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

WORKING PAPER

ANI/WG/3 — WP/10
31/03/16

Third NAM/CAR Air Navigation Implementation Working Group Meeting (ANI/WG/3)
Mexico City, Mexico, 4 to 6 April 2016

Agenda Item 4: **Follow-up, Performance Evaluation and Monitoring of the NAM/CAR Regional Performance Based Air Navigation Implementation Plan (NAM/CAR RPBANIP) Targets**
4.1 Progress Reports of the Task Forces and the ANI/WG

PRELIMINARY PROGRESS REPORT BY AIDC TASK FORCE INCLUDING FPL

(Presented by AIDC Task Force Rapporteur)

EXECUTIVE SUMMARY	
This working paper presents the activities and progress of the AIDC Task Force during this past year.	
Action:	Suggested actions are presented in section 3.
Strategic Objectives:	• Safety • Air Navigation Capacity and Efficiency • Security & Facilitation • Economic Development of Air Transport • Environmental Protection
References:	• Second NAM/CAR Air Navigation Implementation Working Group Meeting (ANI/WG) Air Traffic Services Inter-facility Data Communication (AIDC) Task Force (AIDC/TF/2) Meeting, Mexico City, Mexico, 27 February 2015, Report • State Letter EMX0268, 18 March 2015, Second NAM/CAR Air Navigation Implementation Working Group (ANI/WG) Air Traffic Services Inter-facility Data Communication Task Force Meeting (AIDC/TF/2)

1. Introduction

1.1 The AIDC Task Force Terms of Reference were defined in the ANI/WG/01 Meeting and further updated in the NACC/WG/04 Meeting.

1.2 The last report and agreements made by the AIDC/TF were reported in the AIDC/TF/02 Meeting, which were approved as fast track via ICAO State Letter EMX0268 since 12 April. 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:

a) Decision 2/1 Update of AIDC Regional Implementation Plan
b) Conclusion 2/2 AIDC Implementation Checklist
c) Decision 2/3 Comparison of Existing AIDC ICDS
d) Decision 2/4 NAM ICD for use as Regional ICD
e) Decision 2/5 LOA Annex for AIDC implementation using NAM ICD

2. Progress Report

AIDC Regional Implementation Plan

2.1 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 Flight Information Regions (FIRs) with which implementation will take place, and Point of Contact information). The updated regional implementation plan is presented in this working paper in **Appendix A**. It is very important to keep the information in the regional plan up to date, as it is the guide to plan testing and implementation between FIRs, as well as how to concentrate efforts, assign priorities and identify possible conflicts between systems. The regional plan underwent a major update of information as result of the evaluation of interfaces for the purpose of setting new goals for the Task Force, reflecting more detail with respect to the NAM Interface Control Document (ICD) Class implemented by each FIR.

Task Force Activities

2.2 Since the last ANI/WG meeting in June 2015, the Task Force has carried out two teleconferences, and has a meeting planned for April of this year. In these events there have been several deliverables and results obtained:

a) An example Letter of Agreement (LOA) for automated data exchange between FIRs was presented by Cuba, and is pending discussion by the Task Force, as also a template from COCESNA for PAC ICD implementations. These example LOAs are presented in **Appendix B**.
b) The United States representative provided a consideration of the comparison between NAM ICD and PAN ICD, for the purpose of harmonization, pointing out the differences in applicability and environment between both ICDs.
c) As mentioned in the previous point, an evaluation of interface implementations was done, complementing the information in the regional plan, and producing a document which details the interfaces specified by class when applicable. This document reveals a considerable number of new interfaces, as well as the growing use of NAM ICD Class II, mainly between Canada and United States. The results of this evaluation are presented in **Appendix D**, along with the graph of implementation of AIDC in the CAR region.

2.3 Work in progress includes the definition of new goals, specifically speaking:

a) Achieving a total of 9 AIDC interface implementation in the CAR Region by December 2016. Currently there are 7 implementations in operation, in which Central America (CENAMER) is considered one implementation, although internally there are several interfaces between the upper airspace and the approach area of each member State of COCESNA.
b) There is an ongoing task pursuing the setting of a goal for Class II and III implementations, for which the evaluation of current implementations was done. This is work in progress.
c) Another ongoing task is the definition of metrics which can allow a State or Organization to measure the impact of AIDC implementation, in a "Before/After" fashion. Thus, the metric must be applicable to both non-automation and automation settings, to ensure a common baseline for comparison. This is also work in progress, and responds to Conclusion ANI/WG/2/07, literal c).

FPL Monitoring Group Activities

2.4 The FPL Monitoring group had presented a change of strategy since the ANI/WG/2 meeting, in which the efforts were concentrated to one error at a time, beginning with duplication. Since the meeting, the following activities were performed:

a) A total of five teleconferences were held.
b) A data collection for duplicate cases was performed from September 14th to October 4th, 2015. The results of this data collection can be found in **Appendix C**, and reflect a significant reduction in duplication, especially related to those originated from the *flightplan.com* web page.
c) Two data collections are planned for 2016.
d) Work in progress includes the setting of a goal for 2016, regarding the reduction of duplicate flight plans, and also the standardization of error messages for flight data processing systems.

2.5 The results presented in Appendix C show the overall behaviour of duplicates between phases 2 and 3, in the first graph. There is a significant reduction in duplicates, taking into account factors as duration of data collections, the collection of all errors vs collection of only duplicates, greater experience and awareness in collection of errors, among others. The second graph identifies where the duplicates were originated from, showing that most still come from the KDENXLDS address, belonging to the Jeppesen flight plan web page. There are other addresses that belong to the SAM region, for which there has been some coordination with representatives of that region for joint efforts in mitigation. In the third graph the duplicates detected by State/Organization per phase is depicted. The great reduction in duplicates reported by Mexico and United States comprise the majority of the total reduction between phases 2 and 3. Other FIRs had an increase, but those quantities were offset in the end by the previous two in the first graph. In the fourth graph we match originator with State/Organization, so it is evident where the duplicates for each originator is being detected, thus the FIR can take action in particular with each originator.

2.6 Further discussion and analysis from the last teleconference revealed important information regarding the duplicates generated from operators and Air traffic service (ATS) Units, evidenced in the subsequent graphs. In summary, the graphs show which particular operators are generating the most duplicates, the States those operators are generating duplicates to, a detail of which callsigns are generating duplicates from the KDENXLDS address, and the particular ATS Units generating the most duplicates.

2.7 There are implementations of new flight data processing systems in Central America and Trinidad and Tobago, which will contribute to reduce errors in flight plans. Those systems are programmed to be in testing by the date of this ANI/WG/3 meeting.

AIDC Implementation Performance Indicator

2.8 The implementation of AIDC in the NAM/CAR Regions currently meets the target performance goal of 80%. **Appendix D** shows that 81.40% of the FIRs in the NAM/CAR Regions have implemented AIDC with at least one neighbouring FIR. As mentioned in item 2.3, there are new goals particular to the task force that are defined or in process of definition, and the goal of the CAR Region of 9 interfaces total for December 2016 established during the 12th teleconference of the Task Force.

Operational Benefits

2.9 Mexico described the operational benefits achieved with the implementation of AIDC:

a) Before: verbal coordination of all information related to active flights. This implied the use of more human and material resources.
b) After: the automatic data coordination brought different benefits, among which are the reduction of workload for the areas in charge of coordinating active flights and the reduction of oral language barrier errors, as also the reduction in the time of submission – reception of the data related to the coordination of active flights.

2.10 The Task Force expects this result to repeat itself for the rest of the FIRs and also to be able to present quantified data with the metrics to be developed, as mentioned in item 2.3c).

Work Programme

2.11 The updated work programme is provided in **Appendix E**.

Training needs

2.12 For the purpose of assuring correct flight plan information, it is important that personnel working for the Air Traffic Services Reporting Office (ARO) be properly trained. In many States this is the case, where training is issued regularly to these personnel. In other States, there is a need for training properly the personnel working with flight plans, to avoid procedural errors that impact the Air Traffic Control (ATC) service. In sync with the goals of the FPL Monitoring Group, in the reduction of duplicate flight plans, a significant amount of errors are originated from the ATC units, thus the need for ARO officers capable of recognizing and avoiding errors before they reach the air traffic control centres.

Disuse of converters

2.13 Following up on Conclusion ANI/WG/2/8, regarding the disuse of converters in Flight Data Processing (FDP) and Filed Flight Plan (FPL) processing systems in the region, the updated table is presented in **Appendix F**. There were several States and organizations that removed their converters since the last ANI Working Group Meeting, such as Guatemala and COCESNA.

3. Suggested Actions

3.1 The Meeting is invited to:

a) take note of the activities and performance of the Task Force;

b) review and approve the draft decisions and conclusions detailed in paragraph 2.8 concerning the updated work programme, implementation checklist for approval, etc.; and

c) agree on any other action as deemed necessary.

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NAM/CAR AIDC REGIONAL IMPLEMENTATION PLAN

Update: 04 April 2016

Table A: General Information

State/Organization	System	Point of contact	Network Bandwidth	Comments
Bahamas	-	-	-	-
Belize	-	-	-	-
Canada	CAATS	Pedro Vicente Pedro.Vicente@navcanada.ca	-	-
COCESNA	INDRA Aircon 2100 Renovado	Mayda Ávila (mayda.avila@cocesna.org) Jenny Lee (Jenny.lee@cocesna.org)	N/A (the current AFTN circuit speed is 1.2 kbps internally and 9.6 kbps the internationals). COCESNA planned to change her AFTN network for a new AMHS network in September 2016	-
Costa Rica	No - FDP Server must upgrade – Q1 2017	Warren Quirós navegacionaerea.cns@dgac.go.cr +50622314924 Fernando Naranjo Elizondo fer_nar_eli@hotmail.com	1200 bps	AIDC may be implemented until the upgrade of El Coco Center
Cuba	yes - Oracle Version 9 modified by LITA-CUBA	Manuel Castillo Velasco, Operation Management Havana ACC (537)-649-7281, email: mcastillo@aeronav.ecasa.avianet.cu	19200 BPS	We received many mistakes from the users in the FPL, in almost all fields. We have detected changes in the FPL forwarded by ACC´s or ANSP offices related to FPL´s presented by operators
Curacao	-	Jacques Lasten ATS Manager, DC-ANSP, j.lasten@dc-ansp.org	AMHS: 64 Kbps	-
Dominican Republic	Yes TopSky-ATC, Thales ATM 2014	Julio Cesar Mejia A. Enc. ATM, jmejia@idac.gov.do 809 274-4322. Ext. 2103 + Fernando Casso fernando.casso@idac.gov.do	AMHS: 64 Kbps	-
El Salvador	INDRA Aircon 2100 Renovado	Danilo Ramírez danilo.ramirez@cepa.gob.sv	9600 bps	-

State/Organization	System	Point of contact	Network Bandwidth	Comments
Guatemala	INDRA Aircon 2100 Renovado	Sergio Raul Enrique senriquez@gmail.com David Ascoli davidascoli@gmail.com	9600 bps	-
Haiti	-	-	-	-
Mexico	Yes- FDP=Topsky, Producer= THALES ATM, INFO= Four Control Centres, all Mexico covered	Ing. Jose de Jesus Jimenez Director de Sistemas Digitales SENEAM/SCT/MÉXICO disda@sct.gob.mx 55 57 86 55 32	19200 bps	Mexico already counts with the implementation of CPL/LAM information exchange between: MZT ≤ ≥ LAX, MZT ≤ ≥ ABQ, MTY ≤ ≥ABQ, MTY ≤ ≥HOU, MID ≤ ≥ HOU, MID ≤ ≥ HAB
Nicaragua	INDRA Aircon 2100 Renovado	Jorge Saballos jsaballos@eaai.com.ni	9600 bps	-
Trinidad and Tobago	SELEX ATM System	-	-	To begin testing 2016 Still no compatible interfaces between them
United States	Yes - Host Automation / En Route Automation Modernization(ERAM) systems. Lockheed-Martin (LMCO) is the prime contractor for the Host/ERAM system. Ocean21 provides its own FDP processing in the oceanic environment. LMCO is also the contractor for Ocean21.	Dan Eaves, Federal Aviation Administration Air Traffic Control Specialist, Dan.Eaves@FAA.gov 202-385-8492	US- Mexico: NADIN/AFTN 64 kbps X.25 US- Cuba : MEVA II 19.2 kbps connection to NADIN	The domestic FDP is integrated into the Host Automation / En Route Automation Modernization (ERAM) systems.. The flight data function of the San Juan Combined Center / Radar Approach Control (CERAP) is integrated into the Miami Air Route Traffic Control Center (ARTCC) Host/ERAM.

Table B: Interfaces

State or Organization	State/Org FIR	Adjacent FIR	Interface Class	Interface Status	Implementation Date	Bilateral Agreement or ICD	Circuit / Bandwidth used	Comments
Bahamas	Nassau	Miami	N/A	Planned	TBD	NAM-ICD Version D		
Canada	Edmonton	Anchorage	Class II	Operational		NAM-ICD Version D		
Canada	Edmonton	Reykjavik	Class I	Operational		NAT ICD		
Canada	Edmonton	Salt Lake City	Class II	Operational		NAM-ICD Version D		
Canada	Edmonton	Seattle	Class II	Operational		NAM-ICD Version D		
Canada	Gander	New York	Class II	Operational		NAT ICD		
Canada	Gander	Prestwick	Class II	Operational		NAT ICD		
Canada	Gander	Reykjavik	Class II	Operational		NAT ICD		
Canada	Gander	Santa Maria	Class II	Operational		NAT ICD		
Canada	Moncton	Boston	Class II	Operational		NAM-ICD Version D		
Canada	Moncton	New York	Class II	Planned	TBD	TBD		
Canada	Montreal	Boston	Class II	Operational		NAM-ICD Version D		
Canada	Montreal	Cleveland	Class II	Operational		NAM-ICD Version D		
Canada	Oakland	Seattle	Class II	Operational		NAM-ICD Version D		
Canada	Toronto	Boston	Class II	Operational		NAM-ICD Version D		
Canada	Toronto	Cleveland	Class II	Operational		NAM-ICD Version D		
Canada	Toronto	Minneapolis	Class II	Operational		NAM-ICD Version D		
Canada	Vancouver	Salt Lake City	Class II	Operational		NAM-ICD Version D		
Canada	Winnipeg	Minneapolis	Class II	Operational		NAM-ICD Version D		
Canada	Winnipeg	Salt Lake City	Class II	Operational		NAM-ICD Version D		
COCESNA	CENAMER	Belize	N/A	Planned	2017	PAC ICD		
COCESNA	CENAMER	Bogota	N/A	Testing	December 2015	PAC ICD		
COCESNA	CENAMER	Costa Rica	N/A	Planned	2017	PAC ICD		
COCESNA	CENAMER	El Salvador	N/A	Testing	October 2015	PAC ICD		
COCESNA	CENAMER	Guatemala	Class I	Testing	December 2015	PAC ICD		
COCESNA	CENAMER	Guayaquil	N/A	Testing	January 2016	PAC ICD		
COCESNA	CENAMER	Havana	Class I	Operational		NAM-ICD Version D		
COCESNA	CENAMER	Kingston	N/A	Planned	TBD			
COCESNA	CENAMER	Merida	N/A	Testing	42125	NAM-ICD Version D		
COCESNA	CENAMER	Nicaragua	N/A	Operational	September 2015	PAC ICD		
COCESNA	CENAMER	Panama	N/A	Testing	November 2015	PAC ICD		
Costa Rica	San José	CENAMER	N/A	Planned	April 2017	NAM-ICD Version D		
Costa Rica	San José	Nicaragua	N/A	Planned	April 2017	NAM-ICD Version D		
Costa Rica	San José	Panama	N/A	Planned	April 2017	NAM-ICD Version D		

State or Organization	State/Org FIR	Adjacent FIR	Interface Class	Interface Status	Implementation Date	Bilateral Agreement or ICD	Circuit / Bandwidth used	Comments
Cuba	Havana	CENAMER	Class I	Operational	March/April 2015	NAM-ICD Version D		Using CPL/LAM/LRM
Cuba	Havana	Kingston	N/A	Planned	TBD			
Cuba	Havana	Merida	Class I	Operational	March 9, 2012	NAM-ICD Version D		
Cuba	Havana	Miami	Class I	Operational	December 15, 2011	NAM-ICD Version D		Using CPL/LAM/LRM
Cuba	Havana	Port au Prince	N/A	Not Planned	TBD			
Curacao	Curacao	Kingston	N/A	Planned		NAM-ICD Version D		
Curacao	Curacao	Maiquetia	N/A	Planned				
Dominican Republic	Santo Domingo	Curacao	N/A	Planned	TBD			
Dominican Republic	Santo Domingo	Miami	Class II	Implementing	September 2016	NAM-ICD Version D		
Dominican Republic	Santo Domingo	Port au Prince	N/A	Not Planned	TBD			
El Salvador	El Salvador	Guatemala	N/A	Planned	42522	PAC ICD		
El Salvador	El Salvador	Nicaragua	N/A	Planned	42491	PAC ICD		
Guatemala	Guatemala	Belize	N/A	Planned	2017	PAC ICD		
Guatemala	Guatemala	El Salvador	N/A	Planned	42522	PAC ICD		
Haiti	Port-au-Prince	Santo Domingo	N/A	Planned	TBD	NAM-ICD Version D		
Mexico	Mazatlán	Albuquerque	Class I	Operational	2005	NAM-ICD Version D		
Mexico	Mazatlán	Los Angeles	Class I	Operational	2005	NAM-ICD Version D		
Mexico	Mazatlán	Monterrey	Class I	Operational	2005	NAM-ICD Version D		
Mexico	Mazatlán	Oakland	N/A	Testing	March 2015	PAN ICD V.1		
Mexico	Mérida	CENAMER	Class I	Testing	June 2015	NAM-ICD Version D		
Mexico	Mérida	Havana	Class I	Operational	2011	NAM-ICD Version D		
Mexico	Mérida	Houston	Class I	Operational	2005	NAM-ICD Version D		
Mexico	México	Mazatlan	Class I	Operational	2005	NAM-ICD Version D		
Mexico	México	Mérida	Class I	Operational	2005	NAM-ICD Version D		
Mexico	México	Monterrey	Class I	Operational	2005	NAM-ICD Version D		
Mexico	Monterrey	Albuquerque	Class I	Operational	2005	NAM-ICD Version D		
Mexico	Monterrey	Houston	Class I	Operational	2005	NAM-ICD Version D		
Mexico	Monterrey	Mérida	Class I	Operational	2005	NAM-ICD Version D		
Nicaragua	Nicaragua	Costa Rica	N/A	Planned	2017	PAC ICD		
Nicaragua	Nicaragua	El Salvador	N/A	Planned	42491	PAC ICD		

State or Organization	State/Org FIR	Adjacent FIR	Interface Class	Interface Status	Implementation Date	Bilateral Agreement or ICD	Circuit / Bandwidth used	Comments
Trinidad and Tobago	PIARCO	French Guyanne	N/A	Planned	TBD	???		
Trinidad and Tobago	PIARCO	Maiquetia	N/A	Planned	TBD			
Trinidad and Tobago	PIARCO	New York	N/A	Planned	TBD	PAN ICD		To begin Testing 2016
Trinidad and Tobago	PIARCO	SAL	N/A	Planned	TBD	NAM-ICD Version D		
Trinidad and Tobago	PIARCO	San Juan/Miami	N/A	Planned	TBD	NAM-ICD Version D		Still no compatible interfaces between them
United States	Albuquerque	Monterrey	Class I	Operational		NAM-ICD Version D		
United States	Anchorage	Edmonton	Class II	Operational		NAM-ICD Version D		
United States	Anchorage	Vancouver	Class II	Operational		NAM-ICD Version D		
United States	Boston	Moncton	Class II	Operational		NAM-ICD Version D		
United States	Boston	Montreal	Class II	Operational		NAM-ICD Version D		
United States	Cleveland	Toronto	Class II	Operational		NAM-ICD Version D		
United States	Houston	Merida	Class I	Operational		NAM-ICD Version D		
United States	Houston	Monterrey	Class I	Operational		NAM-ICD Version D		
United States	Los Angeles	Mazatlan	Class I	Operational		NAM-ICD Version D		
United States	Miami	Havana	Class II	Planned	Q4 2015	NAM-ICD Version D		
United States	Miami	Havana	Class I	Operational		NAM-ICD Version D		
United States	Miami	Nassau	N/A	Planned	TBD	NAM-ICD Version D		
United States	Miami	Santo Domingo	Class I	Planned	September 2016	NAM-ICD Version D		
United States	Minneapolis	Toronto	Class II	Operational		NAM-ICD Version D		
United States	Minneapolis	Winnipeg	Class II	Operational		NAM-ICD Version D		
United States	Oakland	Mazatlán		Operational		PAN ICD V.1		
United States	Oakland	Vancouver	Class II	Operational		NAM-ICD Version D		
United States	Salt Lake City	Edmonton	Class II	Operational		NAM-ICD Version D		
United States	Salt Lake City	Winnipeg	Class II	Operational		NAM-ICD Version D		
United States	San Juan	Santo Domingo	Class I	Planned		NAM-ICD Version D		
United States	Seattle	Vancouver	Class II	Operational		NAM-ICD Version D		

APPENDIX B

Letter of Agreement between (Center A) and (Center B)

ANNEX <#>

Automated Data Exchange (ADE)

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

1. **PURPOSE:** This Section **(Annex #)** establishes procedures for the Automated Data Exchange of active flight plan information between **(Center A)** Center and **(Center B)** Center. The message exchange is performed using the protocol NAM ICD. Subsequent sub-sections will introduce abbreviations, definitions and operational procedures to be used by respective facilities.

2. **OPERATIONAL PROCEDURES FOR ADE IS DESCRIBED IN THIS SECTION.** These procedures will evolve as subsequent phases are introduced. This Annex may be deleted and absorbed into the main body of the Letter of Agreement when final phase is implemented and subject mutual agreement.

3. **ABBREVIATIONS:**

ADE Automated Data Exchange
CFL Coordinated Flight Level
CPL Active Flight Plan
FPL Proposed Flight Plan
LAM Logical Acknowledgement Message
UTM Unsuccessful Transmission Message

4. **PROCEDURES:**

4.1. ADE is the primary method of exchanging flight data information between **(Center A)** and **(Center B)** Centers.

4.2. Coordination.

4.2.1. The parameter times for the interface are as follows:

a) Not less than **(##, for example 15)** minutes - **(Center A)** Center CPL send time (prior to boundary).

b) **(##, for example 60)** seconds - **(Center A)** Center LAM time-out (time to wait for **LAM** from **(Center B)** Center).

c) Not less than **(##, for example 13)** minutes - **(Center B)** Center **CPL** send time (prior to boundary)

d) 60 seconds - **(Center B)** Center LAM time-out (time to wait for LAM from **(Center A)** Center).

e) **(Center B)** Center and **(Center A)** Center may agree to modify the parameters listed in a) and c) as necessary to enhance the automation system.

4.2.2. The transferring facility must ensure that CPLs are verified with the receiving facility for all UTMs.

5. **FLIGHT LEVEL COORDINATION**

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

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

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

6. **SCHEDULED AND NON-SCHEDULED OUTAGES**

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

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

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

(Signatures of both parties)

BORRADOR DE ANEXO CARTA ACUERDO
PROTOCOLO AIDC
ENTRE CENTRO A CONTROL Y EL CENTRO B
PRUEBAS OPERACIONALES

1. **PROPOSITO:** Establecer los procedimientos para la coordinación de transferencias mediante los sistemas automatizados de ambas dependencias a través del intercambio de mensajes AIDC durante el período de pruebas.

2. **FECHA DE VIGENCIA:** xxxxxx

3. **PROCEDIMIENTOS**
Durante las pruebas AIDC el canal de voz ATS será el medio PRIMARIO de coordinación y el de intercambio de datos automatizados será el medio SECUNDARIO.

3.1 Vuelos saliendo de los aeropuertos de CENTRO B

Se aplicarán los procedimientos operacionales que a continuación se describen:

a. El CENTRO B notificará (NOTIF) el vuelo XX minutos antes de la hora propuesta de salida, con esta acción el sistema enviará el ABI con el fin que el vuelo se notifique en CENTRO A.
b. El CENTRO B activará el vuelo por medio del ATD.
c. Todos los vuelos saliendo serán autorizados inicialmente ascenso para A190
d. XX minutos después del ATD de una aeronave, El CENTRO B solicitará por medio del AIDC un CDN con el nivel de vuelo solicitado en el plan de vuelo o el nivel que el piloto solicite como final.
e. CENTRO A responderá con un ACCEPT (ACP) o con otro CDN. En el caso que la respuesta sea otro CDN, El CENTRO B deberá ACEPTAR (ACP) el CDN
f. Después de la automatización AIDC, El CENTRO B llamará a CENTRO A y solicitará la autorización vía el canal ATS.
g. Debido al corto tiempo para que la aeronave alcance A190, **NO** se coordinará ningún CDN cuando la aeronave cruce A160, debiendo coordinarlo vía voz.
h. El controlador enviará el “transfer of control” TOC próximo a A190.
i. Todo plan de vuelo debe de cumplir en lo estipulado en el doc.4444 ATM501 Cap.11

3.2 Vuelos llegando de los aeropuertos DEL CENTRO B

Los procedimientos para los vuelos llegando a El Salvador son los siguientes:

a. CENTRO A enviará un mensaje ABI XX minutos antes del punto de coordinación (COP) de forma automática.
b. CENTRO A enviará un mensaje CPL XX minutos antes del punto de coordinación (COP), posteriormente a dicho tiempo, CENTRO A llamará para confirmar los datos vía voz.
c. Todos los vuelos saliendo serán autorizados inicialmente descenso para FXX

d. El CENTRO B enviará un CDN para autorizar una altitud vacante.
e. Después de la automatización mediante un podrá solicitar un CDN con una altitud para que la aeronave continué su descenso.
f. El CENTRO B responderá con un ACCEPT (ACP) o con otro CDN. En el caso que la respuesta sea otro CDN, CENTRO A deberá ACEPTAR (ACP) el CDN
g. Después de la automatización AIDC, CENTRO A llamará a El CENTRO B y solicitará la autorización vía el canal ATS.
h. La dependencia ATC transmisora del mensaje AIDC será responsable de verificar que la coordinación se realice de manera exitosa, posteriormente confirmará por los medios orales que la dependencia receptora recibió correctamente los campos de punto de coordinación y hora, nivel de vuelo y código SSR del mensaje AIDC

4. COORDINACIONES

4.1 Los siguientes procedimientos se aplican para el ACC CENTRO A y El CENTRO B. La coordinación de estimados se llevará a cabo en forma automática, vía los sistemas de ambos Centros de Control.

a. Si el tiempo de espera de una solicitud expira (OTO) el controlador debe eliminar el vuelo de la ventana COOR IN/OUT de forma inmediata.
b. El canal de voz se usará en todo caso que necesite respuestas expeditas, para información de desviaciones, solicitud de rutas directas, para solicitud de vuelos militares en condiciones especiales, cambios de ruta, varias.
c. La dependencia ATC transmisora del mensaje AIDC será responsable de verificar que la coordinación se realice de manera exitosa, posteriormente confirmará por los medios orales que la dependencia receptora recibió correctamente los campos de punto de coordinación y hora, nivel de vuelo y código SSR del mensaje AIDC
d. En el caso de falla del protocolo AIDC, la dependencia transmisora deberá coordinar vía el canal de voz.
e. No se solicitaran más de dos CDN por dependencia.
f. Se realizará un monitoreo de los mensajes intercambiados, para determinar la eficiencia de las pruebas, así como para determinar los posibles errores y corregirlos.
g. Cualquier situación irregular que se detecte se deberá de reportar de INMEDIATO al supervisor.
h. Todos los vuelos serán en rutados por los flujos de salida y entrada publicados por El CENTRO B.
i. No se autorizaran niveles incorrectos.
j. El sistema enviara de forma automática la cancelación de un CPL, la dependencia que envía la cancelación debe llamar a la dependencia receptora para informar las razones de la cancelación.

5. PARAMETROS EN LOS SISTEMAS

5.1 Las coordinaciones **AIDC** se establecen de acuerdo a los flujos de salida y llegada tomando en cuenta los siguientes parámetros de tiempo.

No.	**Aerovía**	**Punto de Coor.**	**CENTRO B / CENTRO A**		**CENTRO A / CENTRO B**		**OBSERVACIONES**
			ABI	**CPL**	**ABI**	**CPL**	
1	Por definir						
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							

Nota: Previa coordinación, una aeronave podrá salir por un punto de coordinación diferente a los flujos de entrada y salida. Los parámetros serán los establecidos en la tabla anterior.

6. INTERRUPCIONES PROGRAMADAS Y NO PROGRAMADAS DEL AIDC

6.1 Los supervisores de ambas dependencias coordinaran las interrupciones programadas o no programadas del **AIDC**.

Este acuerdo será de carácter temporal y el mismo podrá ser revisado durante las pruebas operativas hasta que CENTRO B y CENTRO A Control consideren que las coordinaciones AIDC tienen un alto porcentaje de confiabilidad y decidan que este documento se tome como el Anexo AIDC de la carta acuerdo vigente.

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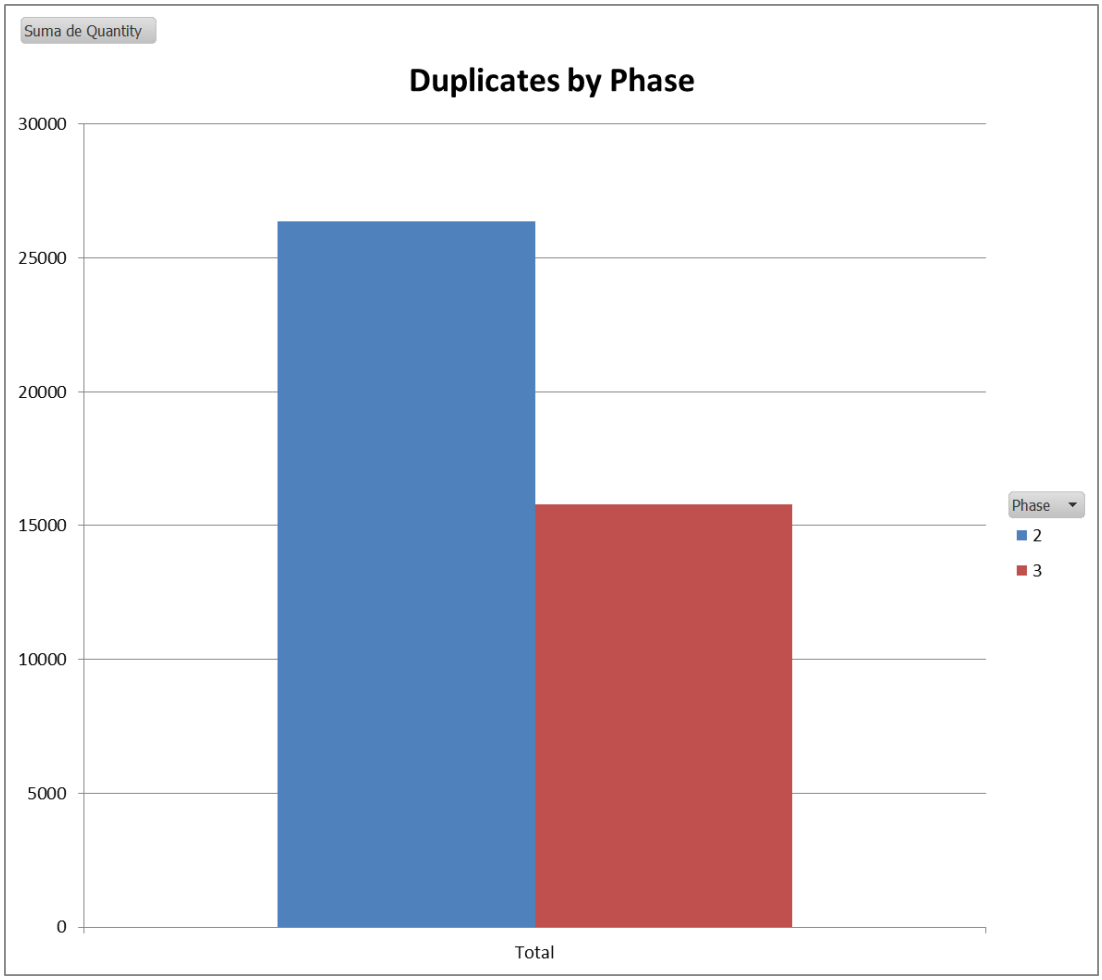
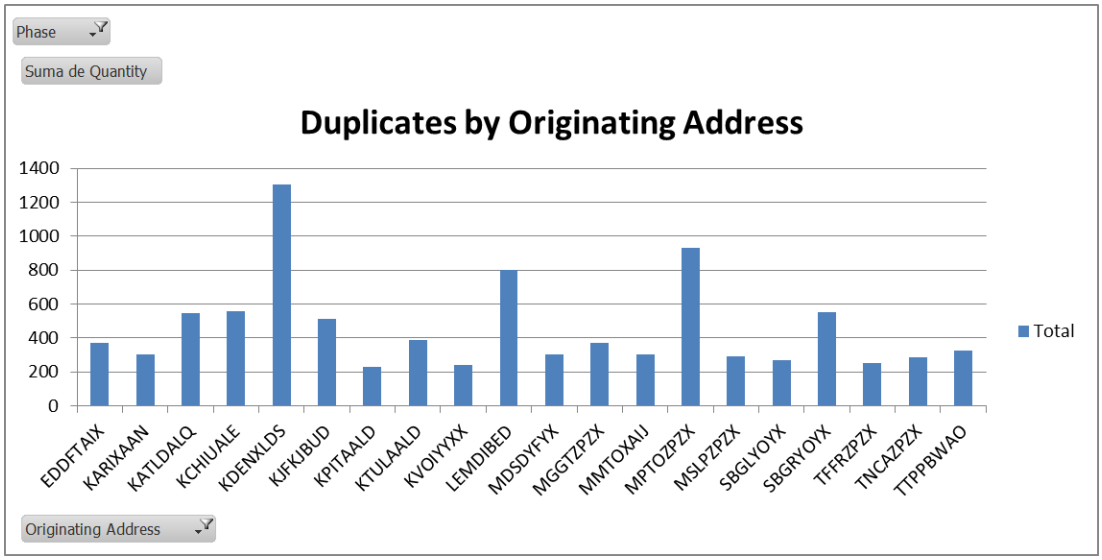
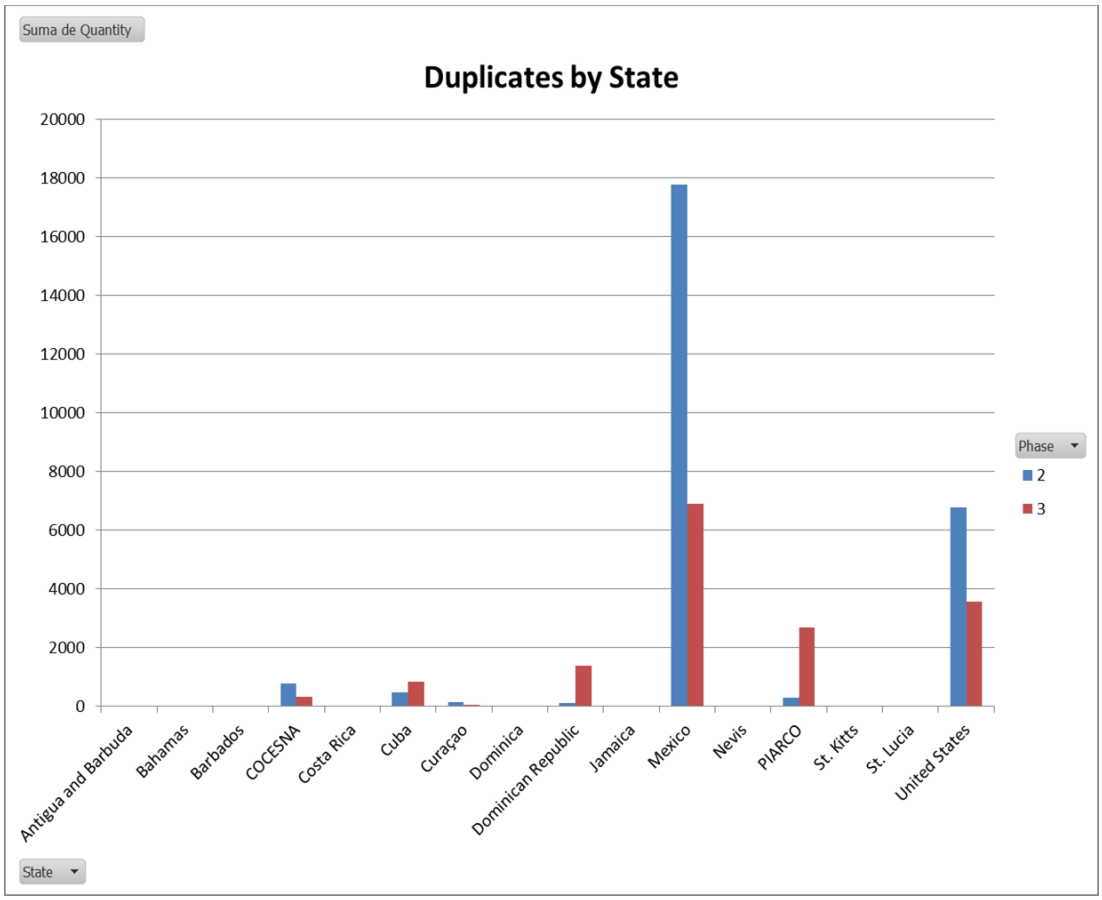
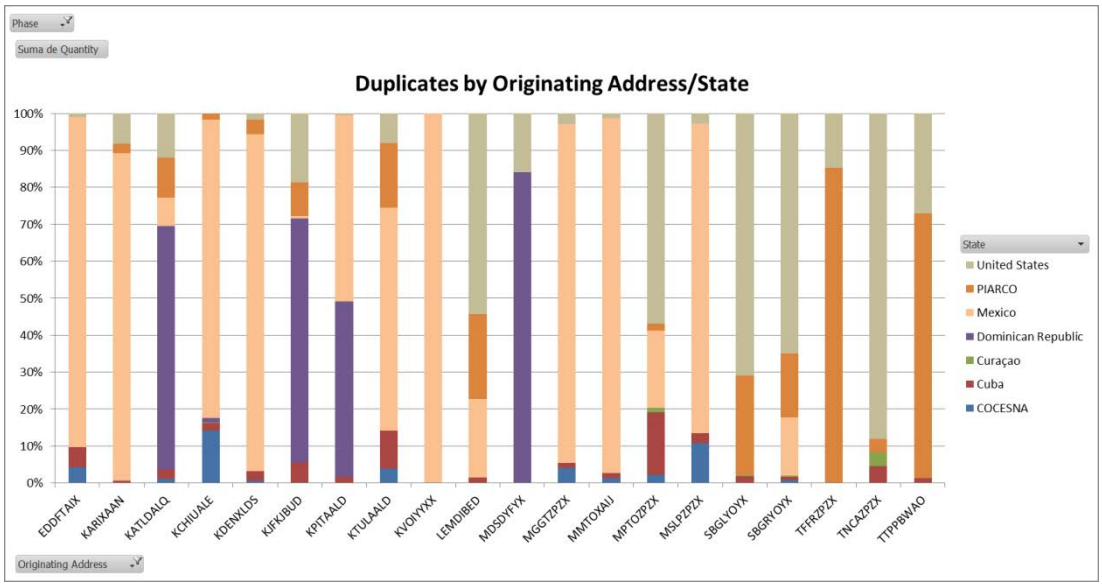
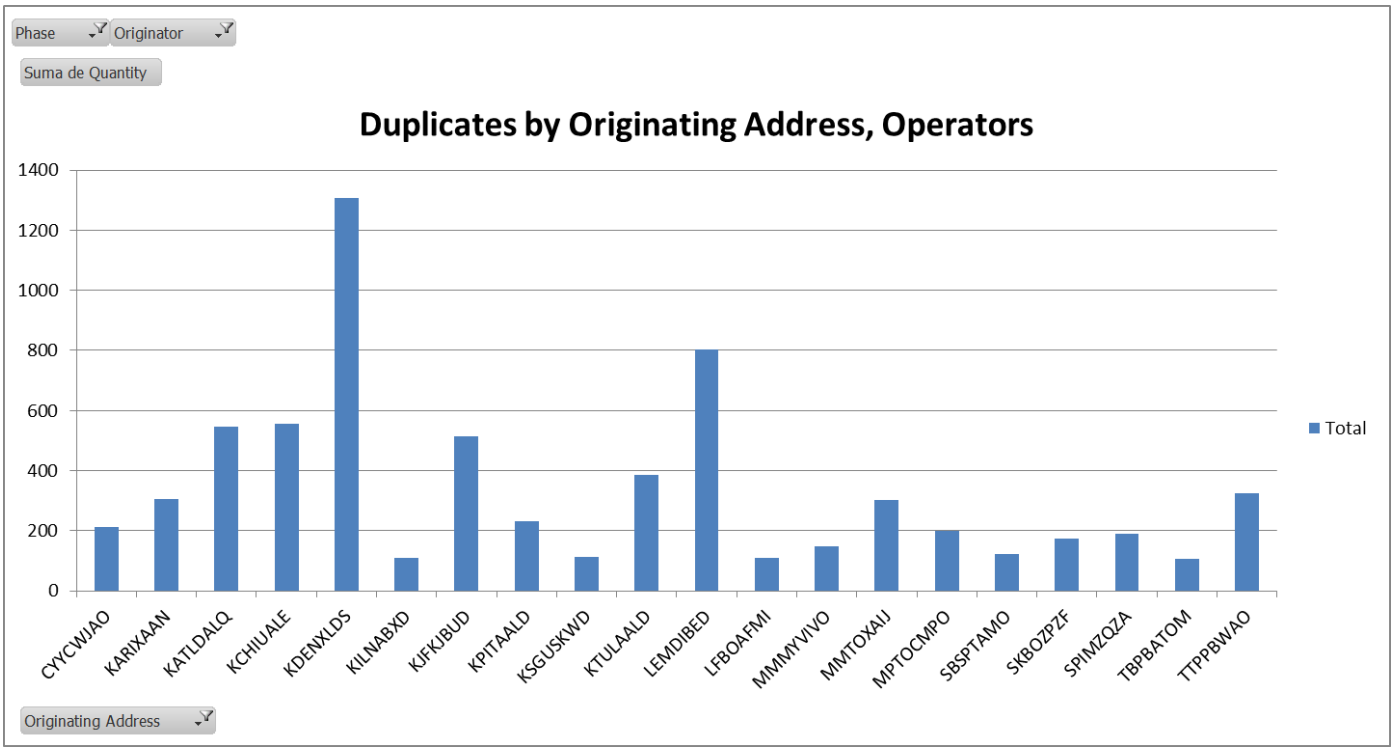
APPENDIX C
Results of Data Collection, September – October 2015

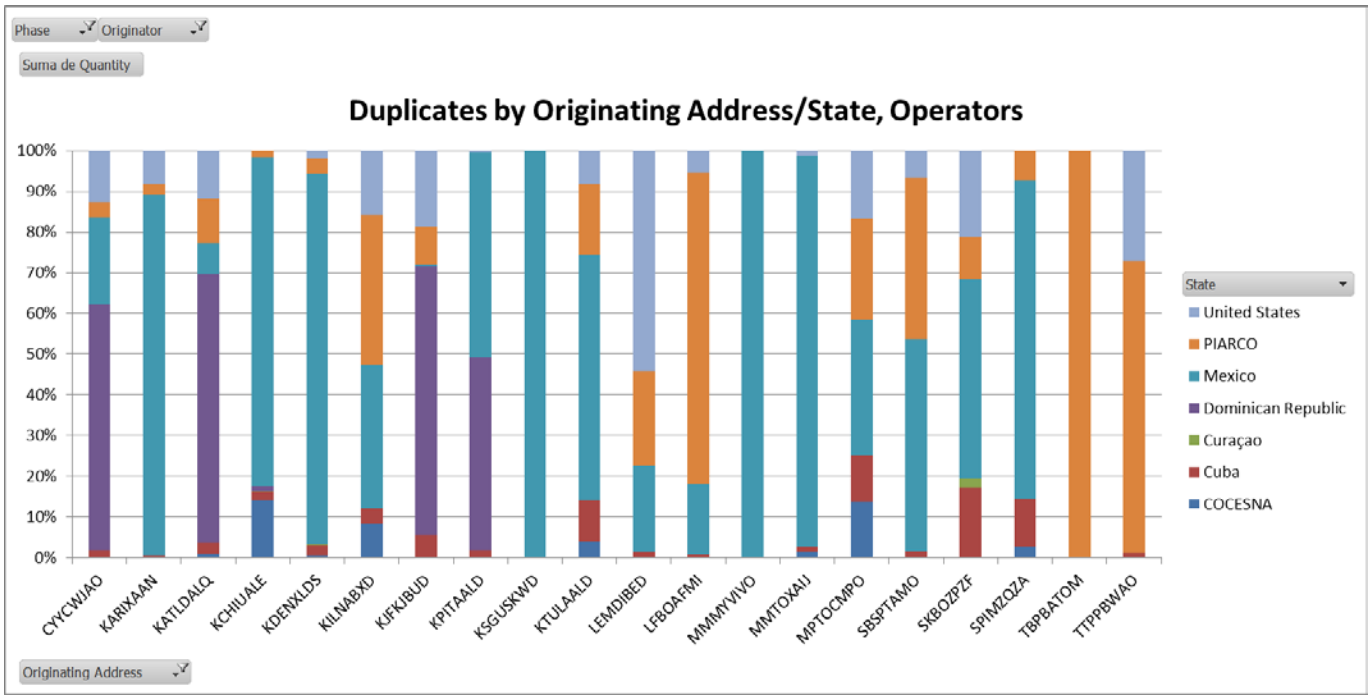


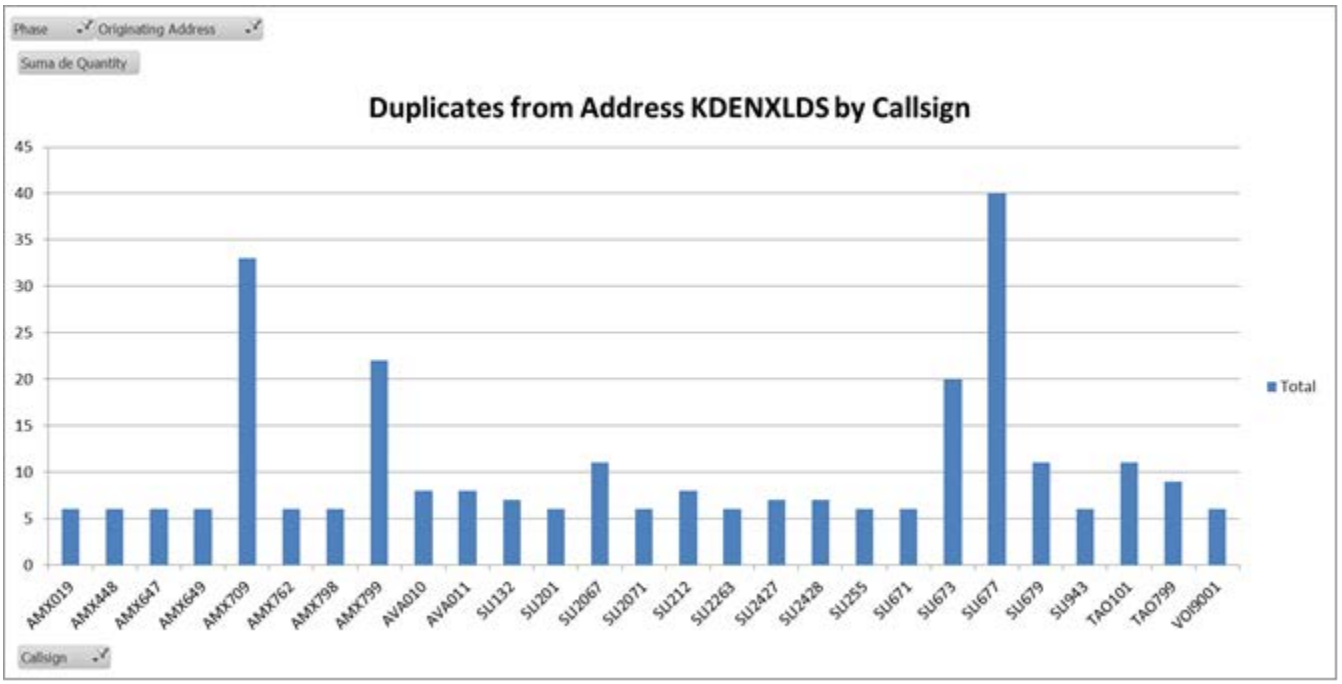


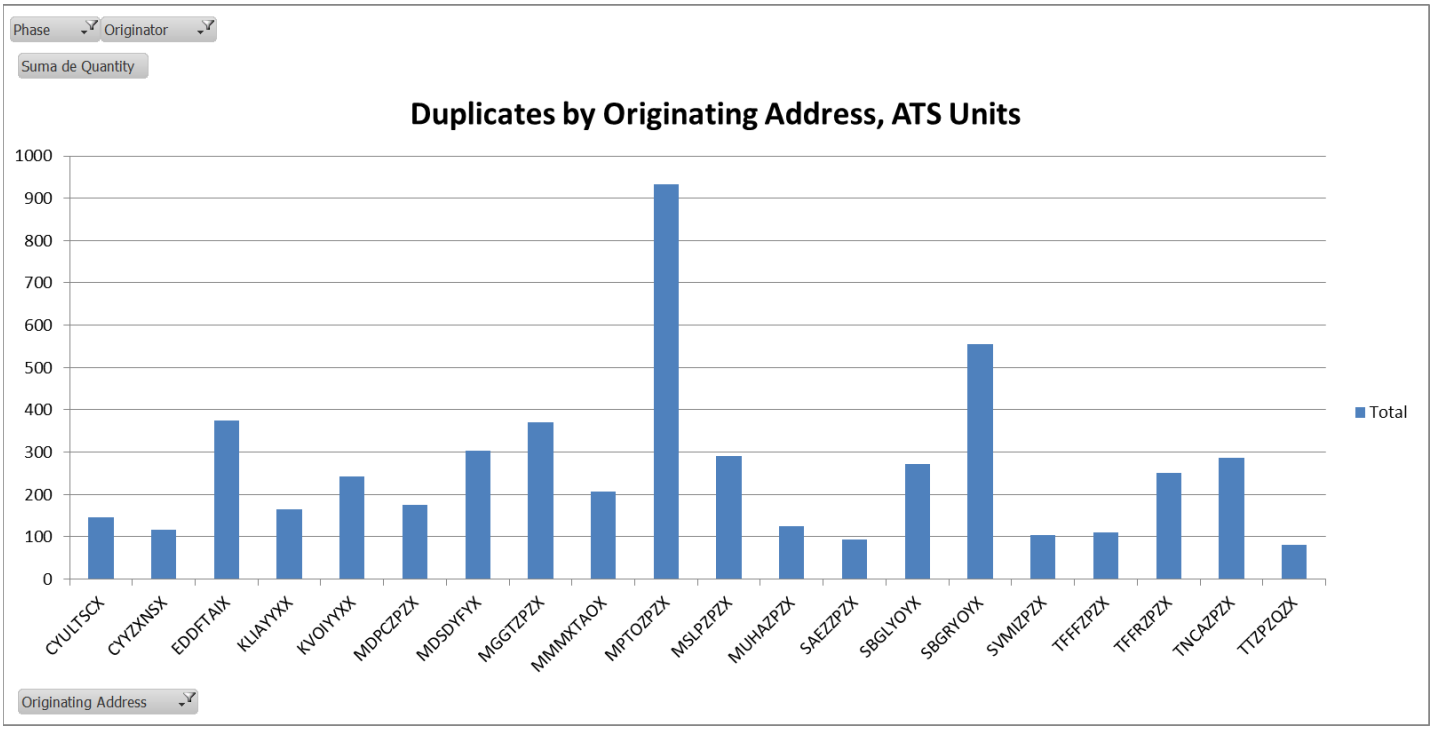

Suma de Quantity
Duplicates by State
20000
18000
16000
14000
12000
10000
8000
6000
4000
2000
0
Antigua and Barbuda
Bahamas
Barbados
COCESNA
Costa Rica
Cuba
Curaçao
Dominica
Dominican Republic
Jamaica
Mexico
Nevis
PIARCO
St. Kitts
St. Lucia
United States
Phase
2
3
State


Phase
Suma de Quantity
Duplicates by Originating Address/State
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
EDDFTAIX
KARIXAAN
KATLDALQ
KCHIUALE
KDENKLDS
KJFKJBUD
KPITAALD
KTULAALD
KVOIYYXX
LEMDIBED
MDSDYFYX
MGGTZPZX
MMTOXAIJ
MPTOZPZX
MSLPZPZX
SBGLYOYX
SBGRYOYX
TFFRZPZX
TNCAZPZX
TTPPBWAO
Originating Address
State
United States
PIARCO
Mexico
Dominican Republic
Curaçao
Cuba
COCESNA


Phase
Originator
Suma de Quantity
Duplicates by Originating Address, Operators
1400
1200
1000
800
600
400
200
0
CYYCWJAO
KARIXAAN
KATLDALQ
KCHIUALE
KDENXLDS
KILNABXD
KJFKJBUD
KPITAALD
KSGUSKWD
KTULAALD
LEMDIBED
LFBOAFMI
MMMYVIVO
MMTOXAIJ
MPTOCMPO
SBSPTAMO
SKBOZPZF
SPIMZQZA
TBPBATOM
TTPPBWAO
Total
Originating Address


Phase
Originator
Suma de Quantity
Duplicates by Originating Address/State, Operators
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
CYYCWJAO
KARIXAAN
KATLDALQ
KCHIUALE
KDENXLDS
KILNABXD
KJFKJBUD
KPITAALD
KSGUSKWD
KTULAALD
LEMDIBED
LFBOAFMI
MMMYVIVO
MMTOXAIJ
MPTOCMPO
SBSPTAMO
SKBOZPZF
SPIMZQZA
TBPBATOM
TTPPBWAO
State
United States
PIARCO
Mexico
Dominican Republic
Curaçao
Cuba
COCESNA
Originating Address

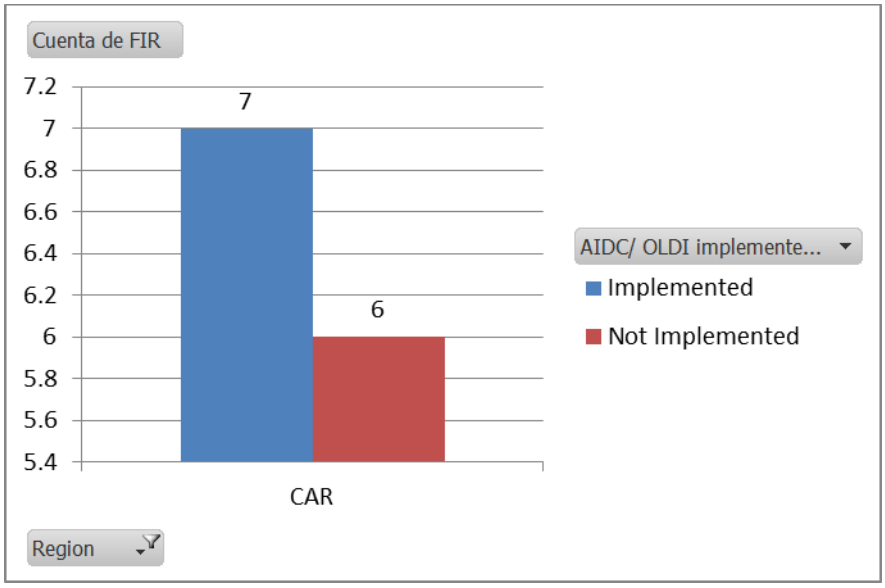

Phase
Originating Address
Suma de Quantity
Duplicates from Address KDENXLDS by Callsign
45
40
35
30
25
20
15
10
5
0
AMX019
AMX448
AMX647
AMX649
AMX709
AMX762
AMX798
AMX799
AVA010
AVA011
SUI32
SUI201
SUI2067
SUI2071
SUI212
SUI2263
SUI2427
SUI2428
SUI255
SUI671
SUI673
SUI677
SUI679
SUI943
TAO101
TAO799
VOI9001
Total
Callsign


Phase
Originator
Suma de Quantity
Duplicates by Originating Address, ATS Units
1000
900
800
700
600
500
400
300
200
100
0
CYULTSCX
CYYZXNSX
EDDFTAIX
KLIAYYXX
KVOIYYXX
MDPCZPZX
MDSDYFYX
MGGTZPZX
MMMXTAOX
MPTOZPZX
MSLPZPZX
MUHAZPZX
SAEZZPZX
SBGLYOYX
SBGRYOYX
SVMIZPZX
TFFFZPZX
TFFRZPZX
TNCAZPZX
TTZPZQZX
Total
Originating Address

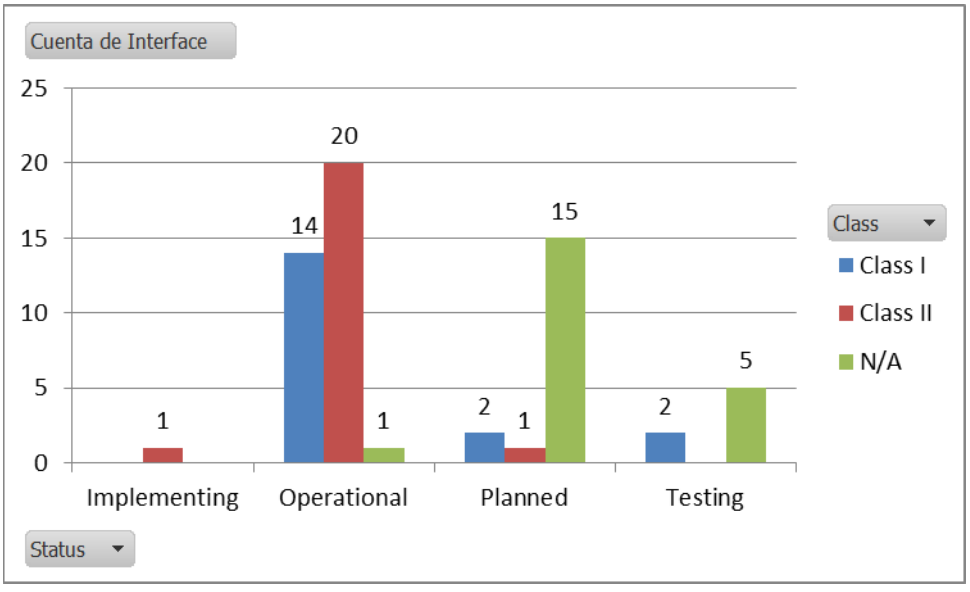
— — — — — — — — — — —

APPENDIX D
AIDC IMPLEMENTATION PERFORMANCE INDICATOR

Graph 1: Implementation percentage, CAR region



Graph 2: AIDC Implementation by Class



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

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

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

APPENDIX F

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

State	Solution	
	AFTN Terminal – FPL	ATC Automated System – FDP
Anguilla	Implemented	Manual
Antigua and Barbuda	Implemented	Manual
Aruba	Implemented	Implemented
Bahamas	Implemented	Implemented
Barbados	Implemented	Implemented
Belize	Implemented	Full upgrade planned (converter in use)
Bermuda	Implemented	Manual
British Virgin Islands	Implemented	Manual
Canada	Implemented	Implemented
Cayman Islands	Implemented	Implemented
Costa Rica	Implemented	Full upgrade planned (converter in use)
Cuba	Implemented	Implemented
Curacao	Implemented	Implemented
Dominica	Implemented	Manual
Dominican Republic	Implemented	Implemented
El Salvador	Implemented	Implemented
Grenada	Implemented	Implemented
Guatemala	Implemented	Implemented
French Antilles	Implemented	Implemented
Haiti	Manual	Manual
Honduras	Implemented	Full upgrade planned (converter in use)
Jamaica	Implemented	Full upgrade planned (converter in use)
Mexico	Implemented	Implemented
Montserrat	Implemented	Manual
Netherlands (BES Islands)	Manual	Manual
Nicaragua	Implemented	Implemented
Saint Kitts and Nevis	Implemented	Manual
Saint Lucia	Implemented	Manual
Saint Vincent and the Grenadines	Implemented	Manual
Sint Maarten	Implemented	Implemented
Trinidad and Tobago	Implemented	Implemented
Turks and Caicos Islands	Implemented	Implemented
United States	Implemented	Implemented
COCESNA	Implemented	Implemented

— END —