.1.1	a. # out of # States that have assessed requirement b. # out of # required States that have completed planning c. # out of # required States that have completed implementation	B0-DATM 1.a. 100% by 31 Dec, 2015 B0-DATM 1.b. ?% by 31 Dec, 2016 B0-DATM 1.c. 40% by 31 Dec, 2018
		2. eAIP	Derived from 3.1.3	a. # out of # States that have assessed requirement b. # out of # required States that have completed planning c. # out of # required States that have completed implementation	B0-DATM 2.a. 100% by 31 Dec, 2015 B0-DATM 2.b. 100% by 31 Dec, 2017 B0-DATM 2.c. 45% by 31 Dec, 2018
		3. Digital NOTAM	Derived from 7.1	a. # out of # States that have assessed requirement b. # out of # required States that have completed planning c. # out of # required States that have completed implementation	B0-DATM 3.a. 100% by 31 Dec, 2015 B0-DATM 3.b. 100% by 31 Dec, 2017 B0-DATM 3.c. 35% by 31 Dec, 2018
		4. eTOD	Identified by NACC	a. # out of # States that have assessed requirement b. # out of # required States that have completed planning c. # out of # required States that have completed implementation	B0-DATM 4.a. 100% by 31 Dec, 2015 B0-DATM 4.b. 100% by 31 Dec, 2017 B0-DATM 4.c. 10% by 31 Dec, 2018
		5. WGS-84	?????	a. # out of # States that have assessed requirement b. # out of # required States that have completed planning c. # out of # required States that have completed implementation	B0-DATM 5.a. 100% by 31 Dec, 2015

Module Code	Module Title	Elements	Source	Metric	Target
		6. QMS for AIM	Identified by NACC	a. # out of # States that have assessed requirement b. # out of # required States that have completed planning c. # out of # required States that have completed implementation	B0-DATM 6.a. 100% by 31 Dec, 2015 B0-DATM 6.b. 100% by 31 Dec, 2015 B0-DATM 6.c. 100% by 31 Dec, 2016
B0-AMET	Meteorological information supporting enhanced operational efficiency and safety	1. WAFS	Defined: Element 1	a. # out of # States that have completed planning b. # out of # States that have completed implementation	B0-AMET 1.a. 100% by 31 Dec, 2014 B0-AMET 1.b. 100% by 31 Dec, 2014

		2. IAVW	Defined: Element 2	a. # out of # States that have completed planning b. # out of # States that have completed implementation	B0-AMET 2.a. 100% by 31 Dec, 2014 B0-AMET 2.b. 70% by 31 Dec, 2014 B0-AMET 2.b. 100% by 31 Dec, 2015
		3. TCAC forecasts	Defined: Element 3	a. # out of # States that have completed planning b. # out of # States that have completed implementation	B0-AMET 3.a. 100% by 31 Dec, 2014 B0-AMET 3.b. 100% by 31 Dec, 2014
		4. Aerodrome warnings	Defined: Element 4	a. # out of # States that have completed planning b. # out of # States that have completed implementation	B0-AMET 4.a. 100% by 31 Dec, 2014 B0-AMET 4.b. 50% by 31 Dec, 2014 B0-AMET 4.b. 80% by 31 Dec, 2015
		5. Wind shear warnings and alerts	Defined: Element 5	a. # out of # States which have completed planning b. # out of # States that have completed implementation	B0-AMET 5.a. 100% by 31 Dec, 2015 B0-AMET 5.b. 20% by 31 Dec, 2015

		6. SIGMET	Derived from Element 6	a. # out of # States that have completed planning b. # out of # States that have completed implementation	B0-AMET 6.a. 100% by 31 Dec, 2014 B0-AMET 6.b. 90% by 31 Dec, 2014 B0-AMET 6.b. 100% by 31 Dec, 2015
		7. Other OPMET information (METAR, SPECI and/or TAF)	Derived from Element 6	a. # out of # States that have assessed requirement to provide other OPMET information b. # of # required implementations planned c. # of # required implementations completed	B0-AMET 7.a. 100% by 31 Dec, 2015
B0-FRTO	Improved Operations through Enhanced En-Route Trajectories	% of FIRs in which FUA is implemented			
		1. CDM incorporated into airspace planning	Derived from Element 1	a. # out of # States that have assessed requirement b. # out of # required States that have completed planning c. # out of # required States that have completed implementation	B0-FRTO 1.a. 100% by 31 Dec, 2016
		2. Flexible Use of Airspace (FUA)	Defined: Element 2	a. # out of # States that have assessed requirement b. # out of # required States that have completed planning c. # out of # required States that have completed implementation	B0-FRTO 2.a. 100% by 31 Dec, 2015 B0-FRTO 2.b. 100% by 31 Dec, 2015 B0-FRTO 2.c. 50% by 31 Dec, 2016
		3. Flexible route systems	Defined: Element 3	a. # out of # FIRs that have assessed requirement b. # out of # required States that have completed planning c. # out of # required States that have completed implementation	B0-FRTO 3.a. 100% by 31 Dec, 2016
		4. CPDLC used to request and receive re-route clearances	Derived from Element 3	a. # out of # FIRs that have assessed requirement b. # out of # required States that have completed planning c. # out of # required States that have completed implementation	B0-FRTO 4.a. 100% by 31 Dec, 2016
B0-NOPS	Improved Flow Performance through	% of FIRs within which all ACCs utilize ATFM systems			

	Planning based on a Network-Wide view			<p>a. # out of # FIRs that have assessed requirement</p> <p>b. # out of # required FIRs that have completed planning</p> <p>c. # out of # required FIRs that have completed implementation</p>	<p>B0-NOPS 1.a. 100% by 31 Dec, 2015</p> <p>B0-NOPS 1.b. 100% by 31 Dec, 2017</p> <p>B0-NOPS 1.c. 100% by 31 Dec, 2018</p>
B0-ASUR	Initial capability for ground surveillance	% of FIRs where ADS-B OUT and/or MLAT are implemented for the provision of surveillance services in identified areas.	1. Not to be considered for the first reporting cycles due to lack of maturity.		
		1. ADS-B	Defined: Element 1	<p>a. # out of # Table AOP I-1 airports that have been assessed for requirement</p> <p>b. # out of # required implementations that have been planned</p> <p>c. # out of # required implementations that have been completed</p>	<p>B0-ASUR 1.a. 100% by 31 Dec, 2016</p> <p>B0-ASUR 1.b. 100% by 31 Dec, 2017</p> <p>B0-ASUR 1.c. 30% by 31 Dec, 2018</p>
		2. Multilateration (MLAT)	Defined: Element 2	<p>a. # out of # Table AOP I-1 airports that have been assessed for requirement</p> <p>b. # out of # required implementations that have been planned</p> <p>c. # out of # required implementations that have been completed</p>	<p>B0-ASUR 2.a. 100% by 31 Dec, 2016</p> <p>B0-ASUR 2.b. 100% by 31 Dec, 2017</p> <p>B0-ASUR 2.c. 80% by 30 June, 2018</p>
B0-ASEP	Air Traffic Situational Awareness (ATSA)	% of States having implemented air traffic situational awareness	1. Not to be considered for the first reporting cycles due to lack of maturity.		
		1. ATSA-AIRB	Defined: Element 1	<p>a. # out of # FIRs that have assessed requirement</p> <p>b. # out of # required States that have completed planning</p> <p>c. # out of # required States that have completed implementation</p>	B0-ASEP 1.a. 100% by Dec, 2016
		2. ATSA-VSA	Defined: Element 2	<p>a. # out of # FIRs that have assessed requirement</p> <p>b. # out of # required States that have completed planning</p> <p>c. # out of # required States that have completed implementation</p>	B0-ASEP 2.a. 100% by Dec, 2016

B0-OPFL	Improved access to optimum flight levels through climb/descent procedures using ADS-B	% of FIRs having implemented in-trail procedures	†. Not to be considered for the first reporting cycles due to lack of maturity.		
		1. ITP using ADS-B	Derived from 1.3.1	a. # of # FIRs that have assessed requirement b. # out of # required States that have completed planning c. # out of # required States that have completed implementation	B0-OPFL 1.a. 100% by Dec, 2016
B0-ACAS	ACAS Improvements	% of States requiring carriage of ACAS (with TCAS 7.1 evolution)			
		1. ACAS II (TCAS version 7.1)	Derived from 1.3.2	a. # of # States that have assessed requirement for aircraft to carry and operate ACAS II b. # out of # required States that have completed planning c. # out of # required States that require carriage and operation of ACAS II	B0-ACAS 1.a. 100% by 31 Dec, 2015 B0-ACAS 1.b. 50% by Dec 31, 2017 B0-ACAS 1.c. 10% by 31 Dec, 2018
		2. Auto Pilot/Flight Director (AP/FD) TCAS	Derived from 1.3.7 a	a. # of # States that have assessed requirement b. # out of # required States that have completed planning c. # out of # required States that have completed implementation	B0-ACAS 2.a. 100% by Dec 31, 2016
		3. TCAS Alert Prevention (TCAP)	Derived from 1.3.7 b	a. # of # States that have assessed requirement b. # out of # required States that have completed planning c. # out of # required States that have completed implementation	B0-ACAS 3.a. 100% by Dec 31, 2016
B0-SNET	Increased Effectiveness of Ground-Based Safety Nets	1. Short Term Conflict Alert (STCA)	Defined: Element 1	a. # of # States that have assessed requirement for all ACCs b. # out of # States that have completed planning for all required ACCs c. # out of # States that have completed implementation at all required ACCs	B0-SNET 1.a. 100% by 31 Dec, 2015 B0-SNET 1.b. 100% by 31 Dec, 2015 B0-SNET 1.c. 80% by 31 Dec, 2015
		2. Area Proximity Warning (APW)	Defined: Element 2	a. # of # States that have assessed requirement at all ACCs b. # out of # States that have completed planning for all required ACCs c. # out of # States that have completed implementation at all required ACCs	B0-SNET 2.a. 100% by 31 Dec, 2015 B0-SNET 2.b. 100% by 31 Dec, 2015 B0-SNET 2.c. 70% by 31 Dec, 2015

		3. Minimum Safe Altitude Warning (MSAW)	Defined: Element 3	<p>a. # of # States that have assessed requirement at all ACCs</p> <p>b. # out of # States that have completed planning for all required ACCs</p> <p>c. # out of # States that have completed implementation at all required ACCs</p>	<p>B0-SNET 3.a. 100% by 31 Dec, 2015</p> <p>B0-SNET 3.b. 100% by 31 Dec, 2015</p> <p>B0-SNET 3.c. 70% by 31 Dec, 2015</p>
		4. Medium Term Conflict Alert (MTCA)	Identified by NACC	<p>a. # of # States that have assessed requirement at all ACCs</p> <p>b. # out of # States that have completed planning for all required ACCs</p> <p>c. # out of # States that have completed implementation at all required ACCs</p>	<p>B0-SNET 4.a. 100% by 31 Dec, 2015</p> <p>B0-SNET 4.b. 100% by 31 Dec, 2015</p> <p>B0-SNET 4.c. 80% by 31 Dec, 2016</p>
B0-CDO	Improved Flexibility and Efficiency in Descent Profiles (CDO)	1. Procedure changes to facilitate CDO	Derived from Element 1	<p>a. # out of # FIRs that have been assessed for requirement</p> <p>b. # out of # required FIRs that have planned implementation</p> <p>c. # out of # required FIRs that have completed implementation</p>	<p>B0-CDO 1.a. 100% by 31 Dec, 2015</p> <p>B0-CDO 1.b. 100% by 31 Dec, 2015</p> <p>B0-CDO 1.c. 50% by 31 Dec, 2016</p>
		2. Route changes to facilitate CDO	Derived from Element 1	<p>a. # out of # FIRs that have been assessed for requirement</p> <p>b. # out of # required FIRs that have planned implementation</p> <p>c. # out of # required FIRs that have completed implementation</p>	<p>B0-CDO 2.a. 100% by 31 Dec, 2015</p>
		3. PBN STARs	Derived from Element 2	<p>a. # out of # Table AOP I-1 airports that have been assessed for requirement</p> <p>b. # out of # required procedures that have been planned</p> <p>c. # out of # required procedures that have been completed</p>	<p>B0-CDO 3.a. 100% by 31 Dec, 2015</p> <p>B0-CDO 3.b. 100% by 31 Dec, 2015</p> <p>B0-CDO 3.c. 80% by 31 Dec, 2016</p>

B0-TBO	Improved Safety and Efficiency through the initial application of Data Link En-Route	1. ADS-C over oceanic and remote areas	Defined: Element 1	<p>a. # out of # FIRs that have been assessed for requirement</p> <p>b. # out of # required FIRs that have planned implementation</p> <p>c. # out of # required FIRs that have completed implementation</p>	<p>B0-TBO 1.a. 100% by 31 Dec, 2015</p> <p>B0-TBO 1.b. 100% by 31 Dec, 2015</p> <p>B0-TBO 1.c. 80% by 31 Dec, 2016</p>
		2. Continental CPDLC	Defined: Element 2	<p>a. # out of # FIRs that have been assessed for requirement</p> <p>b. # out of # required FIRs that have planned implementation</p> <p>c. # out of # required FIRs that have completed implementation</p>	<p>B0-TBO 2.a. 100% by 31 Dec, 2015</p> <p>B0-TBO 2.b. 100% by 31 Dec, 2015</p> <p>B0-TBO 2.c. 80% by 30 June, 2018</p>
B0-CCO	Improved Flexibility and Efficiency Departure Profiles - Continuous Climb Operations (CCO)	1. Procedure changes to facilitate CCO	Derived from Element 1	<p>a. # out of # FIRs that have been assessed for requirement</p> <p>b. # out of # required FIRs that have planned implementation</p> <p>c. # out of # required FIRs that have completed implementation</p>	<p>B0-CCO 1.a. 100% by 31 Dec, 2015</p> <p>B0-CCO 1.b. 80% by 31 Dec, 2015</p> <p>B0-CCO 1.c. 60% by 31 Dec, 2016</p>
		2. Route changes to facilitate CCO	Derived from Element 1	<p>a. # out of # FIRs that have been assessed for requirement</p> <p>b. # out of # required FIRs that have planned implementation</p> <p>c. # out of # required FIRs that have completed implementation</p>	<p>B0-CCO 2.a. 100% by 31 Dec, 2015</p>
		3. PBN SIDs	Derived from Element 2	<p>a. # out of # Table AOP I-1 airports that have been assessed for requirement</p> <p>b. # out of # required procedures that have been planned</p> <p>c. # out of # required procedures that have been completed</p>	<p>B0-CCO 3.a. 100% by 31 Dec, 2015</p> <p>B0-CCO 3.b. 80% by 31 Dec, 2015</p> <p>B0-CCO 3.c. 60% by 31 Dec, 2016</p>

		Visual Aids for Navigation		B0-75/SURF: RPBANIP	70% of selected aerodromes complying with visual aid requirements as per Annex 14 by December 2015 States/Airport operators
		Aerodrome Bird/Wildlife Organization and Control Programme		B0-75/SURF: RPBANIP	70% of selected airports with an aerodrome bird/wildlife organization and control programme by December 2018 Airport operators
		Aerodrome Certification		B0-ACDM: RPBANIP	48% of international aerodromes to be certified in the CAR Region by December 2016– State CAA
		Heliport Operations		B0-ACDM: RPBANIP	30% of selected Heliports with operational approval by Dec. 2018 – State CAA
		MEVA III IP Network Implementation		Supports B0-FICE implementation: RPBANIP	100% implementation of MEVA III IP Network by MEVA Member States by August 2015
		AMHS Implementation		Supports B0-FICE implementation: RPBANIP	4 States with Air Traffic Services Message Handling Services (AMHS) interconnected with other AMHS by December 2014
		ATN Router Structure Implementation		Supports B0-FICE implementation: RPBANIP	70% of ATN router structure implemented by June 2016

		PBN Planning		B0-FRTO: RPBANIP	100% of States to have completed a PBN plan by Dec. 2018
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ASBU Implementation Status check list

Block 0 Modules	Elements	Not Started	Need Analysis			Implementation Status (if Needed)			
			In process	Need	N/A	Plan-ning	Develop-ing	Partially Imple-mented	Imple-mented
ACDM	1. Airport CDM procedures								
	2. Airport CDM tools								
	3. Collaborative departure queue management								
APTA	1. PBN Approach Procedures with vertical guidance (LPV, LNAV/VNAV minima, using SBAS and Baro VNAV)								
	2. PBN Approach Procedures without vertical guidance (LP, LNAV minima; using SBAS)								
	3. GBAS Landing System (GLS) Approach procedures								
RSEQ	1. AMAN via controlled time of arrival to a reference fix								
	2. AMAN via controlled time of arrival at the aerodrome								
	3. Departure management								
	4. Departure flow management								
	5. Point merge								
SURF	1. A-SMGCS with at least one cooperative surface surveillance system								
	2. Including ADS-B APT as an element of A-SMGCS								
	3. A-SMGCS alerting with flight identification information								
	4. Airport vehicles equipped with transponders								
WAKE	1. New PANS-ATM wake turbulence categories and separation minima								
	2. Dependent diagonal paired approach procedures for parallel runways with centrelines spaced less than 760 meters (2,500 feet) apart								
	3. Wake independent departure and arrival procedures for parallel runways with centrelines spaced less than 760 meters (2,500 feet) apart								
	4. Wake turbulence mitigation for departures procedures for parallel runways with centrelines spaced less than 760 meters (2,500 feet) apart								
	5. State-defined additional wake turbulence categories and separation minima (6-category wake vortex separation)								
AMET	1. WAFS								
	2. IAVW								
	3. TCAC forecasts								
	4. Aerodrome warnings								
	5. Wind shear warnings and alerts								
	6. SIGMET								
	7. Other OPMET) information (METAR, SPECI and/or TAF)								
DATM	1. Aeronautical Information Conceptual Model (AICM) Aeronautical Information Exchange Model (AIXM)								

	2: eAIP								
	3: Digital NOTAM								
	4: eTOD								
	5: WGS-84								
	6: QMS for AIM								
FICE	1. AIDC to provide initial flight data to adjacent ATSUs								
	2. AIDC to update previously coordinated flight data								
	3. AIDC for control transfer								
	4. AIDC to transfer CPDLC logon information to the Next Data Authority								
ACAS	1. ACAS II (TCAS version 7.1)								
	2. Auto Pilot/Flight Director (AP.FD) TCAS								
	3. TCAS Alert Prevention (TCAP)								
ASEP	1. ATSA-AIRB								
	2. ATSA-VSA								
ASUR	1. ADS-B								
	2. Multilateration (MLAT)								
FRTO	1: CDM incorporated into airspace planning								
	2: Flexible Use of Airspace (FUA)								
	3. Flexible route system								
	4: CPDLC used to request and receive re-route clearances								
NOPS	1. ATFM								
OPFL	1. ITP using ADS-B								
SNET	1. Short Term Conflict Alert implementation (STCA)								
	2. Area Proximity Warning (APW)/								
	3. Minimum Safe Altitude Warning (MSAW)								
	4. Medium Term Conflict Alert (MTCA)								
CCO	1. Procedure changes to facilitate CDO								
	2. Route changes to facilitate CDO								
	3. PBN SIDs								
CDO	1. Procedure changes to facilitate CDO								
	2. Route changes to facilitate CDO								
	3. PBN STARs								
TBO	1. ADS-C over oceanic and remote areas								
	2. Continental CPDLC								
Summary Counts		0							

**APPENDIX
NAM/CAR RPBANIP AIR NAVIGATION TARGETS
BASED ON RPBANIP VER 3.1**

Red text: POS Declaration Targets

Updated: 10 Apr 2015

Element	Targets	RO	Source of data to measure it/ supporting body	Action needed/ Concern
1. Airspace Planning	100% of States to have completed a PBN plan by Dec. 2018	ATM/ VH	List of National PBN plans	
2. Flexible Use Airspace	50% of selected segregated airspaces available for civil operations by Dec. 2016	ATM/ VH		<ul style="list-style-type: none"> Define criteria for selecting the segregated airspace Define selection
3. AMAN And Time-Based Metering	10% of selected aerodromes with AMAN and time based metering by Dec. 2016	ATM/ VH		<ul style="list-style-type: none"> Define AMAN application w/ time based metering Define criteria for selecting the aerodrome for AMAN Define selection
4. Departure Management (DMAN)	10% of selected aerodromes with DMAN by Dec. 2016	ATM/ VH		<ul style="list-style-type: none"> Define DMAN application Define criteria for selecting the aerodrome for DMAN Define selection
5. Movement Area Capacity Optimization	20% of selected aerodromes with Airport-capacity calculated by Dec. 2016	AGA/JC		<ul style="list-style-type: none"> Define criteria for selecting the aerodrome for airport capacity Define selection
6. ADS-C Over Oceanic and Remote Areas	80% of selected FIRs with ADS-C implemented by December 2016	CNS/ JS	Regional NAM/CAR ADS-C/CPDLC Plan: GOLD TF	
7. CPDLC	80% of selected FIRs with CPDLC implemented by June 2018	CNS/ JS	Regional NAM/CAR ADS-C/CPDLC Plan: GOLD TF	

Element	Targets	RO	Source of data to measure it/ supporting body	Action needed/ Concern
8. APV with Baro VNAV	80% of instrument runways to have APV with Baro VNAV implemented by December 2016 – Service Providers and users	ATM/ VH	AIPs	Collect data to have a table for the metric
9. APV with SBAS (WAAS)	20% of instrument runways to have APV with SBAS/WAAS implemented by December 2018– Service Providers and users	ATM/ VH	AIPs	Collect data to have a table for the metric
10. APV with GBAS	20% of instrument runways to have APV with GBAS by December 2018 – Initial implementation at some States (services providers)	ATM/ VH	AIPs	Collect data to have a table for the metric
11. LNAV	60% of instrument runways to have LNAV procedure implemented by December 2016 – Service Providers and users as per Assembly Resolution A37-11	ATM/ VH	AIPs	Collect data to have a table for the metric
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	CNS/ JS	Regional ADS-B/MLAT Plan for selected aerodromes (TBD) / ADS-B TF	<ul style="list-style-type: none"> Define criteria for selecting the aerodrome with SMR/ SSR Mode S/ ADS-B/ Multilateration (AGA) Define selection
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	CNS/JS	IATA and States (General aviation) / ADS-B TF	<ul style="list-style-type: none"> Define total aircraft registry in NAM/CAR Define procedure for data collection from States/IATA
14. Vehicle Surveillance Systems	20% of vehicles at selected aerodromes with a cooperative transponder systems by June 2018 Vehicle operators	CNS/ JS	Regional ADS-B/MLAT Plan for selected aerodromes (TBD) / ADS-B TF	<ul style="list-style-type: none"> Define of cooperative transponder system for vehicles Define criteria for selecting the aerodrome where vehicles are to have collaborative transponders (AGA) Define selection

Element	Targets	RO	Source of data to measure it/ supporting body	Action needed/ Concern
15. Visual Aids for Navigation	70% of selected aerodromes complying with visual aid requirements as per Annex 14 by December 2015 States/Airport operators	AGA/ JC	ICAO's requirement per Annex 14, Vol I for all airports. Aerodromes certified shall comply with the requirement.	<ul style="list-style-type: none"> Define criteria for selecting the aerodrome complying with visual aid requirements Define selection
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	AGA/ JC	ICAO's requirement per Annex 14, Vol I for all airports. Aerodromes certified shall comply with the requirement.	<ul style="list-style-type: none"> Define criteria for selecting the aerodrome with an aerodrome bird/wildlife organization and control programme Define selection
17. Airport – CDM	60% of selected aerodromes with Airport-CDM by Dec. 2018 – Airport Operator, Stakeholders	AGA/ JC	In consultation	<ul style="list-style-type: none"> Define criteria for selecting the aerodrome with Airport-CDM Define selection
18. Aerodrome Certification	48% of international aerodromes to be certified in the CAR Region by December 2016– State CAA	AGA/ JC	CAR Regional Aerodrome Certification Implementation Plan (CRACIP)	
19. Heliport Operations	30% of selected Heliports with operational approval by Dec. 2018 – State CAA	AGA/ JC	To request States for a list of heliports with operational approval	<ul style="list-style-type: none"> Define criteria for selecting the Heliports with operational approval Define selection
20. Implementation of ADS-B	30% of selected aerodromes with ADS-B implemented by Dec 2018	CNS/ JS	Regional ADS-B/MLAT Plan for selected aerodromes (TBD) / ADS-B TF	<ul style="list-style-type: none"> Define criteria for selecting the aerodrome with ADS-B Define selection
21. Implementation of Multilateration	80% of multilateration system implemented in selected aerodromes by June 2018	CNS/ JS	Regional ADS-B/MLAT Plan for selected aerodromes (TBD) / ADS-B TF	<ul style="list-style-type: none"> Define criteria for selecting the aerodrome to have Multilateration System Define selection
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	CNS/ JS	States response	Enquiry to States

Element	Targets	RO	Source of data to measure it/ supporting body	Action needed/ Concern
23. Short-term Conflict Alert Implementation (STCA)	80% of selected ATS units with ground based safety nets (STCA) implemented by Dec 2015	ATM/ VH	Enquiry to States / GREPECAS C- Project	<ul style="list-style-type: none"> Define criteria for selecting the ATS units with ground based safety nets (STCA) implemented Define selection
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	ATM/ VH	Enquiry to States / GREPECAS C- Project	<ul style="list-style-type: none"> Define criteria for selecting the ATS units with ground based safety nets (APW) / MSAW implemented Define selection
25. Medium-term Conflict Alert (MTCA)	80% of selected ATS units with ground based safety nets (MTCA) implemented by Dec 2016	ATM/ VH	Enquiry to States / GREPECAS C- Project	<ul style="list-style-type: none"> Define criteria for selecting the ATS units with ground based safety nets (MTCA) implemented Define selection
26. WAFS	100% of States implementation of WAFS Internet File Service (WIFS) by December 2014	MET	Table listing the WIFS implementation	
27. IAVW	70% of MWOs with IAVW procedures implemented by December 2014. Volcanic Ash Advisory Centre, Washington USA and VAAC Montréal, Montréal, Canada	MET	Table of MWOs with IAVW procedures implemented	
28. Tropical Cyclone Watch	100% of MWOs with tropical cyclone watch procedures implemented by December 2014. Tropical Cyclone Advisory Centre, Miami, USA	MET	Table of MWOs with tropical cyclone watch procedures implemented	
29. Aerodrome Warnings	50% of selected aerodromes/AMOs with Aerodrome warnings implemented by December 2014	MET		<ul style="list-style-type: none"> Define criteria for selecting the aerodromes/AMOs with Aerodrome warnings Define selection

Element	Targets	RO	Source of data to measure it/ supporting body	Action needed/ Concern
30. Wind Shear Warnings and Alerts	20% of selected aerodromes/AMOs with wind shear warnings procedures implemented (MET provider services) by December 2015	MET		<ul style="list-style-type: none"> Define criteria for selecting the aerodromes/AMOs with wind shear warnings procedures Define selection
31. SIGMET	90% of selected aerodromes/MWOs with SIGMET procedures implemented (MET provider services) by Dec. 2014	MET	Table of MWOs with IAVW procedures implemented	<ul style="list-style-type: none"> Define criteria for selecting the aerodromes/AMOs with SIGMET procedures Define selection
32. MEVA III IP Network Implementation	100% implementation of MEVA III IP Network by MEVA Member States by August 2015	CNS/JS	MEVA III Implementation Plan / MEVA TMG	
33. AMHS Implementation	4 States with Air Traffic Services Message Handling Services (AMHS) interconnected with other AMHS by December 2014	CNS/JS	Regional AMHS Implementation Plan / AMHS TF	
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	CNS/JS	Regional AIDC Implementation Plan/ AIDC TF	
35. ATN Router Structure Implementation	70% of ATN router structure implemented by June 2016	CNS/JS	CAR/SAM CNS Table 1Ba/ Enquiry to States/ AMHS TF	Check ATN router criteria
36. QMS - AIM	100 % of States QMS Certified by Dec.2016	AIM/RM		
37. e.TOD Implementation	10 % of States e-TOD Implemented by Dec.2018	AIM/RM		
38. AIXM 5.1 Implementation	40 % of States with AIXM 5.1 implemented by Dec.2018	AIM/RM		
39. e-AIP Implementation	45 % of States with e-AIP implemented by Dec.2018	AIM/RM		
40. Digital NOTAM	35 % of States with Digital NOTAM implemented by Dec. 2018	AIM/ RM		
41. Air Traffic Flow Management	100% of FIRs within which all ACCs have ATFM measures available by Dec. 2018	ATM/ VH		
42. CDO implementation	50% of selected. Aerodromes with continuous descent operations (CDO) implemented by Dec.2016	ATM/ VH		
43. PBN STARs	80% of selected. Aerodromes with PBN STARs implemented by Dec.2016	ATM/ VH		

Element	Targets	RO	Source of data to measure it/ supporting body	Action needed/ Concern
44. CCO Implementation	60 % of selected aerodromes with continuous climb operations (CCO) implemented by Dec.2016	ATM/ VH		
45. PBN SIDs Implementation	60% of selected aerodromes with PBN SIDs implemented by Dec.2016	ATM/ VH		
Results from 36-40	100% of Aeronautical Information Services (AIS) to implement AIM Roadmap – Phase I required elements by December 2016	AIM/ RM		Need to define elements to measure from individual elements
Result form PBN-IFSET	Reduce Regional CO2 emissions by 40,000 tons per year through PBN implementation by December 2016	ATM/ VH	IATA	

**APPENDIX R - Corrigendum
PROPOSED NEW ANRF**

Sample 1 Proposed ANRF

AIR NAVIGATION REPORT FORM (ANRF)			
			Date Updated
			December 2, 2015
Region (or State)		NAM	
Block	0	Module Description: To use Performance- based airspace and arrival procedures allowing aircraft to fly their optimum profile using Continuous Descent Operations (CDOs). This will optimize throughput, allow fuel efficient descent profiles, and increase capacity in terminal areas.	
PIA	4		
Module Code	CDO		

Elements		Date	Status
1.	CDO implementation	Dec 2014	Implemented
2.	PBN STARS	Spring 2014	Implemented
3.	<i>If applicable, list ASBU Module element(s) the State does not plan to implement</i>		
4.	<i>Add Regional/State specific elements if any (for example enroute PBN feeding into the PBN STARS); list elements associated with a Regional (or National) Performance Objective</i>		

Implementation Challenges
<i>Enter description – Classify by whether the challenges are in the area of Ground System Implementation, Avionics Implementation, Procedures Availability or Operational Approvals Availability.</i>

Element Implementation Status Description		
1	CDO implementation	<p>International aerodromes with CDO implemented CDO/OPD is implemented at approximately 98 airports (as of October 2013). The RNAV STARS designated as OPD were identified based on the below criteria:</p> <ul style="list-style-type: none"> ● The procedure has coded altitudes. ● ATC can use 'descend via' phraseology with it. ● An 'expect' altitude is okay with other coded altitudes. The 'expect' can be 'cleared' by ATC issuing a restriction for the WP. ● It should NOT have any 'jets cross at xxx, turboprops cross at xxx' notes on it.
2	PBN STARS	<p>International aerodromes/TMAs with PBN STARS implemented PBN STARS are implemented at approximately 197 airports (as of October 2013). 253 RNAV STARS in the NAS with some of the procedures serving multiple airports (as of October 2013).</p>

Quantitative and Qualitative Benefits from the Implementation																																												
Element 1. CDO implementation																																												
Access & Equity	Only at locations where PBN STARs can be published to deconflict traffic flows with additional/different routing options. For example, RNAV STARs with OPDs implemented at Dulles and Regan National airports are now laterally separated.																																											
Capacity	N/A																																											
Efficiency	<p>Cost savings through reduced fuel burn due to improved vertical profiles. Reduction in the number of required radio transmissions, and therefore controller and pilot workloads; however, we do not have empirical data to evaluate this particular benefit.</p> <p>Operational benefits:</p> <ul style="list-style-type: none"> — Arrivals exhibited more efficient vertical profiles — Average time and distance within 250 nm of the airport did not change <table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <thead> <tr> <th rowspan="2">Weather</th> <th rowspan="2">Proportion of Flights (%)</th> <th colspan="5">Vertical Profile Performance Outcomes</th> <th colspan="2">Additional Efficiency Performance Outcomes</th> </tr> <tr> <th>Number of Level Segments</th> <th>Time in Level Flight (min)</th> <th>Distance in Level Flight (nm)</th> <th>Time-Weighted Altitude (feet)</th> <th>Flights Without Level Segments (%)</th> <th>Time (min)</th> <th>Distance (nm)</th> </tr> </thead> <tbody> <tr> <td>VMC</td> <td>86</td> <td>2.0 (-16%)</td> <td>5.4 (-13%)</td> <td>31.2 (-12%)</td> <td>17,300 (6%)</td> <td>17 (72%)</td> <td>43.4 (0%)</td> <td>269.7 (0%)</td> </tr> <tr> <td>Non-VMC</td> <td>14</td> <td>2.6 (-9%)</td> <td>8.0 (-6%)</td> <td>41.6 (-6%)</td> <td>14,500 (6%)</td> <td>9 (37%)</td> <td>47.0 (0%)</td> <td>280.7 (0%)</td> </tr> <tr> <td>All</td> <td>100</td> <td>2.1 (-15%)</td> <td>5.7 (-12%)</td> <td>32.7 (-11%)</td> <td>16,800 (6%)</td> <td>16 (70%)</td> <td>43.9 (0%)</td> <td>271.2 (0%)</td> </tr> </tbody> </table>	Weather	Proportion of Flights (%)	Vertical Profile Performance Outcomes					Additional Efficiency Performance Outcomes		Number of Level Segments	Time in Level Flight (min)	Distance in Level Flight (nm)	Time-Weighted Altitude (feet)	Flights Without Level Segments (%)	Time (min)	Distance (nm)	VMC	86	2.0 (-16%)	5.4 (-13%)	31.2 (-12%)	17,300 (6%)	17 (72%)	43.4 (0%)	269.7 (0%)	Non-VMC	14	2.6 (-9%)	8.0 (-6%)	41.6 (-6%)	14,500 (6%)	9 (37%)	47.0 (0%)	280.7 (0%)	All	100	2.1 (-15%)	5.7 (-12%)	32.7 (-11%)	16,800 (6%)	16 (70%)	43.9 (0%)	271.2 (0%)
Weather	Proportion of Flights (%)			Vertical Profile Performance Outcomes					Additional Efficiency Performance Outcomes																																			
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VMC	86	2.0 (-16%)	5.4 (-13%)	31.2 (-12%)	17,300 (6%)	17 (72%)	43.4 (0%)	269.7 (0%)																																				
Non-VMC	14	2.6 (-9%)	8.0 (-6%)	41.6 (-6%)	14,500 (6%)	9 (37%)	47.0 (0%)	280.7 (0%)																																				
All	100	2.1 (-15%)	5.7 (-12%)	32.7 (-11%)	16,800 (6%)	16 (70%)	43.9 (0%)	271.2 (0%)																																				
Environment	Reduced emissions as a result of reduced fuel burn – if there is a quantitative value, show the value.																																											
Safety	RNAV STARs facilitate executing stabilized approaches. Example of a quantitative benefit: In 10 years prior to implementation, there were x CFIT occurrences that were attributed to non-stabilized descent. In the 3 years since the implementation, there have been 0 CFIT occurrences where non-stabilized descent was suspected or attributed.																																											
Element 2. PBN STARs																																												
Access & Equity	N/A (from GANP)																																											
Capacity	N/A (from GANP)																																											
Efficiency	Cost savings and environmental benefits through reduced fuel burn. Authorization of operations where noise limitations would otherwise result in operations being curtailed or restricted. Reduction in the number of required radio transmissions. Optimal management of the top-of-descent in the en-route airspace. (from GANP)																																											
Environment	N/A (from GANP)																																											
Safety	More consistent flight paths and stabilized approach paths. Reduction in the incidence of controlled flight into terrain (CFIT). Separation with the surrounding traffic (especially free-routing). Reduction in the number of conflicts. (from GANP)																																											

Notes

Enter notes/comments, etc. if any.

Sample 2 Proposed ANRF

AIR NAVIGATION REPORT FORM (ANRF)		
		Date Updated
Region (or State)	NAM/CAR	
Regional (or National) Performance Objective Airport improvements		
Elements	Date	Status
1. Aerodrome certification		
2. Heliport operational approval		
3. Visual aids for navigation		
4. Aerodrome Bird/Wildlife Organization and Control Programme		
Implementation Challenges <i>Enter description – Classify by whether the challenges are in the area of Ground System Implementation, Avionics Implementation, Procedures Availability or Operational Approvals Availability.</i>		
Element Implementation Status Description		
1	Aerodrome certification	Target: 48% of CAR aerodromes in CAR ANP Table AOP I-1 certified by 31 December 2016
2	Heliport operational approval	Target: 30% of NAM/CAR heliports in CAR and NAM ANPs Table AOP I-1 certified by 31 December 2018
3	Visual aids for navigation	Target: 70% of NAM/CAR airports in CAR and NAM ANPs Table AOP I-1 compliant with Annex 14 requirements by 14 December 2015
4	Aerodrome Bird/Wildlife Organization and Control Programme	Target: 70% of NAM/CAR airports in CAR and NAM ANPs Table AOP I-1 with an aerodrome bird/wildlife organization and control programme by 31 December 2018
Quantitative and Qualitative Benefits from the Implementation		
Element 1. Aerodrome certification		
Access & Equity	International operators may not be permitted to operate to aerodromes that are not certified	
Capacity		
Efficiency		
Environment		
Safety	Certification should be contingent upon the airport complying with applicable ICAO SARPs. Certification and the associated regulatory oversight should increase the effectiveness of SSP and SMS processes to identify and correct safety issues at certified aerodromes.	

Element 2. Heliport operational approval	
Access & Equity	International operators may not be permitted to operate to heliports that are not approved
Capacity	
Efficiency	
Environment	
Safety	Certification should be contingent upon the heliport complying with applicable ICAO SARPs. Approval and the associated regulatory oversight should increase the effectiveness of SSP and SMS processes to identify and correct safety issues at approved heliports.
Element 3. Visual aids for navigation	
Access & Equity	International operators may not be permitted to operate to aerodromes that are not compliant with Annex 14
Capacity	
Efficiency	Annex 14 compliant visual aids for navigation assist flights to more efficiently complete ground movements
Environment	
Safety	Annex 14 compliant visual aids for navigation reduce flight crew confusion and assist in avoiding runway incursions or other ground movement errors
Element 4. Aerodrome Bird/Wildlife Organization and Control Programme	
Access & Equity	
Capacity	
Efficiency	
Environment	
Safety	An effective organization and control programme reduces the potential for aircraft to strike wildlife or ingest wildlife into engines or propellers.

<p>Notes <i>Enter notes/comments, etc. if any.</i></p>

APPENDIX S
TERMS OF REFERENCE AND WORK PROGRAMME OF THE
NAM/CAR AIR NAVIGATION IMPLEMENTATION WORKING GROUP (ANI/WG)

1. Background

The NAM/CAR Air Navigation Implementation Working Group (ANI/WG) was established in response to Conclusion 4/9 - *Consolidation of Sub-Regional Working Groups in the CAR Region* at the Fourth Meeting of North American, Central American and Caribbean Directors of Civil Aviation (NACC/DCA/4) and endorsed by the 96th Meeting of Directors General of Civil Aviation of Central America and Panama (DGAC/CAP/96) held in Mexico City, Mexico, from 22 to 25 May 2012, the Twelfth Meeting of Directors of Civil Aviation of the Central Caribbean (C/CAR/DCA/12) held in Punta Cana, Dominican Republic, from 10 to 13 July 2012, and the Twenty-fourth Meeting of Directors of Civil Aviation of the Eastern Caribbean (E/CAR/DCA/24) held in Martinique, France, from 2 to 5 October 2012.

This objective of the ANI/WG is to consolidate the existing sub-regional working groups, reduce the number of meetings, avoid duplication, expedite work progress, and improve regional harmonization focused on the Air Traffic Management (ATM), Communications, Navigation and Surveillance (CNS) and Aeronautical Information Management (AIM) air navigation fields.

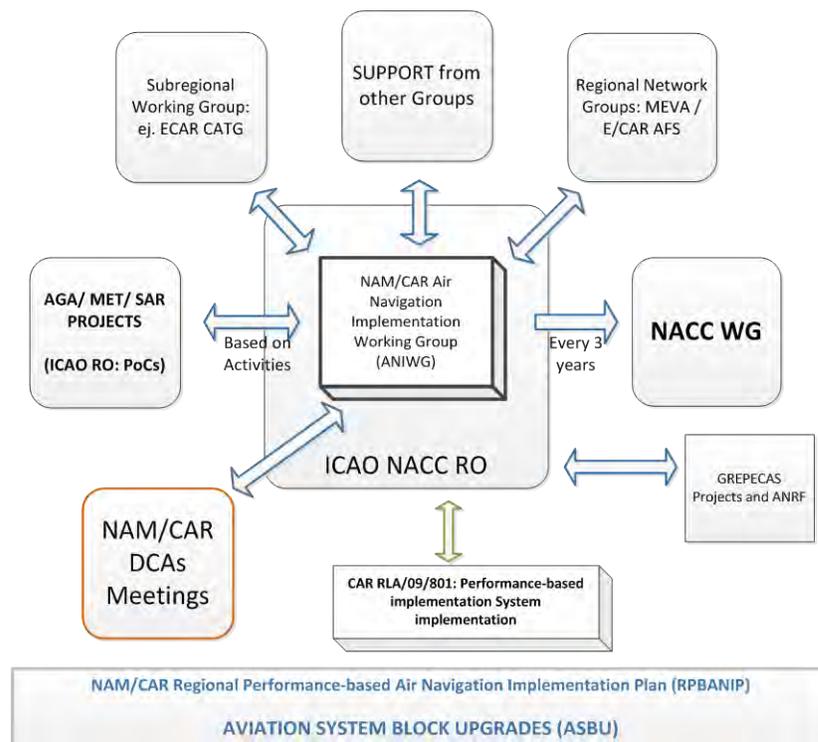
2. Terms of Reference

- a) Promote development of operational initiatives and Aviation System Block Upgrades (ASBUs) related to the AIM, ATM and CNS fields according to ICAO Doc 9750 - *Global Air Navigation Plan*
- b) Support air navigation system(s) implementation and services identified in the **ICAO electronic Regional Air Navigation Plans for the CAR and NAM** ~~SAM Air Navigation Plan, Air Navigation Plans (ANPs) of the NAM Regions Air Navigation Service Providers (ANSPs), and potentially CAR/SAM and NAM Region e ANPs~~ related to the AIM, ATM and CNS fields in line with the *Global Air Navigation Plan* ICAO Doc 9750.
- c) Harmonize operational improvements and associated implementation activities in accordance with the NAM/CAR Regional Performance-based Air Navigation Implementation Plan (NAM/CAR RPBANIP) and update the NAM/CAR RPBANIP as required
- d) Promote ICAO Strategic Objectives
- e) Report work programme progress to the NAM and CAR Directors of Civil Aviation and the North American, Central American and Caribbean Working Group (NACC/WG) Meetings
- f) **Promote the development of operational initiatives to support the ICAO efforts to assist States in implementing ICAO Standards and Recommended Practices (SARPs) supporting the campaign of No Country Left Behind (NCLB) to ensure a better harmonized implementation of the Port-of-Spain Declaration targets and as to resolve Significant Safety concerns related with air navigation matters.**

3. Work Programme

The ANI/WG Work Programme is based on Regional Performance Objectives (RPO) activities/tasks contained in the NAM/CAR Regional Performance-based Air Navigation Implementation Plan (RPBANIP) for the AIM, ATM and CNS fields.

The ANI/WG will coordinate and be linked with other groups and projects as shown below:



Representatives are expected to present their work progress and provide inputs to the NAM/CAR ANI/WG meetings on behalf of their State/Territory/International Organization according to the following:

- a) Associate implementation of operational improvements with the seven components of Doc 9854, (Airspace Organization and Management (AOM), Demand/Capacity Balancing (DCB), Aerodrome Operations (AO), Traffic Synchronization (TS), Conflict Management (CM), Airspace User Operations (AUO) ATM Service Delivery Management (ATMSDM)) as appropriate
- b) Provide recommendations to develop proposals for amendment to ICAO Doc 7030, Doc 8733 and the Air Navigation Plans of the NAM Region ANSPs to satisfy ATM community expectations
- c) Develop guidelines to assist States/Territories/International Organizations to develop and implement their Air Navigation Services (ANS) National Plans related to the AIM, ATM and CNS fields so as to align with the RPBANIP

- d) Monitor implementation of air navigation facilities and procedures and take appropriate action to resolve intraregional and interregional interoperability issues
- e) Coordinate contributions from the Aerodromes, and Ground Aids (AGA), Aeronautical Meteorology (MET), and Search and Rescue (SAR) fields through the respective Points-of-Contact, as required
- f) Promote close cooperation among States, Territories and International Organizations to optimize the use of available expertise and resources
- g) Provide recommendations to improve human resource planning and development in line with ICAO guidelines
- h) Quantify cost/benefit analysis of performance measurements, deadlines, stakeholders and results in terms of operational safety and environmental benefits for each implementation activity undertaken to address the RPBANIP

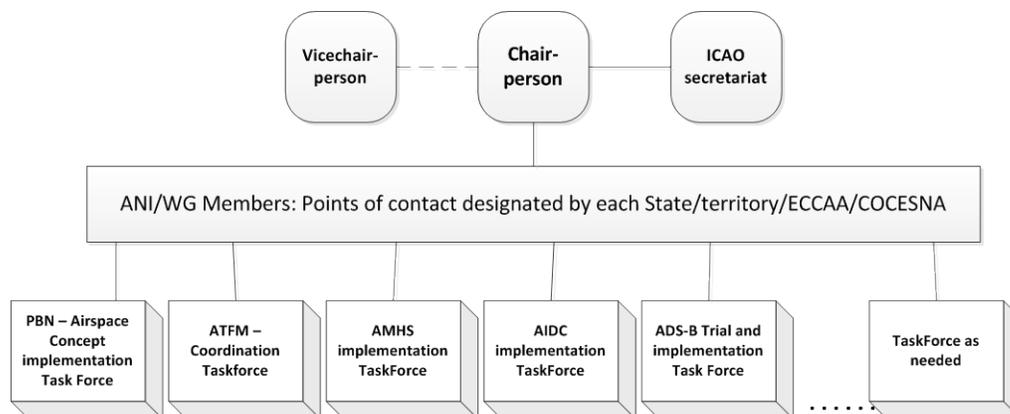
4. Membership

All ICAO States, Territories and International Organizations to which the ICAO NACC Regional Office is accredited shall be members of the ANI/WG. Other States adjacent to the CAR and NAM Regions may be invited to participate in the ANI/WG.

5. Working Methods

- a) The ANI/WG will use the following classification/definitions to record recommendations in t meeting reports:
 - Decisions: Internal actions of the ANI/WG
 - Draft Conclusions: Actions requiring communication to States and Territories and/or endorsement by Meetings of the NAM and CAR DCAs
- b) The Vice-Chairperson, who will also be a representative from a CAR or NAM State or Territory, will be elected for the same period as the Chairman and will carry out the duties of the Chairperson when requested to do so by him/her. The duties of the Chairperson are the following:
 - Chair ANI/WG meetings
 - Coordinate fulfillment of tasks and action plans
 - Closely coordinate with the Secretariat on development of agendas and planning, and conduct ANI/WG meetings
 - Inform the CAR and NAM Region Directors of Civil Aviation meetings on ANI/WG meeting results

- c) The ANI/WG may form committees to analyze specific topics whose duration will be valid for the time of the meeting. Task forces and Ad hoc Groups will be valid until the completion of the assigned tasks or until disbanded by the ANI/WG. All tasks and activities should be clearly defined by time and deliverables. Nominations of committee rapporteurs and/or task forces may be made by any State, Territory, COCESNA or ECCAA. For illustration, consider the following functional structure of the ANI/WG:



- d) The ANI/WG will avoid duplication of work and maintain close coordination with States/Territories/International Organizations
- e) The ANI/WG will conduct activities in the most efficient manner with a minimum of formality and documentation, using electronic tools and teleconferences to ensure timely exchange of information, as required
- f) The ANI/WG Members will conduct coordination of works as follows:
- Via written correspondance, i.e., e-mail, fax, etc.
 - Via phone and teleconference calls
 - Via a dedicated page on the ICAO NACC Regional Office Website
 - Hold meetings when necessary
- g) The ANI/WG will consider inputs from other regional implementation groups and States, as appropriate
- h) The ANI/WG meetings will be convened every year except in years when the NACC/WG meets, or whenever necessary
- i) The ICAO NACC Regional Office will provide Secretariat service

5. Meeting Sites

- a) The ICAO NACC Regional Office will convene the ANI/WG Meeting at least six months prior to holding it

- b) The ANI/WG will meet in accordance with the following rotational scheme: Central America, ICAO, North America, ICAO, Eastern Caribbean (E/CAR), ICAO and Central Caribbean (C/CAR)
- c) Any member may, at any time, offer to host an ANI/WG meeting

6. Points-of-Contact

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