

INTERNATIONAL CIVIL AVIATION ORGANIZATION

Third ICAO/IATA/CANSO Performance-Based
Navigation (PBN) Harmonization, Modernization
and Implementation Meeting for the North
American, Caribbean and South American
(NAM/CAR/SAM) Regions
(ICAO/IATA/CANSO/PBN/3)

Final Report

Mexico City, Mexico, 2 – 6 July 2018

Prepared by the Secretariat

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HISTORICAL

ii.1 Place and Date of the Meeting

The Third ICAO/IATA/CANSO Performance-Based Navigation (PBN) Harmonization, Modernization and Implementation Meeting for the North American, Caribbean and South American (NAM/CAR/SAM) Regions (ICAO/IATA/CANSO PBN/3) was held at the ICAO NACC Regional Office in Mexico City, Mexico, from 2 to 6 July 2018.

ii.2 Opening Ceremony

Mr. Javier Vanegas, CANSO Regional Director for Latin America and the Caribbean welcomed the participants and highlighted the work done and the results achieved in the previous ICAO/CANSO/IATA joint meetings. Mr. Marco Vidal, IATA Safety and Flight Operations Manager for the Americas, highlighted the importance of the work that has been carried out within the framework of this forum, which serves as a space for collaboration between States, service providers and operators.

Mr. Melvin Cintron, Regional Director of the ICAO NACC Regional Office of the North American, Central American and Caribbean (NACC) Office of the International Civil Aviation Organization (ICAO) provided opening remarks and thanked the participants their support to this initiative, which will positively impact the safety and efficiency of the air operations in our regions. Mr. Cintron welcomed the participants to Mexico City and officially opened the meeting.

ii.3 Officers of the Meeting

The ICAO/IATA/CANSO PBN/3 Meeting was chaired by Mr. Riaaz Mohammed, Manager Air Navigation Services Planning and Development, Trinidad and Tobago Civil Aviation Authority. Mr. Eddian Méndez, Regional Officer, Air Traffic Management and Search and Rescue of the ICAO NACC Regional Office served as Secretary of the Meeting, assisted by Mr. Fernando Hermoza, Regional Officer, Air Traffic Management and Search and Rescue of the ICAO SAM Regional Office.

ii.4 Working Languages

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

ii.5 Schedule and Working Arrangements

It was agreed that the working hours for the sessions of the meeting would be from 08:30 to 15:30 hours daily with adequate breaks. Ad hoc Groups were created during the Meeting to do further work on specific items of the Agenda.

ii.6 Agenda

Agenda Item 1 Approval of the Meeting Agenda and Schedule

Agenda Item 2 Implementation of Performance-Based Navigation (PBN) Routes

- 2.1 Follow-up to the Proposal for Amendment PfA1
- 2.2 Approval and Implementation Process
 - 2.2.1 PfA1 Lessons Learned
 - 2.2.2 PfA Approval Process
 - 2.2.3 Optimized Route Proposal Format
 - 2.2.4 Publication Agreement and Date of Entry into Effect of Routes
 - 2.2.5 Letter of Agreements (LoAs) 2017-2018
- 2.3 New Performance-Based Navigation (PBN) Routes Proposal and Interregional Initiatives

Agenda Item 3 General Flight Efficiency Concepts

- 3.1 Key Performance Indicators (KPIs) (En-route)
- 3.2 Safety feedback (hotspots)
- 3.3 Airlines feedback on operational matters [Air Traffic Flow Management (ATFM) measures/others]

Agenda Item 4: Optimization of Longitudinal Separation

- 4.1 Review the Letters of Agreement related to the application of 40 NM and 20 NM separation between adjacent Flight Information Regions (FIRs) in the CAR and SAM Regions
- 4.2 Restrictions Related to the Air Traffic Management/Communications Navigation and Surveillance (ATM/CNS) constraints experienced by Air Navigation Service Providers (ANSPs) to implement 40 NM/20 NM separation

Agenda Item 5 ATM Situation Analysis in the CAR/SAM Regions

Under this Agenda Item, the Meeting will analyse the ATM scenario focusing in the common problems for the CAR/SAM Regions.

Agenda Item 6 Other Business

ii.7 Attendance

The Meeting was attended by 20 States/Territories from the NAM/CAR/SAM Regions, 3 International Organizations, and industry, totalling 72 delegates as indicated in the list of participants.

ii.8 Decision

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

An executive summary of the decision is presented in **Appendix A** to this report.

List of Decisions

Number	Title	Page
3/1	IMPLEMENTATION OF REGIONAL/INTERREGIONAL OPTIMIZED RNAV ROUTES	2-6

ii.9 List of Working and Information Papers and Presentations

Number	Agenda Item	WORKING PAPERS Title	Date	Prepared and Presented by
WP/01	1	Approval of the Meeting Agenda and Schedule	13/06/18	Secretariat
WP/02	4.1	Reduction of Longitudinal Separation Between Aircraft in the CAR/SAM Airspace	26/06/18	Venezuela

INFORMATION PAPERS				
Agenda Item	Title	Date	Prepared and Presented by	
	List of Working, Information Papers and Presentations	02/07/18	Secretariat	
2.3	Update on the Implementation of PBN in Paramaribo Airspace	29/04/17	Suriname	
2.3	Brazilian Airspace Routing Proposal	26/06/18	Brazil	
4.1	Operational Conditions in FIR-AZ	26/06/18	Brazil	
	2.3 2.3	Agenda Item Title List of Working, Information Papers and Presentations 2.3 Update on the Implementation of PBN in Paramaribo Airspace 2.3 Brazilian Airspace Routing Proposal	Agenda Item Title Date List of Working, Information Papers and Presentations 2.3 Update on the Implementation of PBN in Paramaribo Airspace 29/04/17 2.3 Brazilian Airspace Routing Proposal 26/06/18	

ROUTES PROPOSALS			
Agenda Item	Title	Date	
2.3	Cuba	25/08/17	
2.3	Curaçao	25/08/17	
2.3	Jamaica	14/09/17	
2.3	Trinidad and Tobago	25/08/17	
2.3	United States	25/08/17	
2.3	COCESNA	14/09/17	
2.3	IATA	29/06/18	
	2.3 2.3 2.3 2.3 2.3	Agenda Item Title 2.3 Cuba 2.3 Curaçao 2.3 Jamaica 2.3 Trinidad and Tobago 2.3 United States 2.3 COCESNA	

Presentations			
Number	Agenda Item	Title	Presented by
1	4.2	GNSS/RNAV Non-Radar Longitudinal Separation in the Caribbean	United States
2	2.3	FAA Briefing to the ICAO/IATA/CANSO PBN Harmonization Meeting	United States
3	3.1	Free Route Operations / FRTO	Colombia

ICAO/IATA/CANSO PBN/3 Historical

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Presentations				
Number	Agenda Item	Title	Presented by	
4	3.1/3.3	Turning Challenges into Opportunities	IATA	
5	5	Harmonization of ATS Contingency Plans	Secretariat	

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Agenda Item 1 Approval of the Meeting Agenda and Schedule

- 1.1 Under this Agenda Item, the Chairperson of the Meeting was elected. Dominican Republic nominated Mr. Riaaz Mohammed, Manager Air Navigation Services Planning and Development, Trinidad and Tobago Civil Aviation Authority, as Chairperson of the Meeting. This proposal was supported by Uruguay. Mr. Mohammed was unanimously elected.
- 1.2 The Secretariat presented WP/01REV2 and invited the Meeting to approve the Provisional Agenda and Schedule. The Meeting approved the Agenda and Schedule as presented.

Agenda Item 2 Implementation of Performance-Based Navigation (PBN) Routes

2.1 Follow-up to the Proposal for Amendment PfA1

- 2.1.1 Under this Agenda Item, the Meeting followed-up the implementation of the CAR/SAM Air Navigation Plan amendment, Volume II, e-ANP, Part IV Air Traffic Management (ATM), Table ATM II CAR/SAM 1 CAR/SAM Regions ATS Routes, included in the Proposal for Amendment NACC 17/01 ATM.
- 2.1.2 The States and International Organizations highlighted the effort made to comply with the abovementioned amendment and the setbacks faced in the process. Some States commented that, after having prepared and published the new routes or having made the adjustments according to the routes restructure, they had to cancel the publications because the adjacent respective Flight Information Regions (FIRs) had not complied with the proposed dates or with the accepted changes.
- 2.1.3 In this sense, the Meeting agreed to make a more detailed analysis of the situation and asked the States to present their differences so that they may be addressed with the involved entities.
- 2.1.4 The Meeting agreed to receive the information of those States that still had pending matters to implement, for which a questionnaire was developed to evaluate the publication of the pending changes.
- 2.1.5 Four States had pending issues regarding the Proposal for Amendment 1 (PfA1) implementation, and agreed to take corrective actions to comply with the proposal for amendment.

2.2 Approval and Implementation Process

2.2.1 PfA1 Lessons Learned

- 2.2.1.1 Under this Agenda Item, the Meeting facilitated an open space for participants to share their experience regarding the PfA1 implementation, in order to be able to identify opportunities of improvement based on lessons learned by every State.
- 2.2.1.2 The main pitfalls pointed out by participants were as follows:
 - The PfA was developed considering mainly the FIRs, but their connection with the Terminal Areas (TMAs) was obviated, in some cases where the upper and lower airspaces are managed by different States or Organizations.
 - Some points of the PfA were not clearly detailed, so it is necessary to provide clearer guidelines for its correct implementation.

- Some States do not have a clear concept regarding the implemented changes, so they require certain assistance and guidance in order to implement.
- Some States, despite of agreeing with the PfA in principle, presented limitations to implement. Although they had several opportunities to notify their agreement with the proposed changes and their capacities to continue with the implementation, they did not notify in a clear manner their limitations.
- Some States implemented the PfA and added improvements to their airspaces, with PBN procedures implementation that operators do not use.
- The Collaborative Decision Making (CDM) procedures with the stakeholders must be improved.
- The improvement of the coordination between the CAR/SAM neighbouring FIRs is imperative.
- Confusion regarding the elimination of conventional routes exists for some States.
- The CAR Region must develop additional work that involves the TMA evaluation.
- The PfA was made with an initial focus on the route traffic or the flyover, which cannot connect later to provide routes to the local stakeholders.
- Although some operators are equipped and with an enabled crew, they do not use the implemented PBN procedures in a consistent manner.
- Lack of follow-up by the CAR Region Champion States.
- The agreements made were not adequately documented.
- Leadership challenges on the implementation.
- Lack of training by the regulator to accept the changes proposed by the service provider.

2.2.2 PfA Approval Process

- 2.2.2.1 The Secretariat informed the Meeting on the Regional Air Navigation Plans amendment procedure, approved by the ICAO Council on 18 June 2014. This procedure describes, clearly and precisely, the manner in which a proposal for amendment should be made and who can start it.
- 2.2.2.2 The amendments to Volume II of the Regional Air Navigation Plan should be based on adequately documented proposals, submitted by a State (or group of States) or by the Planning and Implementation Regional Group (PIRG) to the Secretary General, through the corresponding Regional Office. These proposals may include additions, changes or eliminations. This procedure does not prevent any State from submitting a proposal for amendment through the corresponding Regional Office, after consultation with another State.
- 2.2.2.3 Based on the procedure approved by the Council of ICAO, the Meeting agreed to analyse each initiative, to focus on the Area Navigation (RNAV) routes implementation, to document the discussions held, to keep record of the agreed proposals, and to include the dates of publication and entry into effect agreed by all involved FIRs. In order to comply with the established procedure for amendment to Table ATM II-CAR/SAM-1 *CAR/SAM Regions ATS Routes*, the Meeting decided to follow a procedure for routes publication, included in **Appendix B** to this report.

2.2.3 Optimized Route Proposal Format

2.2.3.1 The Meeting assessed the optimized route proposal format proposed by IATA in the previous meeting. It was agreed to use this format with slight modifications.

2.2.4 Publication Agreement and Date of Entry into Effect of Routes

- 2.2.4.1 For this new version of routes for the CAR/SAM Regions, and taking into account the Regional Air Navigation Plans amendment procedure, the Meeting agreed that all changes should be published in the Aeronautical Information Regulation and Control (AIRAC) cycle of November 8th 2018, to entry into effect on 31 January 2019.
- 2.2.4.2 In the case of United States, the date of publication and entry into effect will be 31 January 2019, given the fact that according to their normal procedures the publication and entry into effect date is the same.

2.2.5 Letter of Agreements (LoAs) 2017-2018

2.2.5.1 States and International Organizations held conversations to update to their corresponding LOAs. Some progress was achieved that will be finalized in upcoming meetings.

2.3 New Performance-Based Navigation (PBN) Routes Proposal and Interregional Initiatives

- 2.3.1 Under this Agenda Item, IP/02 was presented, which details the progress on PBN implementation within the Paramaribo FIR/TMA. This paper states that more harmonisation and collaborative decision-making among States are needed, in order to go forward in the development of the PBN airspace concept in the NAM/CAR/SAM Regions.
- 2.3.2 Similarly, Brazil presented IP/03 that describes the routing proposal within the Brazilian airspace, adjusted to the NAM/CAR/SAM Regions PBN project. The proposed changes are aligned with the improvements proposed by the NAM/CAR FIRs, with 4 entry points into the Brazilian airspace, which will be directed to the four main Brazilian international airports: São Paulo International Airport-Guarulhos (SBGR), Galeão International Airport (SBGL), Presidente Juscelino Kubitschek International Airport (SBBR) and Tancredo Neves International Airport (SBCF).
- 2.3.3 In P/02, United States presented its Q and Y routes implementation project, named Florida Metroplex. This project presents a readjustment to the system of routes used by the control centres in Jacksonville (ZJX), Miami (ZMA) and San Juan (ZSU), which are implemented due to changes in preferential routes and air navigation system automatization. These changes improve the efficiency and connectivity, maintaining their connection with the routes in use by the adjacent FIRs.

2.3.4 During this meeting, Ad hoc Groups were established to analyse proposals for optimization of the route structure. The following proposals were agreed to be included in this new version of the routes:

	Optimization of Routes	Agreements	
No.	States/International Organizations involved	Affected FIRs	Impacted Region(s)
1	UNITED STATES-TRINIDAD AND TOBAGO	TJZS - TTZP	CAR
2	HAITI-JAMAICA	MTEG-MKJK	CAR
3	MEXICO-BELICE-COCESNA	MMFR-MHCC	CAR
4	MEXICO-GUATEMALA-COCESNA	MMFR-MHCC	CAR
5	MEXICO-BELICE-COCESNA	MMFR-MHCC	CAR
6	MEXICO-HONDURAS-NICARAGUA-COCESNA	MMFR-MHCC	CAR
7	PANAMA-COCESNA HONDURAS NICARAGUA	MPZL-MHCC	CAR/SAM
8	TRINIDAD AND TOBAGO	TTZP	CAR/SAM
9	TRINIDAD AND TOBAGO	TTZP	CAR/SAM
10	JAMAICA-PANAMA	MKJK-MPZL	CAR/SAM
11	JAMAICA-PANAMA	MKJK-MPZL	CAR/SAM
12	CUBA-JAMAICA-PANAMA	MUFH-MKJK-MPZL	CAR/SAM
13	CUBA-JAMAICA-COLOMBIA	MUFH-MKJK-SKEC	CAR/SAM
14	PANAMA-COLOMBIA-CURACAO-UNITED STATES	MPZL-SKEC-TNCF-TJZS	CAR/SAM
15	PANAMA/COLOMBIA/CURACAO/DOMINICAN REPUBLIC	MPZL-SKEC-TNCF-MDCS	CAR/SAM
16	DOMINICAN REPUBLIC - HAITI	MDCS-MTEG	CAR
17	DOMINICAN REPUBLIC - HAITI- JAMAICA	MDCS-MTEG-MKJK	CAR
18	CUBA	MUFH	CAR
19	CUBA	MUFH	CAR
20	CUBA	MUFH	CAR
21	CUBA-MÉXICO	MUFH-MMFR	CAR
22	CUBA-JAMAICA-CAYMAN ISLANDS	MUFH-MKJK-TMA GRAND CAYMAN	CAR
23	CUBA-JAMAICA-CAYMAN ISLANDS	MUFH-MKJK-TMA GRAND CAYMAN	CAR
24	CUBA-JAMAICA-CAYMAN ISLANDS	MUFH-MKJK-TMA GRAND CAYMAN	CAR
25	CUBA-JAMAICA-CAYMAN ISLANDS	MUFH-MKJK-TMA GRAND CAYMAN	CAR
26	CUBA-JAMAICA	MUFH-MKJK	CAR
27	CUBA-JAMAICA	MUFH-MKJK	CAR
28	CUBA-JAMAICA	MUFH-MKJK	CAR
29	CUBA-JAMAICA-PANAMA	MUFH-MKJK-MPZL	CAR/SAM
30	CUBA-JAMAICA-PANAMA	MUFH-MKJK-MPZL	CAR/SAM

	Optimization of Routes Agreements			
No.	States/International Organizations involved	Affected FIRs	Impacted Region(s)	
31	CUBA-UNITED STATES	MUFH-KZMA	CAR	
32	CUBA-UNITED STATES	MUFH-KZMA	CAR	
33	UNITED STATES-CUBA-JAMAICA	KZMA-MUFH-MKJK	CAR	
34	UNITED STATES-CUBA-JAMAICA	KZMA-MUFH-MKJK	CAR	

- 2.3.5 Considering proposals involving Route RNAV UL 474 flows, the Meeting took note that this route is currently suspended due to lack of surveillance and communications coverage in an area of the SKEC FIR. Colombia indicated that the use of this route segment between F250 and F280 levels will be managed shortly and the resolution of the communications and surveillance matter for the abovementioned airspace will be fostered.
- 2.3.6 The agreed proposals, signed by representatives of involved parties, are included in **Appendix C** to this report.
- 2.3.7 Each State and International Organization involved in the routes optimization proposals presented in this meeting is responsible for coordinating amongst them the technical details to support each proposal. These details shall be submitted to the corresponding ICAO Regional Office by 5 August 2018.
- 2.3.8 Consequently, States and International Organizations formulated the following decision regarding the routes implementation activities:

DECISION				
ICAO/IATA/CANSO/PBN/3/1 IMPLEMENTATION OF REGIO ROUTES	DNAL/INTERREGIONAL OPTIMIZED RNAV			
What:	Expected impact:			
That, NAM/CAR/SAM States coordinate the implementation	on of 🗌 Political/ Global			
the regional/interregional optimization initiatives of the R				
routes agreed in Appendix C, and they define priority activiti	es in 🛛 Economic			
order to:	⊠ Environmental			
a) validate and match the technical parameters of the ro	outes 🗵 Operational/Technical			
to be implemented;				
b) update the ATS procedures and provide training to	the			
operational staff, if needed;				
c) perform the safety analysis regarding the airspace cha	inge;			
and				
d) develop the aeronautical publication complying	with			
AIRAC terms and deadlines agreed for the effe	ctive			
implementation of the optimized routes.				
·				
Why:				
In order to complete the implementation of the "N	AM/CAR/SAM Routes July 2018 version",			
approved by the Meeting.				
When:	Status:			
Immediate entry into effect and until the RNAV	Adopted by ICAO/IATA/CANSO/PBN/3			
route effective implementation.				
Who : \boxtimes Coordinators \boxtimes States \boxtimes ICAO Secretariat \square IC	CAO HQ 🗵 Others: COCESNA			

Agenda Item 3 General Flight Efficiency Concepts

3.1 Key Performance Indicators (KPIs) (En-route)

- 3.1.1 P/04, provided by IATA, highlighted the importance of using appropriate performance indicators to measure the safety and efficiency in a seamless operational environment. These indicators are necessary in order to support decision-making related to the implementation of key improvement measures. The correct analysis of the presented data, allows the States and the Air Navigation Service Providers (ANSP) to select adequate options to reduce the complexity of the airspaces and improve their use.
- 3.1.2 Under this Agenda Item, Colombia also provided in P/03 with description of the project developed by the State to allow the optimized use of the airspace and a flexible routing adjusted to specific traffic patterns. This project allows major routing possibilities, reducing a possible congestion of trunk routes and saturated crossing points, resulting in a reduction of CO_2 polluting gases and fuel consumption.

3.2 Safety feedback (hotspots)

3.2.1 Under this Agenda Item, IATA provided feedback of essential points regarding safety performance, which could help to support decision-making related with air space optimization and other air traffic management improvements.

3.3 Airlines feedback on operational matters [Air Traffic Flow Management (ATFM) measures/others]

3.3.1 Under P/04, IATA also presented an analysis of the suggested strategies to provide a more efficient use of the airspace by operators. As part of this analysis, the interregional initiatives were discussed, which would allow a better interconnection between the main cities in Latin America and United States. The main challenge is the need to harmonise different airspace types. The presentation highlighted that the isolated and non-coordinated implementation by FIRs has a negative impact in air operations, which results in poor benefits due to the significant investment made by the ANSPs. Additionally, the presentation detailed the status of the longitudinal separation implementation among the CAR/SAM FIRs, urging the States and the ANSPs to evolve from a longitudinal separation based on time to a longitudinal separation based on Distance Measuring Equipment (DME) and Global Navigation Satellite System (GNSS).

Agenda Item 4 Optimization of Longitudinal Separation

- 4.1 Review the Letters of Agreement related to the application of 40 NM and 20 NM separation between adjacent Flight Information Regions (FIRs) in the CAR and SAM Regions
- 4.1.1 Under this Agenda Item, Brazil presented IP/04 that describes the operational conditions of the Amazonic FIR to support the 40 Nautical Miles (NM) and 20 NM longitudinal separation minima, respectively. Almost all the Brazil airspace is supported by RADAR surveillance coverage and has full Very High Frequency (VHF) coverage. Brazil has made important changes in the air routes that assist their main airports: São Paulo International Airport-Guarulhos (SBGR), Galeão International Airport (SBGL), Presidente Juscelino Kubitschek International Airport (SBBR) and Tancredo Neves International Airport (SBCF).
- 4.1.2 IATA exposed the current situation of the optimization of longitudinal separation for NAM/CAR/SAM Regions. After the discussion held in the Ad hoc Groups, the following updates were provided by the states:
 - Cuba:

Mexico: 20NMJamaica: 20NM

 Haiti: 80NM (expected to be changed in January 2019 to 40 NM – waiting for Curação implementation)

- Jamaica:
 - o UM782 stills with 80NM (with CENAMER) due to SUR/COMMs limitations but it is expected to be reduced on 31 August 2018.
 - o Cuba: 20NM
 - Haiti 80NM (expected to be changed in January 2019 to 40 NM)
- Curação:
 - Venezuela (accepted 40NM but will be implemented in January 2019)
 - o Colombia (accepted 40NM but will be implemented in January 2019)
 - o Jamaica (accepted 40NM but will be implemented in January 2019)
 - Haiti (accepted 40NM but will be implemented in January 2019)
 - o Dominican Republic (accepted 40NM but will be implemented in January 2019)
 - San Juan; 80NM for FAA constraints (Very High Frequency (VHF) and regulation)
- Dominican Republic:
 - o Ready with all FIR neighbors (expected implementation in January 2019 after Curação)

- United States:
 - San Juan (all CAR FIR limits);
 - reported VHF issues at FIRs boundary, mitigation study is undergoing
 - United States will provide an update in the Fourth NAM/CAR Air Navigation Implementation Working Group (ANI/WG) Meeting about the regulatory constraint they had (airspace classification)
 - o GOMEX;SENEAM/FAA are having a meeting in August 2018. Expected update afterwards
- Venezuela:
 - Trinidad and Tobago still with 80NM and discussing the reduction to 40NM, by November 2018.
- 4.1.3 The integrated information regarding the optimization of longitudinal separation for NAM/CAR/SAM Regions, is presented in the **Appendix D** to this report.
 - 4.2 Restrictions Related to the Air Traffic Management/Communications Navigation and Surveillance (ATM/CNS) constraints experienced by Air Navigation Service Providers (ANSPs) to implement 40 NM/20 NM separation
- 4.2.1 The WP/02, presented by Venezuela, puts into consideration of the States and the Secretariat the need to specify the efforts made by the CAR/SAM Regions regarding the implementation of the longitudinal separation reduction. The paper proposes that, either in a conventional operative environment or in a radar one, the expectation is that the longitudinal separation optimization serves to increase the CAR/SAM Regions operations efficiency, and to reduce the workload of air traffic controllers and pilots, considering that the aircrafts would be "naturally separated" and little intervention by air traffic controllers would be needed to change the aircrafts flight level. This workload reduction would result in a safety improvement.
- 4.2.2 All SAM States agree with the longitudinal separation optimization for the traffic evolution among their FIRs. SAM and CAR bordering States are required to jointly review their Letters of Agreement for the establishment of the 40 NM longitudinal separation in those routes that are of common interest between two FIRs and under the agreed established conditions.
- 4.2.3 Under this Agenda Item, United States provided P/01 that summarizes the longitudinal separation currently applied to the adjacent FIRs of the CAR Region and presents potential opportunities to reduce this separation.
- 4.2.4 During the Ad hoc Groups meetings, Venezuela established contact with Trinidad and Tobago, beginning a conversation for joint work on the update of Air Traffic Service (ATS) and Search and Rescue (SAR) Letters of agreement (LoAs) as well as the optimization of longitudinal separation, among other Air Traffic Management (ATM) and Communications, Navigation and Surveillance (CNS) matters. The first teleconference about these activities was agreed to be held no later than 10 August 2018.

Agenda Item 5 ATM Situation Analysis in the CAR/SAM Regions

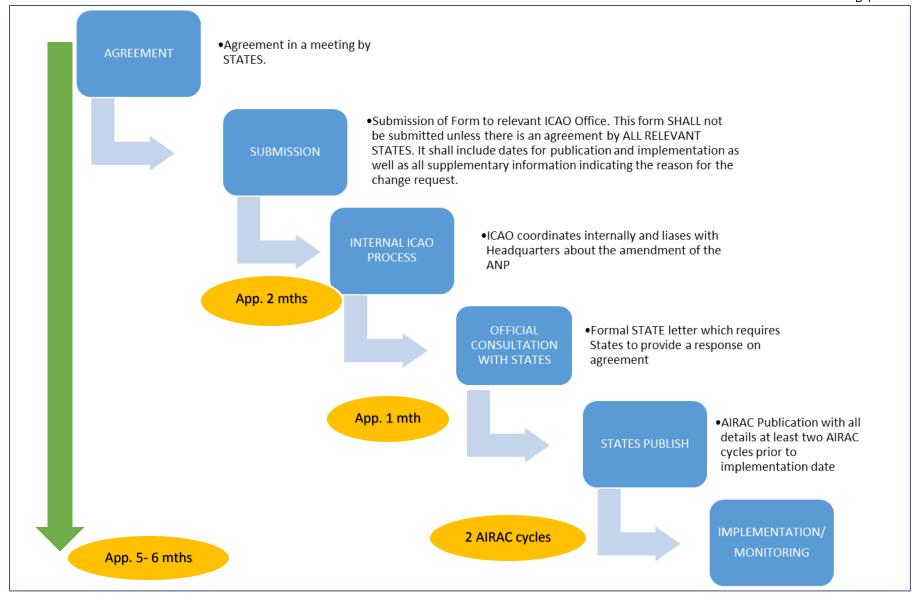
- 5.1 The Secretariat provided P/05 regarding the need of the States to develop and harmonise their contingency plans for ATS services, considering that the Meeting had among its objectives the regional and interregional airspace optimization, also aiming to the efficiency and safety of ATS services and, ATM in general.
- 5.2 In this sense, ICAO Annex 11 Air Traffic Services points out that the States are responsible to guarantee to the international civil aviation that the ATS continue to operate and that the main international air route remain open in case of an ATS interruption, through the development of an ATM Contingency Plan.
- 5.3 The Meeting recognized that the ATS contingency plans should provide actions related to flight plans, its presentation and particularly, if needed, to establish the special arrangements for the flyover authorizations for those flights that must operate through another State's jurisdiction airspace.
- 5.4 The Meeting was informed on the importance of harmonising the ATS contingency plans between neighbouring States, and even more, between States that are in the border of the NAM/CAR or CAR/SAM Regions. The harmonisation must be understood as a dialogue and a search of consensus, which would allow the State dealing with an ATS deterioration (including technical and operational support services) to receive assistance and support of the adjacent States, and also to facilitate the flyover without severe limitations until the services conditions are back to normal. It was also highlighted that the ATS contingency plans could be incorporated in the national plans for response to natural disasters, such as volcanic activity emergencies.
- 5.5 As a good practice, the Meeting mentioned that this benefit could be obtained by including the ATS contingency plans as appendices to the ATS Letters of Agreement (LoA).

Agenda Item 6 Other Business

Under this Agenda Item, the Secretariat presented to the Meeting a progress of the ICAO NACC Regional Office new strategy to support the PBN implementation in the CAR Region. This strategy proposes changes to the work methodology of the NAM/CAR Air Navigation Implementation Working Group (ANI/WG) PBN Task Force, which includes an update of the Terms of Reference and the readjustment of this Task Force work programme. This strategy will be presented in the Fourth ANI/WG (ANI/WG/4), to be held in Miami, United States, from 21 to 24 August 2018.

APPENDIX A EXECUTIVE LIST OF DECISIONS

DECISION			
ICAO/IATA/CANSO/PBN/3/1 IMPLEMENT ROUTES	TATION OF REGION	AL/INTERREGIONAL OPTIMIZED RNAV	
What:		Expected impact:	
That, NAM/CAR/SAM States coordinate	the implementation	of Delitical/Global	
the regional/interregional optimization in			
routes agreed in Appendix C, and they def	ine priority activities	in 🛮 Economic	
order to:		⋈ Environmental	
a) validate and match the technical pa	rameters of the rout	tes 🛛 🖂 Operational/Technical	
to be implemented;			
b) update the ATS procedures and p	rovide training to t	he	
operational staff, if needed;	operational staff, if needed;		
c) perform the safety analysis regardir	c) perform the safety analysis regarding the airspace change;		
and			
d) develop the aeronautical publication complying with		ith	
AIRAC terms and deadlines agre	ed for the effecti	ive	
implementation of the optimized ro	utes.		
p			
Why:			
In order to complete the impleme	ntation of the "NAN	M/CAR/SAM Routes July 2018 version",	
approved by the Meeting.	·		
		tatus:	
Immediate entry into effect and	until the RNAV A	Adopted by ICAO/IATA/CANSO/PBN/3	
route effective implementation.			
Who : ⊠ Coordinators ⊠ States ⊠ ICAC	Secretariat 🗀 ICA	O HQ 🗵 Others: COCESNA	



					FLOW	/S - CITY PAI	IRS					
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	ROUTE to be DELETE	0	CURRENT ROUTE	NEW ROUTE	REALIGN	EXTEND	TRIM	NEW ROUTE	REALIGN	- Common	
ATS ROUTES				UM201	REALIGIT	EXIEND	TUBVI	NEW ROUTE	REALIGN	EXTEND	TRIM
	POINTS	LAT LON	IG DISTANCE	POINTS CPE	LAT 19° 49 51"N	LONG 090* 30 14"W	DISTANCE	POINTS	LAT	LONG	DISTANCE
				ATUTO	17°49.00.00N	090°24.36.12W					
				BIBES	16°0324N	090°19 47"W					
								Harton State			
	TOTAL DIST	ANCE	0	TOTA	AL DISTANCE		0	TO	OTAL DISTANCE		
				RECO	R D S	12000	Transition of				
Proposed by	CESAR TURCIOS	1	Reviewed by:	JOSE ANTONIO VIL	LANUEVA	Reviewed by	/OSE C	GIL JIMENEZ	Reviewed by		
	and.					1	10	1			
	7	_					/11/				
EUNIDOS MEXICO (SE	NEAM Y DGAC) Y COCESNA, SE A	CORDO DARLE SEGL	JIMIENTO A ESTA RUTA QU	E YA HABIA SIDO COORDINADA E	N 2017, SE		VA				
Fecha de Implementac	DENADAS DEL FIJO ATUTO ENTRE ión 8 de Noviembre de 2018	FIR MERIDA Y CENA	AMER Y SE ACORDO LA COO	RDENADA INCLUIDA EN EL CUAD	RO.	/	1/1				
Fecha de Publicación:	31 de Enero de 2019					1					
						7	1				
				FLIGHTS PER MONTH							NOTES
TYPE	8752 74	B738 B73		E109	MD83	G4 6	0 0	TOTAL 327		TOTAL	
			•	1.1	-1			327			
				SAVINGS							NOTES
		DISTANCE (NN	1)		T		CO	2 (KG)			



				FLOWS	- CITY PAI	RS					
				CAR	IBBEAN						
Identification			Section 2	OPTIMIZ	ATION AIMS:						
Number	REDUCE FLIGHT DISTANCE	ATC EFFICIENCY	HARMONIZATION	CONNECTIVITY	FLOW IMP	ROVEMENT		0	THERS (SPECIFY)		
	×	CTATE	CONCERNED			4				in the second	
			ELICE-COCESNA				FIR CONCE				REGIONS CAR
									union visit		- CAIN
	ROUTE to be DELETE		CURRENT ROUTE	NEW ROUTE	REALIGN	EXTEND	TRIM	NEW ROUTE	REALIGN	EXTEND	TRIM
ATS ROUTES				UM203							
	POINTS	LAT LONG	DISTANCE	POINTS CPE	LAT 19° 49 51"N	LONG 090° 30 14"W	DISTANCE	POINTS	LAT	LONG	DISTANCE
				DASMO	18°01 19.550"N	088°46.					
				BELICE	17°3222.62158N	05.840"W 088°1850.31636V	N	2 2			
											THE
	TOTAL DISTA	ANCE	0	TOTAL	DISTANCE	l	0	TC	TAL DISTANCE		
				RECO	R D S			192			
Proposed by	CESAR TURCIOS	1	Reviewed by:	JOSE ANTONIO VILLAI		Reviewed by	JOSE	GIL JIMENEZ	Reviewed by	GILBER	TO TORRES
REVISARON LAS COO echa de Publicación:	SENEAM Y DGAC) , COCESNA Y BELI RDENADAS DEL FIJO DASMO ENTRI 8 de Noviembre de 2018 ación: 31 de Enero de 2019	CE SE ACORDO DARLE FIR MERIDA Y CENAN	SEGUIMIENTO A ESTA RU IER Y SE ACORDO LA COO	TA QUE YA HABIA SIDO COORDINA RDENADA INCLUIDA EN EL CUADR	ADA EN 2017, SE O.		4		F	de	3
				FLIGHTS PER MONTH							NOTES
TYPE AMOUNT	B737 1126	B738 A319 3959 1400	A320	E190	B739	B763		TOTAL		TOTAL	
AWOUNT	1126	3939 1400	2579	1739	403	662		11868			
				SAVINGS							NOTES
		DISTANCE (NM))2 (KG)			
		18NM				FU	EL 832 K	G PER FLIGH	T		



	F L O WS - CITY PAIRS											
				CA	RIBBEAN							
Identification				ОРТІМІ	ZATION AIMS	:						
Number	REDUCE FLIGHT DISTANCE	ATC EFFICIENCY	HARMONIZATION	CONNECTIVITY	FLOW IMP	ROVEMENT			OTHERS (SPECIFY)			
	×					x						
	AAFV		ONCERNED				FIR CONCER			ICA	O REGIONS	
	IVIEX	ICO-HONDORAS	NICARAGUA-CO	CESNA			MMFR-M	HCC			CAR	
a de la constantina	ROUTE to be DELETED	D CL	IRRENT ROUTE	NEW ROUTE	REALIGN	EXTEND	TRIM	NEW ROUTE	REALIGN	EXTEND	TRIM	
ATS ROUTES				UM204	1							
	POINTS	LAT LONG	DISTANCE	COUNTS								
	1.014.0	DA1 CONG	DISTANCE	POINTS OMVON	LAT 22° 01 35"N	LONG 089° 11 43"W	DISTANCE	POINTS	LAT	LONG	DISTANC	
				ANIKO	19°02 55"N	086° 54 23"W						
			1 1 2 2 3	URVIL	17°15 00"N	085°31 47"W				+		
			N. T. S.	PUSEM	14°40 52"N	083°35 23"W		Section 5			200	
				FALLA	13° 26 00"N	082°40 00"W						
										2.3.		
	TOTAL DISTA	ANCE	0	TOTA	L DISTANCE		0	Ť	OTAL DISTANCE			
				R E C O	D D C							
	11.00 2.000/2	T		K E C U	נ ע א					T		
Proposed by		<i></i>	teviewed by:	JOSE ANTONIO VILL	ANUEVA	Reviewed by	JOSE	IL JIMENEZ	Reviewed by		ERTO SIERRA IAN MOLINA	
,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	CESAR TURCIOS	A						6			IAN INIOEMA	
INIDOS MEXICO (SE IGUNA MODIFICACI ha de implementaci	ENEAM Y DGAC) , COCESNA Y BELLI ON EN CUANTO A FIJOS Y COORD Ión: 8 de Noviembre de 2018 Ión: 31 de Enero de 2019	CE SE ACORDO DARLE SE	EGUIMIENTO A ESTA RUT	'A QUE YA HABIA SIDO COORDII	VADA EN 2017, SIN		4					
JNIDOS MEXICO (SE IGUNA MODIFICACI ha de implementaci ha de implementaci	ENEAM Y DGAC) , COCESNA Y BELLI ON EN CUANTO A FIJOS Y COORD Ión: 8 de Noviembre de 2018 Ión: 31 de Enero de 2019	CE SE ACORDO DARLE SE ENADAS.		FLIGHTS PER MONTH		j	4				NOTES	
INIDOS MEXICO (SE GUNA MODIFICACI ha de implementaci	ENEAM Y DGAC) , COCESNA Y BELI ON EN CUANTO A FIJOS Y COORD Ión: 8 de Noviembre de 2018	CE SE ACORDO DARLE SE ENADAS. B738 B739	A320	FLIGHTS PER MONTH A319	B752	E190	8777	TOTAL		TOTAL		
INIDOS MEXICO (SE GUNA MODIFICACI ha de implementaci ha de implementaci TYPE	ENEAM Y DGAC) , COCESNA Y BELLI ON EN CUANTO A FIJOS Y COORD Ión: 8 de Noviembre de 2018 Ión: 31 de Enero de 2019	CE SE ACORDO DARLE SE ENADAS.		FLIGHTS PER MONTH A319				TOTAL 653		TOTAL		
INIDOS MEXICO (SE GUNA MODIFICACI na de implementaci na de implementaci TYPE	ENEAM Y DGAC) , COCESNA Y BELLI ON EN CUANTO A FIJOS Y COORD Ión: 8 de Noviembre de 2018 Ión: 31 de Enero de 2019	CE SE ACORDO DARLE SE ENADAS. B738 B739	A320	FLIGHTS PER MONTH A319	B752					TOTAL		
NIDOS MEXICO (SE GUNA MODIFICACI na de implementaci na de implementaci	ENEAM Y DGAC) , COCESNA Y BELLI ON EN CUANTO A FIJOS Y COORD Ión: 8 de Noviembre de 2018 Ión: 31 de Enero de 2019	CE SE ACORDO DARLE SE ENADAS. B738 B739	A320	FLIGHTS PER MONTH A319	B752		16			TOTAL	NOTES	

				FLOW	S - CITY PAIRS		
				CARIBBEAN-	SOUTH AMERICA		
dentification			-	OPTIMIZ	ATION AIMS:		
Number	REDUCE FLIGHT DISTANCE	ATC EFFICIENCY	HARMONIZATION	CONNECTIVITY	FLOW IMPROVEMENT	OTHERS	(SPECIFY)
	X				x		
			CONCERNED			FIR CONCERNED	ICAO REGIONS
	PANA	AMA-COCESNA H	IONDURAS NICARA	GUA	122	MPZL-MHCC	CAR/SAM

	ROUTE to be D	ELETED	CURRE	ENT ROUTE	NEW ROUTE	REALIGN	EXTEND	TRIM	NEW ROUTE	REALIGN	FUTENIS	
ATS ROUTES	UA766				UM205			11464	HEW ROOFE	REALIGN	EXTEND	TRIM
	POINTS	LAT	LONG	DISTANCE	POINTS	LAT	LONG	DISTANCE	POINTS	LAT	LONG	DISTANCE
	SIGMA	19° 36 59"N	086° 22 03W		SIGMA	19° 36 59"N	086* 22 03W					
	KELVO	18° 59 18"N	085° 59 06"W		AMESI	16° 26 08.9N	084°12 35.1W					
	IRGOL	18° 16 12"N	085° 33 06"W		TEKUG	13°53.40N	082°32,41W					
	MELDA	17°44 06"N	085° 13 54"W		SPP	12°34′57″N	081°42'19"W					
	ILONA	17° 02 24"N	084°49 06"W									-
	CORAL	16° 42 57"N	084° 37 41"W									
	LERIK	16° 20 25"	084° 24 28"W		2							
	KITIS	15° 15 34"N	083° 46 43°W									
	TOTAL	DISTANCE		0	TOTA	AL DISTANCE		0	TOT	AL DISTANCE		

Proposed by	CESAR TURCIOS (COCESNA)	Reviewed by:	ANA MONTENEGRO (PANAMA)	Reviewed by	COCESNA	Reviewed by
	Cary.		Just montal fro			
DINADA CON PANAN EN AJUSTAR HASTA 2	2 DECIMAS DE SEGUNDO. DEBIDO A LA IMPLA	RE LOS 2 FIRs (TEKUG) SE ACORDA ANTACION DE ESTA RUTA ELIMINA	RON COORDENADAS ENTRE LOS 2 FIR LAS CUALES S RA LA UA766 SOLO EN ESPACIO AEREO DE CENAME	R.		
cha de publicación: 8 d	le Neulembre de 2010					

					LIGHTS PER MONTH						NOTES
TYPE	B737	B738	B739	A320	A319	B752	E190	B777	TOTAL	TOTAL	110125
AMOUNT	77	232	104	102	60	30	23	16	TOTAL	696	

SAVINGS		NOTES
DISTANCE (NM)	CO2 (KG)	
10NM	785KG PER FLIGHT FUEL	CALCULADO CON B738



				S - CITY PAIRS		
			CA	RIBBEAN		
OPTIMIZ	ATION AIMS: SAVI	NG TRACK MILES - I	NCREASE AIRSPACE CA	APACITY - ACCESS for the follo	owing city pairs KMIA (MIA)/KFLL(FI	L) to SBBE
REDUCE FLIGHT DISTANCE	ATC EFFICIENCY	HARMONIZATION	CONNECTIVITY	FLOW IMPROVEMENT	OTHERS (SPECIA	FY)
YES	YES	YES	YES	YES	Provides more direct routing for KMIA (BEL)/SBFZ(FOR)/SBI	
	STATES (ONCERNED		F	IR CONCERNED	ICAO REGION
SURIN	AME, TRINIDAD AN	D TOBAGO, UNITED	STATES		TTZP	CAR/SAN

	ROUTE to be DE	LETED	CURF	RENT ROUTE	NEW ROUTE	REALIGN	EXTEND	TRIM	NEW ROUTE	REALIGN	EXTEND	TRIM
ATS ROUTES				UA555	U????							
	POINTS	LAT	LONG	DISTANCE	POINTS	LAT	LONG	DISTANCE	POINTS	LAT	LONG	DISTANCE
					ILURI	16° 18′ 04″.00″N	063° 00′ 00″.00″W					
					OZZEE	15° 13′ 42″.03″N	061° 55' 10".03"W	89		799		
					ETBIG	13° 19′ 48″.00″N	060° 03′ 35″.00″W	157				
					ROSLU	10° 09′ 20″.68″N	057° 00′ 00″.00″W	261				
					TRAPP	09° 05′ 05″.00″ N	055° 59′ 29″.00″ W	88				
	TOTAL	DISTANCE		0		TOTAL DISTANCE		595.5	TO	TAL DISTANCE		

arte proposal was agreed by the United States (San Juan) and Suriname.It will be a bi-directional route.Waypoints OZZEE and ROSLU still to be published tion date: November 8th 2018 leentation date: January 31st 2019				RECORDS	
ute proposal was agreed by the United States (San Juan) and Suriname.It will be a bi-directional route.Waypoints OZZEE and ROSLU still to be published ition date: November 8th 2018 nentation date: January 31st 2019	roposed by	TRINIDAD AND TOBAGO	Reviewed by:	Reviewed by	Reviewed by
on date: November 8th 2018 Intation date: January 31st 2019					
ion date: November 8th 2018 entation date: January 31st 2019					
	te proposal was as	preed by the United States (San Juan) and Si	uriname It will be a hi-directional route Waynoint	ts O77FF and POSILI still to be published	
Keen ogeld	tion date: Novemb	er 8th 2018	uriname.It will be a bi-directional route.Waypoint	ts OZZEE and ROSLU still to be published	

					FLIGHTS PER MONTH					NOTES
TYPE	A320	A340	B737	8787	B738	B763	B772	E190	TOTAL	200
AMOUNT				28						

SAVINGS		NOTES
DISTANCE (NM)	CO2 (KG)	
1		

V & MS

				F	LOWS - CITY P	AIRS					
					CARIBBEAN						
dentification	OPTIMIZATION AIMS	:SAVING TRACK	MILES - INCREASE A	AIRSPACE CAPACITY	- ACCESS for the f	ollowing city pairs I	MIA (MIA)/KFLL(FLL) to	SBBE (BEL)/SE	BFZ(FOR)	/SBRF(R
Number	REDUCE FLIGHT DISTANCE	ATC EFFICIENCY	HARMONIZATION	CONNECTIVITY	FLOW I	MPROVEMENT	7	0	THERS (SPECIFY)		
	YES	YES	YES	YES		YES	Provi		uting for KMIA (MI SBFZ(FOR)/SBRF(R) to SBBE
			CONCERNED				ONCERNED			ICAC	REGIONS
		TRINIDAD	AND TOBAGO				TTZP			CA	R/SAM
	ROUTE to be DELETED	o a	JRRENT ROUTE	NEW ROUTE	REALIGN	EXTEND	TRIM	NEW ROUTE	REALIGN	EXTEND	TRIM
ATS ROUTES				U????		DATERIS	TRUG	NEW ROUTE	REALIGN	EATEND	IKIM
	POINTS	LAT LONG						6-00-0			
	POINTS	LAI LONG	DISTANCE	POINTS GABAR	17" 21' 14".00" N	LONG 063* 00' 00".00" W	DISTANCE	POINTS	LAT	LONG	DISTAN
				TOXED	15° 30′ 42″.60″ N	061° 03′ 12″.10″ W	157	No. Control			
				KEDMI	13°04′ 30″.00″N	058° 32′ 44″.61″W	206				
				NOSOB	11° 13′ 23″.31″ N	056° 41′ 34″.62″ W	155				
				DOLRO	09° 14′ 12″.00″ S	054° 44′ 12″.13″ W	166				
									2.63		
	TOTAL DISTA	ANCE	0		TOTAL DISTANCE		684.5	TO	OTAL DISTANCE		T W
				R E	C O R D S					T EVE	- 6
Proposed by	TRINIDAD AND TOBAG	iO	Reviewed by:			Reviewed by			Reviewed by		
lished lication date: No	was agreed by the United States (seember 8th 2018 e: January 31st 2019	1	.It will be a bi-directional rou		II and NOSOB still to be					990	
	A320	A340 B737	B787	FLIGHTS PER M	ONTH B763	B772	T	E190		TOTAL	NOTES
TYPE											
TYPE AMOUNT					77						
		DISTANCE (NM)		SAVINGS							NOTES

ICAO/IATA/CANSO/PBN/3 Appendix C to the Report

1		-
11		1)
1	110	9/

					FLOWS	- CITY PAIR	S					
					CARIBBEAN-	OUTH AMERI	ICA					
					OPTIMIZ	ATION AIMS:						
	REDUCE FLIGHT DISTANCE	ATCE	FICIENCY	HARMONIZATI ON	CONNECTIVITY	FLOW IMF	PROVEMENT		- 1 E V	OTHERS (SPECIFY)		
			STATES CONC	X	Х			100,000				
		F	ANAMA/ J					FIR CONC				REGIONS R/SAM
	ROUTE to be DELE	TED	-	NT ROUTE	NEW ROUTE	REALIGN	EXTEND	TRIM	NEW ROUTE	REALIGN	EXTEND	TRIM
ATS ROUTES	UG434		U	L347			X					
	POINTS	LAT	LONG	DISTANCE	POINTS	LAT	LONG	DISTANC	POINTS	LAT	LONG	DISTANC
	MLY	175548.90N			MLY	175548.90N	0764639.50W	£		7	20110	DISTRICT
	KASOR TBG	150000.00N	0774143.00W		KASOR TBG	150000.00N	0774143.00W					
					100					-		
						5				B. S.		
						4.5						
	TOTALO	ISTANCE		0	TOTA	L DISTANCE		0	-	OTAL DISTANCE	Description of	
										O'AL DISTANCE		
	1				RECO	R D S				3.55		
Proposed by	JAMAICA/PANAM	A	Revie	wed by:	SOUD AUA	NEGRO	Reviewed by			Reviewed by		
		AV route UL34	7.	gio	T-mort	alpo						
vard Greaves from lication date: Nov	route UG434 and replace with RN n Jamaics and Ana Montenegro fr rember 8th 2018 : January 31st 2019	om Panama		0	Dies	10						
vard Greaves from lication date: Nov lementationdate:	n Jamaica and Ana Montenegro fr rember 8th 2018 January 31st 2019				FLIGHTS PER MONTH							NOTES
ard Greaves from lication date: Nov	n Jamaica and Ana Montenegro fr rember 8th 2018	A340	B737	8787 28	1	B763	8772		£190		TOTAL	NOTES

ICAO/IATA/CANSO/PBN/3 Appendix C to the Report



				FLOW	/S - CITY PA	KS					
				CARIBBEAN	N-SOUTH AME	RICA					
				OPTIM	ZATION AIMS	:					
	REDUCE FLIGHT DISTANCE	ATC EFFICIENCY	HARMONIZATION	CONNECTIVITY	FLOW IMP	ROVEMENT			THERS (SPECIFY)		
	X		×	x						Production of the last	
			CONCERNED				FIR CONCE	RNED		ICAO	REGIONS
		Panan	ia / Jamaica				MPZL/I	VIKIK		CAF	R/SAM
	ROUTE to be DELETE	0	URRENT ROUTE	NEW ROUTE	REALIGN	EXTEND	TRIM	NEW ROUTE			
ATS ROUTES	UB510			NEW ROOTE	REALIGIT	UM542	IKIM	NEW KOUTE	REALIGN	EXTEND	TRIM
					1	J 0141542			I		
	POINTS	LAT LONG	DISTANCE	POINTS	LAT	LONG	DISTANCE	POINTS	LAT	Lyone	D. Law v. v. L.
	SIA			SIA	183003.80N	0775526.80W	212.2	PUIRIS	LAI.	LONG	DISTANG
	COLBY			COLBY	150000.00N	0773328.80W	212.2				
	OPLOS			TBG	2500000000	-700232.00W					
	DAGAS							2.5			30.00
	MIKUS TBG										
	100				+						
	TOTAL DISTA	NCE	0	TOTA	L DISTANCE		0	TO	TAL DISTANCE		
				RECO	R D S						
	JAMAICA/PANAMA			A	n D 3					1	
	JAINIAICAY PANAINIA		Reviewed by:	THA HONE	ENORW	Reviewed by			Reviewed by		
Proposed by				1							
lete coventional row ward Greaves from blication Date: Nove	ute U8510 and replace with RNAI Jamaics and Ana Montenegro fr ember 8th 2018 January 31st 2019		Gr.	Ruere	tu (pr						
ete coventional rov vard Greaves from Ilication Date: Nova lementation date:	ı Jamaica and Ana Montenegro fr ember 8th 2018 January 31st 2019	om Panama	Gn.	PLIGHTS PER MONTH	tru (N)	379			and the second		Notes
ete coventional ro vard Greaves from lication Date: Nove	n Jamaica and Ana Montenegro fr rember 8th 2018		8787	FLIGHTS PER MONTH 8738	B763	8772		£190		TOTAL	Notes



					FLOWS -	CITY PAIRS						
					NORTH AMERICA-	SOUTH AMER	RICA					
		(0.00)			OPTIMIZAT	ON AIMS:						
	REDUCE FLIGHT DISTANCE	ATCE	FICIENCY	HARMONIZATION	CONECTIVITY	FLOW IMP	ROVEMENT			OTHERS (SPECIFY)		
				x								
			STATES CON					FIR CONC				REGIONS
			Cuba/Jamaic	a/Panama			M	UFH-MK	JK-MPZL		CAR	/SAM
	ROUTE to be	DECETED	l moon	NT ROUTE				S 505 (505 505 505 505 505 505 505 505 50	d decreased a processor and a second	Halle Additional to responsible of the state of the	Total Assessment Control	
ATS ROLITES	UG4		COARL	W NOO'E	NEW ROUTE	REALIGN	EXTEND	TRIM	NEW ROUTE	REALIGN	EXTEND	TRIIV
			<u>i</u>			<u>I</u>	Lesione (22)	1:30			15.65.26	
	POINTS	LAT	LONG	DISTANCE	NAME OF THE PARTY		de session y consession			contration contration	A Section of the Control	
	TBG	- LA1	LONG	DISTANCE 372	POINTS	LAT	LONG	DISTANCE	POINTS	LAT	LONG	DISTAN
	DUXUN	150000.00N	0791323.00W	299.3								<u> Santarana</u> Januaran
	GONIS	200000.00N	0785611.00W	121	<u>anders and Friedrich (1976) de la Grande (1976) de</u> Calon (1976) de grande (1976) de la Grande (1976) de la Grande (1976) de la Grande (1976) de la Grande (1976)			2016/03/03/03/03/03/03 2016/28/03/04/03/03			0.000	
	UCA	220054.00N	0784857.00W	125				20 20 10 20 65 20 00 20 20 20 20			12 / (2) (2) (4) (4) (4) (4) (4) (4)	
	DYNAH	235700.00N	0775647.00W				4 100-20-159-159-159-159-159-159-159-159-159-159	19985/200344 19985/200344			2014 2014 2014 2014 2014 2014	gyrge (raye) gwlyfarfal yr
								10000000000000000000000000000000000000	a <u>Deuglasi dang dan katal</u> Banggaya palaman dan b		\$25.05666764 \$25.05564947	<u>Velokiska</u> Velokiska
								2/8/21/28/28/2			2000 (000000)	<u>sartaratak</u> Sagranda
							44.24.24		52-42-62-9019		2875c/67	<u>94349407</u> 89859555
		TOTAL DISTANCE		545.3	TOTAL	DISTANCE		0		TOTAL DISTANCE		
					RECO	RD5						9. 95. 95
	PANAMA/JAM	AICA/CUBA	Revi	ewed by:	And I America de la APT	TKIRA LA	Reviewed by			Reviewed by		
Proposed by	81				NINGER TOTAL SERVICE	and the second of the second o		<u> </u>				
Proposed by	<u>)</u>	·····			Acces a market of		-					
Proposed by	<u> </u>			472	J Mentudy ?)						
	to be replaced with other	DN637 markes (1184)	(DE J (200)	900	The Most End for)	***************************************					
etion of this route t	to be replaced with other			jo 2 4	es-lawitudija M	3	***					
etion of this route t sed by Howard Gre	aves from Jamaica, Ana I			J? //	The Mexical grantes	2	**************************************					
etion of this route t	eaves from Jamaica, Ana I ember 8th 2018			itella from Cuba	ANA MANT E-Mentedija Musica	7				***************************************		
tion of this route t led by Howard Gre ication date: Nove	eaves from Jamaica, Ana I ember 8th 2018			atella from Cuba	The moster of the server	7						
tion of this route t ed by Howard Gre ication date: Nove	eaves from Jamaica, Ana I ember 8th 2018			atella from Cuba	The moster of the services	;						
ion of this route t ed by Howard Gre cation date: Nove	eaves from Jamaica, Ana I ember 8th 2018			atella from Cuba	The moster of the services	7						
ion of this route t ed by Howard Gre cation date: Nove	eaves from Jamaica, Ana I ember 8th 2018					7						
ion of this route t ed by Howard Gre cation date: Nove ementation date: J	raves from Jamaica, Ana I imber 8th 2018 January 31st 2019	Montenegro from Pa	enama and Jorge Cen	F1	IGHTS PER MONTH							NOTE
ion of this route to be by Howard Grecation date: Nove mentation date: I	eaves from Jamaica, Ana I ember 8th 2018			FL 8787		7 7 8763	B77Z		E190		ТОТАЦ	NOTE
ion of this route t ed by Howard Gre cation date: Nove ementation date: J	raves from Jamaica, Ana I imber 8th 2018 January 31st 2019	Montenegro from Pa	enama and Jorge Cen	F1	IGHTS PER MONTH				E190		TOTAL	NOTE
tion of this route to the day Howard Grecation date: Nove the mentation date: I	raves from Jamaica, Ana I imber 8th 2018 January 31st 2019	Montenegro from Pa	enama and Jorge Cen	FL 8787	IGHTS PER MONTH B738				E190		TOTAL	NOTE
tion of this route t ed by Howard Gre cation date: Nove ementation date: I	raves from Jamaica, Ana I imber 8th 2018 January 31st 2019	Montenegro from Pa	enama and Jorge Cen	FL 8787	IGHTS PER MONTH				E190		TOTAL	NOTE
tion of this route t ed by Howard Gre ication date: Nove ementation date: I	raves from Jamaica, Ana I imber 8th 2018 January 31st 2019	Montenegro from Pa	enama and Jorge Cen	FL 8787	IGHTS PER MONTH B738				E190		TOTAL	

	N				FLOWS	- CITY PAIRS	\$					
					NORTH AMERICA	-SOUTH AME	ERICA					
					OPTIMIZA	TION AIMS:						
	REDUCE FLIGHT DISTANCE	ATC EFFIC	CIENCY	HARMONIZATI ON	CONECTIVITY	FLOW IMP	ROVEMENT			OTHERS (SPECIFY)	1 1 2 1	
		S	TATES CONCE	RNED				FIR CONCE	EDNED		1	
		Cuba/	Jamaica/	Colombia			MU	JFH/MK	JK/SKEC			/SAM
	ROUTE to be DELETED	D	CURREN	IT ROUTE	NEW ROUTE	REALIGN	EXTEND	TRIM	NEW ROUTE	REALIGN	EXTEND	TRIN
ATS ROUTES			UB	503								
	POINTS	LAT	LONG	DISTANCE								
	TOTAL DIST	TANCE		0	TOTAL	DISTANCE		0	TC	OTAL DISTANCE		
					RECO	R D S						
Proposed by	JAMAICA		Reviev	ved by:	Cuba/Colombia	ý –	Reviewed by			Reviewed by		
ARD GREAVES fr	JAMAICA /ENTIONAL TO REGIONAL RNAV DES rom Jamaica, Jorge Centella Artola frember 8th November 2018 implemen	from Cuba and F	Freddy Celis fro	om Colombia.	Cuba/Colombia	j.	Reviewed by			Reviewed by		
ME FROM CONV	/ENTIONAL TO REGIONAL RNAV DES	from Cuba and F	Freddy Celis fro	om Colombia.	Decrea		Reviewed by			Reviewed by		
ME FROM CONV ARD GREAVES fr cation date nove	/ENTIONAL TO REGIONAL RNAV DES	from Cuba and F	Freddy Celis fro	om Colombia.	Cuba/Colombia GHTS PER MONTH B738	B763			E190	Reviewed by	TOTAL	NOTE
ME FROM CONV IRD GREAVES fro ation date nove	/ENTIONAL TO REGIONAL RNAV DES rom Jamaica, Jorge Centella Artola fr ember 8th November 2018 implemen	from Cuba and F entation date jar	Freddy Celis fro nuary 31st 201	om Colombia.	GHTS PER MONTH		Reviewed by		E190	Reviewed by	TOTAL	NOTE
ME FROM CONV RD GREAVES fr ation date nove	/ENTIONAL TO REGIONAL RNAV DES rom Jamaica, Jorge Centella Artola fr ember 8th November 2018 implemen	from Cuba and F entation date jar	Freddy Celis fro nuary 31st 201	om Colombia.	GHTS PER MONTH				E190	Reviewed by	TOTAL	NOTE



				FLOW	S - CITY PA	IRS					
13-26-4				NORTH AMERICA-CA	ARIBBEAN-SOL	JTH AMERIC	CA				
Identification Number	English Control			ОРТІМ	ZATION AIMS	:					
UL328	REDUCE FLIGHT DISTANCE	ATC EFFICIENCY	HARMONIZATION	CONECTIVITY	FLOW IMP	ROVEMENT		0	OTHERS (SPECIFY)		
		X		X		x					
	PΔ		CONCERNED IBIA / CURACAO	/ I I S A		4403	FIR CONCE				REGIONS
		andary cozon	IDIA / CONACAO	(U3A		IVIPZ	L /SKEC/ I	NCF/TJZS		CA	R/SAM
1											
-	ROUTE to be DELETE	D (URRENT ROUTE	NEW ROUTE	REALIGN	EXTEND	TRIM	NEW ROUTE	REALIGN	EXTEND	TRIM
ATS ROUTES	UA574			XXXXX	1270						
	POINTS	LAT LONG	Diemolor								
	TBG	LAI LUNG	DISTANCE	TBG VOR	LAT	LONG	DISTANCE	POINTS	LAT	LONG	DISTANCE
	BOGAL	- 117		BOGAL							
	CTG			CTG VOR			1.3				
UA574				AMBAS SCAPA							
				TRNKY							
				OBIKE		 					
	TOTAL DIST.	ANCE									
	TOTAL DIST	ANCE	0	TOTA	AL DISTANCE		0	τ0	OTAL DISTANCE		
				RECO	R D S						
Proposed by	CURACAO		Reviewed by:			Reviewed by			Reviewed by		
EXTENSIÓN SE MANTIENE LA UAS7 USA/SAN JUAN INDICA LETRA U, FECHA DE PL NOVIEMBRE 2018 (FAA	BIA	AIRWAY AS maintaine USA/SAN . UPPER DE NFECHA DE 100 UTC. OU UTC. ANA MON JACQUES I	between Cartagena (CT UAN indicates that the so that publication date wi	maintained to full extent. Airwa G VOR) and Curacao (PJG VOR Iffix U (for upper route) is not bull be 8 November 2018 (FAA not ve date will be 31 January 2019 f. FREDY	eing used by them. ifies it's users via 00:00UTC. CAR CELIS - COLOMBIA						
TYPE	A320	A340 B737	B787	FLIGHTS PER MONTH	1 5753	0.777					NOTES
AMOUNT	7,920	8/3/	B/0/	B/38	B763	B772		E190		TOTAL	
						1					
				SAVINGS							NOTES
		DISTANCE (NM)		SAVINGS				2 (KG)			NOTES



					FLOWS	- CITY PAIRS						
					CARIBBEAN-SO	OUTH AMERIC	CA					
					OPTIMIZA	TION AIMS:						
	REDUCE FLIGHT DISTANCE	ATC EFFICIE	ENCY HARMONIZA	TION	CONNECTIVITY	FLOW IMP	PROVEMENT		O.	THERS (SPECIFY)		
			X				x					
	Panam		STATES CONCERNED Curacao/Repúblic	a Dom	inicana		8/1071	FIR CONCE	NCF /MDCS			REGIONS
					incuna		WIFZL	SKBQJ I	NCF / IVIDCS		CAI	R/SAM
	ROUTE to be DELET	ED	CURRENT ROUTE		NEW ROUTE	REALIGN	EXTEND	TRIM	L very sover			
ATS ROUTES	UA319				NEW ROUTE	REALIGIN	UM597	IKIM	NEW ROUTE	REALIGN	EXTEND	TRIM
							1 0111337					
	POINTS	LAT	LONG DISTANCE		POINTS	LAT	LONG	DISTANCE	POINTS	LAT	LONG	DISTANCE
	TBG			_	G VOR					-3	LONG	DISTANCE
	AGUJA OROSA			-	GUJA		1					
	PALAS			- Tentan	ROSA							
	BETIR			P.7	(CO)				2.79			
												The same of the sa
										2.000		
	TOTAL DI	ISTANCE	0		TOTA	LDISTANCE		0	T	TAL DISTANCE		
	TOTAL DI	ISTANCE	0			L DISTANCE		0	TO	OTAL DISTANCE		
	TOTAL DI	ISTANCE	0		TOTA			0	TO	OTAL DISTANCE		
Proposed by	TOTAL DI CURACAO/REPUBLICA DOM	MINICANA	Reviewed by:		R E C O	R D S	Reviewed by	0	TO	OTAL DISTANCE Reviewed by		
RUTA ACORDADA EN	i	MINICANA Rou date COL LAUDERDALE. 31 de enero de		s agreed s fective Jar	RECO	R D S	Reviewed by	0	тс			
RUTA ACORDADA EN echa de publicacion 8	CURACAO/REPUBLICA DON	MINICANA Rou date COL LAUDERDALE. 31 de enero de	Reviewed by: ute extension (M597) that wa te November 8th 2018 and ef LOMBIA A MONTENEGRO - PANAMA CQUES LASTEN - CURACAO	Sective Jar	RECO since the 1st PBN meeting in Interpretate the 1st PBN meeting in Interpretate the Inte	R D S KFLL Publication FREDY CELIS FELIX	Reviewed by	0	TC			
UTA ACORDADA EN echa de publicacion 8 019	CURACAO/REPUBLICA DON REUNIÓN 1 DE IATA/CANSO FORT I 8 de Noviembre de 2018, vigencia 3	MINICANA Rou date COL ANA 31 de enero de ROS	Reviewed by: ute extension (M597) that wa te November 8th 2018 and ef LOMBIA A MONTENEGRO - PANAMA CQUES LASTEN - CURACAO SA - DOMINICAN REPUBLIC	Sective Jar	RECO since the 1st PBN meeting in Insury 31st 2019. Showing the state of the state	R D S KFLL Publication FREDY CELIS FELIX		0				NOTES
UTA ACORDADA EN echa de publicacion 8	CURACAO/REPUBLICA DON	MINICANA Rou date COL LAUDERDALE. 31 de enero de	Reviewed by: ute extension (M597) that wa te November 8th 2018 and ef LOMBIA A MONTENEGRO - PANAMA CQUES LASTEN - CURACAO	Sective Jar	RECO since the 1st PBN meeting in Interpretate the 1st PBN meeting in Interpretate the Inte	R D S KFLL Publication FREDY CELIS FELIX	Reviewed by	0	E190		TOTAL	NOTES
UTA ACORDADA EN echa de publicacion 8 019	CURACAO/REPUBLICA DON REUNIÓN 1 DE IATA/CANSO FORT I 8 de Noviembre de 2018, vigencia 3	MINICANA Rou date COL ANA 31 de enero de ROS	Reviewed by: ute extension (M597) that wa te November 8th 2018 and ef LOMBIA A MONTENEGRO - PANAMA CQUES LASTEN - CURACAO SA - DOMINICAN REPUBLIC	FLICE	RECO since the 1st PBN meeting in Insury 31st 2019. Showing the state of the state	R D S KFLL Publication FREDY CELIS FELIX		0			TOTAL	
UTA ACORDADA EN echa de publicacion 8 019	CURACAO/REPUBLICA DON REUNIÓN 1 DE IATA/CANSO FORT I 8 de Noviembre de 2018, vigencia 3	MINICANA Rou date COL ANA 31 de enero de ROS	Reviewed by: ute extension (M597) that was the November 8th 2018 and eff LOMBIA A MONTENEGRO - PANAMA CQUES LASTEN - CURACAO SA - DOMINICAN REPUBLIC	FLICE	RECO since the 1st PBN meeting in Interval and Interval	R D S KFLL Publication FREDY CELIS FELIX					TOTAL	NOTES



					FLOW	S - CITY PA	IRS					
					CA	RIBBEAN						
Identification					OPTIMI	ZATION AIMS	:					
Number	REDUCE FLIGHT DISTANCE	ATC EFFI	CIENCY	HARMONIZATION	CONNECTIVITY	FLOW IMP	PROVEMENT	13.5		OTHERS (SPECIFY)	200	- = = -
		х		×	×		X	East				
	-	Dominican		ONCERNED ic/Republic of I	Jajei			FIR CONCE				REGIONS
		Johnmean	ткериы	ic/ Republic of I	idiu			MDCS-M	ILEG			CAR
	ROUTE to be DELETE	D	CUI	RRENT ROUTE	NEW ROUTE	REALIGN	EXTEND	TRIM	NEW ROUTE	REALIGN	EXTEND	TRIM
ATS ROUTES				UM-596	UM-596	x	x					
	POINTS	LAT	LONG	DISTANCE	POINTS	LAT	LONG	DISTANCE	DOINTE	POINTS LAT TOTAL DISTANCE Reviewed by	Lave	
	PTA-VOR			0.00,000	PTA VOR	LAI	EUNG	DISTANCE	PUINTS	LAI	LONG	DISTANCE
	DUTAV NABEN				POBIN						N E	
	NABEN	BEPAL ETBOD XXXXX				34		1				
										Service Service Service		
	TOTAL DISTANCE		0		TOTAL DISTANCE			0	TO	OTAL DISTANCE		
					RECO	D D C						
Proposed by	Dominican Republic /Republi	ic of Haiti	Re	eviewed by:	N E C U	K D 3	Reviewed by	6		Paula mad by		
				•			reviewed by			Reviewed by		
Realign the route UM To extend the route U or Dominican Republic		nican Republic to overlay the	c and the Re segment fro	public of Haiti, both d	elegations agreed to: with the route UB-891	on L						
					FLIGHTS PER MONTH							NOTES
TYPE AMOUNT	A320	A340	B737	B787	B738	B763	B772		E190		TOTAL	NOTES
					SAVINGS							
		Dictoria	CE (NA e)		ortings.							NOTES
		DISTANC	CE (IVIVI)					CO	2 (KG)			



Identification				FLOW	S - CITY PA	IRS					
				C/	RIBBEAN						
Identification				OPTIM	ZATION AIMS	S :					
Number	REDUCE FLIGHT DISTANCE	ATC EFFICIENC	HARMONIZATION	CONECTIVITY	FLOW IMI	PROVEMENT			OTHERS (SPECIFY)	<u> </u>	
		CTAT	ES CONCERNED				DCS/MTEG/MKJK NAM/CAR TRIM NEW ROUTE REALIGN EXTEND				
			public/Haiti/Jamaic	a		M		CONCERNED ICAO REGIO NAM/CAR/ RIM NEW ROUTE REALIGN EXTEND TR ANCE POINTS LAT LONG DIST O TOTAL DISTANCE Reviewed by			
						141	FIR CONCERNED (CAO & MDCS/MTEG/MKJK) EXTEND TRIM NEW ROUTE REALIGN EXTEND LONG DISTANCE POINTS LAT LONG O TOTAL DISTANCE Reviewed by Reviewed by				CAR/SAIV
	ROUTE to be DELETE	D	CURRENT ROUTE	NEW ROUTE	REALIGN	CATCHO					
ATS ROUTES	UB-520			INEW ROOTE	REALIGN	EXTEND	TRIM	NEW ROUTE	REALIGN	EXTEND	TRIM
DuteX+	POINTS	LAT LON	G DISTANCE	POINTS	LAT	LONG	DISTANCE	POINTS	LAT	LONG	DISTANCE
	SASON								JTE REALIGN EXTEND S LAT LONG TOTAL DISTANCE Reviewed by		
	MANLEY PESTO							RNED G/MKJK NEW ROUTE POINTS TOTAL			
						The second			E REALIGN EXTEND LAT LONG TOTAL DISTANCE		
											205
	TOTAL DIST	ANCE									
	(OTAL DIS)	ANCE	0	TOTA	L DISTANCE		0	T(OTAL DISTANCE		
				RECO	R D S						
Proposed by			Reviewed by:			Reviewed by			Reviewed by		
			ρ	le & Rosa V.							
			Te	au s rom				- 40			
his route is going to be	e deleted because this route was	s replaced by UL349									
ourtney Malcom/How ublication date: Nover	vard Greaves from Jamaica, Jacqu	ues Boursiquot from	Haiti and Félix Rosa from Do	minican Republic							
nplementation date; J								0.1			
TYPE	A320	A340 B73		FLIGHTS PER MONTH B738	B763	0770		F100		Leon	NOTES
AMOUNT		070	0.07	0730	D/03	DIIZ		E190		TOTAL	
				SAVINGS							NOTES
		DISTANCE (NM			T		cc	02 (KG)			



				FLOWS	- CITY PAIRS						
				CARIB	BEAN						
				OPTIMIZAT	ION AIMS:						
	REDUCE FLIGHT DISTANCE	TC EFFICIENCY	HARMONIZATION	CONNECTIVITY	FLOW IMP	PROVEMENT			OTHERS (SPECIFY)		
		CTATECA	ONCERNED			x					
			JBA				FIR CONC MU				REGIONS CAR
											CAIL
	ROUTE to be DELETED	CUR	RENT ROUTE	NEW ROUTE	REALIGN		ad ansiveacitis				Y
ATS ROUTES		Con	REAL ROOLE	X X	REALIGN	EXTEND	TRIM	NEW ROUTE	REALIGN	EXTEND	TRIM
										REALIGN EXTEND	
	POINTS LAT	LONG	DISTANCE	POINTS	LAT	LONG	DISTANCE	POINTS	LAT	LONG	DISTANCE
				PTO1 PTO2	2.27.00.28.28					9.70.75	1500/670
				P102 PT03							
				PTO4 PTO5							940940843
į.				PTO6							Professional Services and a
-				PTO7 GELOG	183342N	0751042W				97 4150 GA	
	TOTAL DISTAN	Æ	0		DISTANCE	1 0/31042W	0	1	OTAL DISTANCE	1	
				R E C O I	R D S						
Proposed by	HABANA	Re	viewed by:	JORGE CENTELLA, DORA RIC		Reviewed by			Reviewed by		
IRSUS-G430- PTO1 (A 52 1430)-GELOG Y BALANCE IEVAS Y MAYA.		;									
echa de implementación											
				LIGHTS PER MONTH			Pakin			###466	NOTES
TYPE AMOUNT	A320 A340	B737	B787	B738	B763	B772		£190		TOTAL	
		de de la companya de					- L,		1		<u>enimentine de filotofic</u>
				SAVINGS							NOTES
		DISTANCE (NM)						CO2 (KG)			
					1	the state of the s	<u> and and a filter of the filt</u>		<u> Leonardo de la companión de la compaña de </u>	auditititi tiriri tel	in the set Alberta



					FLOWS	- CITY PAIR	\$					
					CARI	BBEAN						
	REDUCE FLIGHT				OPTIMIZA	TION AIMS:						
	DISTANCE	ATC E	FFICIENCY	HARMONIZATION	CONNECTIVITY	FLOW IMI	PROVEMENT			OTHERS (SPECIFY)		
and the second	5012053000000000000000000000000000000000		STATES CO	NCERNED				FIR CONC	EDNIED			
			CU	ВА				MUI				REGIONS CAR
											·	
	ROUTE to be D G/UG43		CURI	RENT ROUTE	NEW ROUTE	REALIGN	EXTEND	TRIM	NEW ROUTE	REALIGN	EXTEND	TRIM
ATS ROUTES	4,0043	,	1			<u> </u>		1		1		
	POINTS	LAT	LONG	DISTANCE	POINTS	LAT	LONG	DISTANCE	POINTS	LAT	LONG	DISTANCE
					DYNAH	235700N	0775647W				20.00	OBTANCE
					PTO1							
											9/08/09/20	
								900000			4 27 20 7 20 2 2 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	1327/gr. 119 - 2 m
	ro	ALDISTANCE		0								
				1 0		L DISTANCE		0	Ţ	OTAL DISTANCE		Average etc.
	<u> </u>				RECO					.		
Proposed by	HABANA, JAN	IAICA	Rev	riewed by:	JORGE CENTELLA, DORA R	ICARDO (CUBA)	Reviewed by			Reviewed by		
		********									<u> </u>	
SE REALINEA LA RUTA DI ARMONIZAR ENTRE LAS	E DYNAH HASTA UN PTO1 Firs	PARA					and a second sec					
	PUNTUAUZARÁN Y POSTE	RIORMENTE SE			7 /		A STATE OF THE STA					
Fecha de publicación 8 d	le Noviembre de 2018. Fe	cha de										
Implementación 31 de E	nero de 2019											

		40.00			FLIGHTS PER MONTH						1806.07G	NOTES
TYPE AMOUNT	A320	A340	B737	B787	B738	B763	8772		E190		TOTAL	
						Seedlevagear was sket	eriuri e lejene undere	Sanson salangan	Same and a fire one and the control		anger to a series of the	(<u> </u>
					SAVINGS							NOTES
		DIS	TANCE (NM)					C	02 (KG)			
				***************************************								72892220872



					FLOWS -	CITY PAIRS	ì							
					CARIBI	BEAN			MUFH CAR TRIM NEWROUTE REALIGN EXTEND					
	REDUCE FUCUT				OPTIMIZATI	ON AIMS:				NROUTE REALIGN E OINTS LAT TOTAL DISTANCE				
	DISTANCE	ATC I	FFICIENCY	HARMONIZATION	CONECTIVITY	FLOW IMP	PROVEMENT			OTHERS (SPECIFY)				
			STATES CO	NCERNED			X							
											<u>[8]</u>			
		LETED	CURR	ENT ROUTE	NEW ROUTE	REALIGN	EXTEND	TRIM	NEW ROUTE	REALIGN	EXTEND	TRIM		
ATS ROUTES	L/UL795					X					1			
	STATES CONCERNED		l	1 200 000 00										
				DISTANCE	P.UHVI3	LAI	LUNG	DISTANCE	POINTS	LAT	LONG	DISTANCE		
	GELOG	183342N	0751042W			3.		99.00.00						
									1667-1615		7 07 9 2 3			
	TOTA	AL DISTANCE		0	TOTAL	ISTANCE		0	10	I OTAL DISTANCE				
					RECOR	D S								
Proposed by	HABANA, JAM/	AICA	Rev	lewed by:	2.		Reviewed by			Reviewed by				
DE URSUS-G430- PTO1 G430)-GELOG Y BALANI NEVAS Y MAYA.	(A 52NM AL SUR DE URSUS CEAR LA CAPACIDAD DE LOS de Noviembre de 2018. Feci	POR LA RUTA SECTORES												

					LIGHTS PER MONTH						Skoletekari	NOTES		
TYPE AMOUNT	A320	A340	B737	· · · · · · · · · · · · · · · · · · ·		B763	B772		E190		TOTAL	2/2016 2/2016		
					SAVINGS							NOTES		
		DI	STANCE (NM)					C	02 (KG)					



				F L O WS	- CITY PAIRS						
				CARIE	BEAN						
1000	1			OPTIMIZA	TION AIMS:						
	REDUCE FLIGHT DISTANCE	ATC EFFICIENCY	HARMONIZATION	CONNECTIVITY	FLOW IMP	ROVEMENT	10000		THERS (SPECIFY)		
		X	ONCERNED	POSSETT TOTAL PROTECTION CONTINUES IN CONTIN		x					
			MÉXICO				FIR CONCE				REGIONS
					1		14101511-14	HALL			CAR
	ROUTE to be DELETED) cu	RRENT ROUTE	NEW/ROUTE	REALIGN		Westernamental and the	99000000 200000000000000000000000000000			
ATS ROUTES				X	KEALIGN	EXTEND	TRIM	NEW ROUTE	REALIGN	EXTEND	TRIM
							<u> 12</u>		l c		
	POINTS	LAT LONG	DISTANCE	POINTS	LAT	LONG	DISTANCE	POINTS	LAT	LONG	DISTANCE
				PTO1	240000N 232216.13N	830300				97.99	
				PTO2	232216.1310	W0000980					26020000
				PTO3							
				PTO4 PTO5							
				PTO6		dente de la company					
			<u> </u>	PTO7 AXOMU	// ****		10.12011.0301020				
	TOTAL DIST	ANCE	Ö		210410N DISTANCE	950000	0	70	OTAL DISTANCE	1	
Proposed by	HABANA Y MÉRIDA			RECO			1			<u> </u>	
rropused by	RADANA I MERIDA	R	eviewed by:	JORGE CENTELLA, DORA RIC	ARDO (CUBA)	Reviewed by	PATRICIA S.	MANSO (MÉXICO)	Reviewed by		ļ
				V /			***************************************			<u> </u>	
					,						
NOTA PROPUESTA PARA POSTERIORMENTE SE E	A CANALIZAR EL TRÁNSITO A CIUDA ENVIARÁN LOS VALORES. LOS ESTAI	AD MÉXICO, COORDINADO DOS INVOLHERADOS ESTÁ	ENTRE CUBA Y MÉXICO. N DE ACHERDO	LAS COORDENADAS SÉ PUNTUALIZ	ZARÁN Y						
echa de publicación 8	de Noviembre de 2018. Fecha de ir	mplementación 31 de ene	o de 2019	ì							
		762/02/05/06/06/06/06/06/06/06/06/06/06/06/06/06/	taten esilik kan parantesa kulun keneya		n en transcript agenes te ganera and						
ТҮРЕ	A320	A340 B737	8787	FLIGHTS PER MONTH B738	B763	8772		E190		9/6/49/4	NOTES
AMOUNT						100 D/72	323233142233	::::::::::::::::::::::::::::::::::::::		TOTAL	
		Colorado de Caracida de Ca	regen visen på de ingefallikuer vinden på viser sek		en energe en de personale en est						
				SAVINGS							NOTES
		DISTANCE (NM)			00 880 762 755 755 65 2 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7		r	2 (KG)			
		30						- (NO)		<u> 1.0219114.80</u>	



		F L O W S - CITY PAIRS												
					CARIE	BEAN								
					OPTIMIZAT	TON AIMS:								
	REDUCE FLIGHT DISTANCE	ATC EFFIC	CIENCY	HARMONIZATION	CONNECTIVITY	FLOW IMP	ROVEMENT		0	THERS (SPECIFY)				
	X	X			X									
			MAICA/G	RAND CAYMAN			MIIEH/ MK	FIR CONCE		IAN				
						REALIGN EXTEND TRIM NEW ROUTE REALIGN EXTEND						AIL		
	ROUTE to be DELETE	ED.	CLIP	RENT ROUTE	NEW ROUTE	aray ay				REALIGN EXTEND TRIM LAT LONG DISTANC STAL DISTANCE COURTNEY MALCOLI				
ATS ROUTES	NOOTE to be offer to	.0		L/UL465	NEW ROUTE		EXTEND	TRIM	NEW ROUTE	REALIGN	EXTEND	TRIM		
									1			17:00		
	POINTS	LAT	LONG	DISTANCE	POINTS VOR GCM		POINTS	LAT	LONG	DISTANCE				
					PTO1	13170414	081220344							
	TOTAL DIS	STANCE		0	TOTA	DISTANCE		0	Ť	OTAL DISTANCE				
					RECO	R D S								
Proposed by	HABANA, GRAND CAYMAN,	JAMAICA	Re	viewed by:	JORGE CENTELLA, DORA RI	CARDO (CUBA)	Reviewed by		OODEM (ISLAS NYMAN)		EY MALCOLI MAICA)			
AND CAYMAN. GRAR FLUJOS DE EN PERAR LOS FLUJOS.	EL PTO1 ESTÁN PENDIENTES A MED NTRADA Y SALIDA A TMA GRAND CA E PUNTUALIZARÁN Y POSTERIORME	YMAN Y	alla	H										

LAS COORDENADAS SE PUNTUALIZARÁN Y POSTERIORMENTE SE ENVIARÁN LOS VALORES. Fecha de publicación 8 de noviembre de 2018 Fecha de implementación 31 de enero de 2019			(Mu	~^					
				FL	IGHTS PER MONTH					NOTES
TYPE	A320	A340	B737	B787	B738	B763	B772	E190	TOTAL	

TOTAL

AMOUNT

	SAVINGS
DISTANCE (NM)	CO2 (KG)
90	

28



					FLOWS	- CITY PAIR	5					
					NORTH AMERICA	-SOUTH AMI	ERICA					
					OPTIMIZA	TION AIMS:	15.22.2					
	REDUCE FLIGHT DISTANCE	ATCE	FFICIENCY	HARMONIZATION	CONECTIVITY	FLOW IMI	PROVEMENT			OTHERS (SPECIFY)		1500
			STATES CO	X VCERNED			FIR CONCERNED ICAO REG MUFH/ MKJK/ TMA GCM CA N EXTEND TRIM NEW ROUTE REALIGN EXTEND LONG DISTANCE POINTS LAT LONG D O TOTAL DISTANCE					PECIONS
		CUBA	/ JAMAICA/	GRAND CAYMAI	N		MUFI					CAR
f San	ROUTE to be DI	ELETED	CURRI	ENT ROUTE	NEW ROUTE	REALIGN	EXTEND	TRIM	NEW POUTE	DEALIGN	EVERAID	TRIBA
ATS ROUTES	B/UB 767	7				THE COLUMN TO TH	Exicito	TKIIVI	NEW ROUTE	REALIGN	EXTEND	TRIM
	a course											
	POINTS VOR UCA	220054.23N	LONG 0784856.94W	DISTANCE	POINTS	LAT	LONG	DISTANCE	POINTS	LAT	LONG	DISTANCE
	KANEX	200000N	0804304W									
	VOR GCM	191704N	0812203W								E	
			1									
	TOT	AL DISTANCE		0	TOTA	LDISTANCE		0	7/	OTAL DISTANCE	The same	
										JIAE DISTANCE		
					RECO	R D S		course		100	1.22/2000	
Proposed by	HABANA, JAM	IAICA	Revi	ewed by:	JORGE CENTELLA, DORA R	CARDO (CUBA)	Reviewed by			Reviewed by		
	M/UM 330 REALINEADA EN		ElBon	W	1.4						1	
EN ESTE SEGMENTO. Fecha de publicación	8 de noviembre de 2018 ción 31 de enero de 2019	ONVENCIONAL			Den	~						
						*						
				F	LIGHTS PER MONTH							NOTES
TYPE AMOUNT	A320	A340	B737	B787	B738	B763	B772		E190		TOTAL	NOTES
					SAVINGS							NOTES
		DIS	TANCE (NM)					C	O2 (KG)			



					FLOWS	- CITY PAIR	Š					
					CARII	BBEAN						
	PEDLICE FLICHT	1			OPTIMIZA	TION AIMS:						
	DISTANCE	ATCE	FICIENCY	HARMONIZATION	CONNECTIVITY	FLOW IMI	PROVEMENT			OTHERS (SPECIFY)		2.1
			STATES CO	X	X							
		GRAN			CA		MHE					REGIONS
	CARIBBEAN OPTIMIZATION AIMS: REDUCE FLIGHT DISTANCE ATC EFFICIENCY HARMONIZATION STATES CONCERNED STATES CONCERNED AX FIR CONCERNED F									CAR		
	ROUTE to be DEL	ETED	CUR	RENT ROUTE	NEW ROUTE	REALIGN	EXTEND	TRIM	NEW ROUTE	REALIGN	EXTEND	TRIM
ATS ROUTES					X					TOTAL DISTANCE ICAO IC		
	POINTS	LAT	LONG	DISTANCE	OPTIMIZATION AIMS: ZATION CONNECTIVITY FLOW IMPROVEMENT OTHERS (SPE X FIR CONCERNED MUFH/ MKJK/ TMA GCM NEW ROUTE REALIGN EXTEND TRIM NEW ROUTE REALIGN X ICE POINTS LAT LONG DISTANCE POINTS LAT PIGBO 211849N 0790746W KATAL 200000N 0793818W NDB CBC 194104N 0795104W TOTAL DISTANCE 0 TOTAL DISTANCE R E C O R D S JORGE CENTELLA, DORA RICARDO (CUBA) Reviewed by COURTNEY MALCOLM (JAMAICA) Reviewe	LAT	LONG	DISTANCE				
	TOTAL	TOTAL DISTANCE		0	TOTAL	DISTANCE		0	70	OTAL DISTANCE		
					D . C . C	5 5 6						
Proposed by	HABANA, JAMA	ICA	Re	viewed by:	1 - A		Reviewed by			Reviewed by		ODEM (ISLAS
echa de publicación 8 d	de noviembre de 2018	YMAN BRAC	Øbst.		Dun	-						
TYPE	Д320	A340	B727	T								NOTES
AMOUNT	7,520	7340	5/3/	5/8/	B/38	B763	B772		E190		TOTAL	
					SAVINGS							NOTES
		DIST	ANCE (NM)					cc	02 (KG)			
									•			



					FLOWS	- CITY PAIR	S					
					CAR	IBBEAN						
					OPTIMIZA	ATION AIMS:						
	REDUCE FLIGHT DISTANCE	ATCE	FFICIENCY	HARMONIZATION	CONNECTIVITY	FLOW IM	PROVEMENT			OTHERS (SPECIFY)		
				X					RIM NEW ROUTE REALIGN EXTEND ANCE POINTS LAT LONG TOTAL DISTANCE COURTNEY MALCOLM Pantique and by ERICK BO			
		CUBA		GRAND CAYMA	N		MILE					
							FIR CONCERNED ICAO REG MUFH/ MKJK/ TMA GCM CAR EXTEND TRIM NEW ROUTE REALIGN EXTEND LONG DISTANCE POINTS LAT LONG DE 0772135W 0784856.94W 0804304W 0812203W 0812203W Reviewed by COURTNEY MALCOLM (JAMAICA) Reviewed by ERICK BOODER CAYMAI					CAR
	ROUTE to be DEL	ETED	CUR	RENT ROUTE	NEW ROUTE	REALIGN	EXTEND	TRIM	NEW ROUTE	REALIGN	EXTEND	TRIM
ATS ROUTES			B 330 (DENOM	IINACIÓN TEMPORAL)	X					ALC: O(I	LATERO	TAHOS
	POINTS	LAT	LONG	DISTANCE	POINTS	LAT	MUFH/ MKJK/ TMA G ALIGN EXTEND TRIM NEW RO AT LONG DISTANCE POINT N 0772135W 1.23N 0784856.94W N 0804304W N 0812203W E 0 S COURTNEY MALCO	POINTS	LAT	LONG	DISTANCE	
					ENAMO	233344N						
					VOR UCA KANEX	220054.23N						
						444			2-124			
							+					
							1					
	TOTA	L DISTANCE		0/	TOT	AL DISTANCE		0	T	OTAL DISTANCE		
					R En C O	B B C						
Proposed by	HABANA, JAMA	AICA	Rev	riewed by:	JORGE CENTELLA, DORA		Reviewed by			Reviewed by		
FIRS DE JAMAICA Y TMA DE AERONAVES NO EQL DETERMINARÁ LA FIR H DPERADORES SE EQUIP LAS COORDENADAS SE I ENVIARÁN LOS VALORE: Fecha de publicación 8 (PUNTUALIZARÁN Y POSTERI S.	A EL TRÁFICO QUE IE LOS	DB.	Alway -	Fran	_						
					FLIGHTS PER MONTH							NOTES
TYPE AMOUNT	A320	A340	B737	B787	B738	B763	B772		E190		TOTAL	.,,,,,,,
ANOUNT												
					SAVINGS							NOTES
		DIS	TANCE (NM)					c	02 (KG)			

					FLOWS	- CITY PAIRS	S					
					NORTH AMERICA							
Version (Fig. 1)		_			OPTIMIZA	TION AIMS:						
	REDUCE FLIGHT DISTANCE	ATC EF	FICIENCY	HARMONIZATION	CONECTIVITY	FLOW IMI	PROVEMENT			OTHERS (SPECIFY)		
			CTATES OF	Works West	X							
			CUBA/J					FIR CONC				REGIONS
								WUFH	WIKJK			CAR
ATS ROUTES	ROUTE to be DEL	ETED	CURI	RENT ROUTE	NEW ROUTE	REALIGN	EXTEND	TRIM	NEW ROUTE	REALIGN	EXTEND	TRIM
AISTOUTES					X		1					
	POINTS	LAT	LONG	DISTANCE	POINTS	LAT	LONG	DISTANCE	POINTS	LAT	LONG	DISTANCE
					NEFTU	203300N	0772649W					
		1			TOTON	193226N	0773402W					
	TOTAL	L DISTANCE		0	TOTA	L DISTANCE		0	T	OTAL DISTANCE		- 1
					RECO					JAC DIDITATELE		
Proposed by	HABANA, JAMA	ICA	Rev	lewed by:	JORGE CENTELLA, DORA R		Reviewed by		NEY MALCOLM	Paula wed by		
				CAP CO CONTRACTOR		ie mae (coary	neviewed by	(1	AMAICA)	Reviewed by		
/IENE POR LA RUTA R/L N EL ACC DE JAMAICA. echa de publicación 8 (A win	0						
TYPE	A320	A340	B737	B787	IGHTS PER MONTH	D702						NOTES
AMOUNT		,,,,,,	<i>J</i> , <i>J</i> ,	0/0/	B738	B763	B772		E190		TOTAL	
					SAVINGS							NOTES
		DIST	ANCE (NM)			1		C	02 (KG)			



					FLOWS	- CITY PAIR!	\$					
					CARIB	BEAN					49 99 19 9 60 90 90 0	
	REDUCE FUCUT	7		T	OPTIMIZAT	ION AIMS:						
	REDUCE FLIGHT DISTANCE	ATCEI	FICIENCY	HARMONIZATION	CONECTIVITY	FLOW IMI	PROVEMENT			OTHERS (SPECIFY)		
			STATES CC	NCERNED	X			FIR CONC	EDMEN		I revo	PECIONE
			CU					MUI				REGIONS CAR
	ROUTE to be DI	ELETED		RENT ROUTE	NEW ROUTE	REALIGN	EXTEND	TRIM	NEW ROUTE	REALIGN	EXTEND	TRIM
ATS ROUTES			N.	1/UM331		<u></u>	<u> </u>			<u> L</u>		
	POINTS	LAT	LONG	DISTANCE	POINTS	LAT	LONG	DISTANCE	POINTS	LAT .	LONG	DISTANCE
					VOR UHG	204753.18N	0761810.79W			7/20/20/20/20/20/20/20/20/20/20/20/20/20/		
					MATOS	192923N	0772826W					
								000.620.600				
	тот	AL DISTANCE		Ö	TOTAL	DISTANCE	1	0	7	OTAL DISTANCE	9 (8) (8)	
					R E C O	R D S						
Proposed by	HABANA, JAM	IAICA	Rev	riewed by:	JORGE CENTELLA, DORA RIC		Reviewed by			Reviewed by	ROCCO HE	ESTERS (KLM)
PROPORCIONA CONEXIÓ KLM, BAW, TON, CFG	de noviembre de 2018	A LINEA AÉREA										
								·				
ТҮРЕ	A320	A340	B737	B787	FLIGHTS PER MONTH B738	B763	B772		E190		TOTAL	NOTES
AMOUNT						2,000	J. 112		2		IOIAL	
					SAVINGS			B 3558			55 g 27 g g	ranggy-nami
		F-1-	FANCE (AIA#)		JAVINGS							NOTES
		DI2	TANCE (NM)						:02 (KG)			



			FLOWS	- CITY PAIRS		
			NORTH AMERIC	A-SOUTH AMERICA		
4 4 2 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4			OPTIMIZ	ATION AIMS:		
REDUCE FLIGHT DISTANCE	ATC EFFICIENCY	HARMONIZATION	CONECTIVITY	FLOW IMPROVEMENT	OTHERS (SE	PECIFY)
X		x				
		CONCERNED		FIR C	ONCERNED	ICAO REGION
	CUBA/	JAMAICA		MUF	H/ MKJK	CAR/SAM

ATS ROUTES	ROUTE to be DE	ELETED		ENT ROUTE /UZ 465	NEW ROUTE X UXXX	REALIGN	EXTEND	TRIM	NEW ROUTE	REALIGN	EXTEND	TRIM
	POINTS	LAT	LONG	DISTANCE	POINTS	LAT	LONG	DISTANCE	POINTS	LAT	LONG	DISTANCE
	FUNDI	240000N	0810043W									Business and
	ALVEK	230113N	0805814W	59	SECTION SECTION							
	UDNET	210407N	0805341W	117								
	LEPON	200000N	0805053W	64		100000000000000000000000000000000000000						
	ARNAL		141			1 1 2 2 2 3 3 3 3 3 3		3.5				
	TOTAL	DISTANCE		240	TOTA	L DISTANCE		0	TO	AL DISTANCE		7.00

Proposed by	HABANA, JAMAICA	Reviewed by:	JORGE CENTELLA, DORA RICARDO (CUBA)	Reviewed by	COURTNEY MALCOLM (JAMAICA)	Reviewed by
NCLUIRLA EN EL SISTEMA CONFUSIÓN CON LA L/UL 4 KINGSTON Y LA HABANA P. TRÁFICO RUMBO SUR. PARA LOS VUELOS QUE CO	ARA ESTABLECER FLUJOS Y CANALIZAR ONTUAN AL ÁREA DE PANAMÁ SE CIÓN HASTA QUE SE CREE UNA NUEVA KISTENTE. noviembre de 2018		Dur			

			10000	FLI	GHTS PER MONTH					NOTES
TYPE	A320	A340	B737	B787	B738	B763	B772	E190	TOTAL	
AMOUNT				28		0,00	5772	£130	TOTAL	

SAVINGS		NOTES
DISTANCE (NM)	CO2 (KG)	



					FLOW	S - CITY PAIR	S					
					NORTH AMERIC	CA-SOUTH AM	ERICA					
	9500000000				OPTIMIZ	ATION AIMS:						
	REDUCE FLIGHT DISTANCE	ATCE	FFICIENCY	HARMONIZATION	CONECTIVITY	FLOW IM	PROVEMENT			OTHERS (SPECIFY)		
			CTATEC C	X								
				AMAICA				FIR CONCE				REGIONS
								WOFH)	VIKJK			CAR
		·										
ATS ROUTES	ROUTE to be DEI	LETED		RENT ROUTE	NEW ROUTE	REALIGN	EXTEND	TRIM	NEW ROUTE	REALIGN	EXTEND	TRIM
AISKUUIES			IV	1/0101 550		X	X					
	POINTS	LAT	LONG	DISTANCE	POINTS	LAT	LONG	DISTANCE	POINTS	LAT	LONG	DISTANC
					ENAMO	233344N	0772135W					
					VOR UCA KANEX	220054.23N 200000N	0784856.94W					
					VOR GCM	191704N	0804304W 0812203W					
	TOTA	AL DISTANCE		0	TO	TAL DISTANCE		0	T	OTAL DISTANCE		
							1			JIAL DISTANCE		la de la constante de la const
	·				R E C O		1					
Proposed by	HABANA, JAMA	AICA	Rev	riewed by:	JORGE CENTELLA, DORA	RICARDO (CUBA)	Reviewed by			Reviewed by		
YMAN. LAS COORDEI OSTERIORMENTE SE E cha de publicación 8	AS FIRS DE JAMAICA Y TMA (NADAS SE PUNTUALIZARÁN NVIARÁN LOS VALORES. de noviembre de 2018 ón 31 de enero de 2019				A um							
					FLIGHTS PER MONTH							NOTES
					0770	8763	B772		E190		TOTAL	
TYPE AMOUNT	A320	A340	B737	B787	B738	Urus .					TOTAL	
	A320	A340	B737	B787	SAVINGS	- Criss					TOTAL	NOTES



						- CITY PAIR	rs .					
						IBBEAN						
	REDUCE FLIGHT				OPTIMIZ/	ATION AIMS:						
	DISTANCE	ATC EF	FICIENCY	HARMONIZATION	CONECTIVITY	FLOW IM	PROVEMENT		-	OTHERS (SPECIFY)		
		1	STATES CO	NCERNED X								
				AMAICA				FIR CONCE				REGIONS CAR
								inioi ii,	VIIOX			CAR
	ROUTE to be DEL	ETED	CUR	RENT ROUTE	NEW ROUTE	REALIGN	EXTEND	TRIM	NEW ROUTE	REALIGN	EXTEND	TRIM
ATS ROUTES			1	n/UM795		x				MEALICH	EXTEND	TRUV
	POINTS	LAT	LONG	DISTANCE	POINTS	LAT	LONG	DISTANCE	POINTS	LAT	LONG	DISTANO
					TASNO	220742N	0790640W					DISTANC
					NIBEO COLBY	200008N 150000N	0785611W 0783200W					
							07032011					
	TOTAL	LDISTANCE		0	тот	AL DISTANCE		0	TO	TAL DISTANCE		
					RECO	R D S						
Proposed by	HABANA, JAMA	ICA	Ret	rlewed by:	R E C O		Reviewed by		NEY MALCOLM AMAICA)	Reviewed by		
TA RUTA, REALINEAC SNO HASTA COLBY. PROPONE CAMBIO ONFUNSIÓN CON LA L S COORDENADAS SE VIARÁN LOS VALORE cha de publicación 8	DA, AHORA COMIENZA EN EL DE DESIGNACIÓN PARA EVITA L/UL795. PUNTUALIZARÁN Y POSTERIO	PUNTO AR	Re	viewed by:	Λ Λ		Reviewed by			Reviewed by		
TA RUTA, REALINEAD SNO HASTA COLBY. PROPONE CAMBIO NFUNSIÓN CON LA L S COORDENADAS SE VIARÁN LOS VALORE tha de publicación 8	DA, AHORA COMIENZA EN EL DE DESIGNACIÓN PARA EVITA L/UL795. PUNTUALIZARÁN Y POSTERIO ES. de noviembre de 2018	PUNTO AR	Re		JORGE CENTELLA, DORA I		Reviewed by			Reviewed by		
TA RUTA, REALINEAD SNO HASTA COLBY. PROPONE CAMBIO NFUNSIÓN CON LA L S COORDENADAS SE VIARÁN LOS VALORE cha de publicación 8	DA, AHORA COMIENZA EN EL DE DESIGNACIÓN PARA EVITA L/UL795. PUNTUALIZARÁN Y POSTERIO ES. de noviembre de 2018	PUNTO AR DRMENTE SE			JORGE CENTELLA, DORA I	RICARDO (CUBA)			AMAICA)	Reviewed by		NOTES
A RUTA, REALINEAD SNO HASTA COLBY. PROPONE CAMBIO NFUNSIÓN CON LA L COORDENADAS SE /JARÁN LOS VALORE ha de publicación 8 ha de implementaci	DA, AHORA COMIENZA EN EL DE DESIGNACIÓN PARA EVITA L/UL795. PUNTUALIZARÁN Y POSTERIO ES. de noviembre de 2018 ión 31 de enero de 2019	PUNTO AR	Ren 8737		JORGE CENTELLA, DORA I		Reviewed by			Reviewed by	TOTAL	NOTES
TA RUTA, REALINEAD SNO HASTA COLBY. PROPONE CAMBIO NFUNSIÓN CON LA L COORDENADAS SE VIARÁN LOS VALORE tha de publicación 8 tha de implementaci	DA, AHORA COMIENZA EN EL DE DESIGNACIÓN PARA EVITA L/UL795. PUNTUALIZARÁN Y POSTERIO ES. de noviembre de 2018 ión 31 de enero de 2019	PUNTO AR DRMENTE SE			JORGE CENTELLA, DORA I	RICARDO (CUBA)			AMAICA)	Reviewed by	TOTAL	NOTES

					FLOWS	- CITY PAIR	S					
					NORTH AMERIC	A-SOUTH AM	ERICA					
					OPTIMIZA	TION AIMS:						
	REDUCE FLIGHT DISTANCE	ATC EF	FICIENCY	HARMONIZATION	CONECTIVITY	FLOW IM	PROVEMENT			OTHERS (SPECIFY)		
				ONCERNED X				FIR CONCI	ERNED		I ICAO	REGIONS
		ESTAD	OS UNIDOS	/ CUBA/ JAMAI	CA		KZ	ZMA-MU				CAR
	ROUTE to be DELI	ETED	CUR	RENT ROUTE	NEW ROUTE	REALIGN	EXTEND	TRIM	NEW ROUTE	REALIGN	EXTEND	Thiss
ATS ROUTES				G/UG430		X				REALIGN	EXTEND	TRIM
	POINTS	LAT	LONG	DISTANCE	POINTS	LAT	LONG	DISTANCE	POINTS	LAT	LONG	DISTANCE
					URSUS PUTUL	240000N 185934N	0790412W 0781736W					
<u> </u>												
	TOTAL	DISTANCE		0								
		- DISTANCE		J		L DISTANCE		0	T	OTAL DISTANCE		
					R E C O	R D S	1					
Proposed by	HABANA, JAMAI	CA	Re	viewed by:	JORGE CENTELLA, DORA R	ICARDO (CUBA)	Reviewed by	COURTI	NEY MALCOLM AMAICA)	Reviewed by	MATTHEW	DEAK (EEUU
ANIA- VOR UCA- PUTUL.	CIÓN DE LOS SEGMENTOS D .SE REALINEA A LA RUTA U A PARA ARMONIZAR ENTRE noviembre de 2018 31 de enero de 2019	RSUS -		(allien					M		
					LIGHTS PER MONTH							NOTES
TYPE AMOUNT	A320	A340	B737	B787	B738	B763	8772		E190		TOTAL	
					SAVINGS							NOTES



					FLOWS	- CITY PAIRS	S					
					NORTH AMERIC	A-SOUTH AME	RICA					
					OPTIMIZA	TION AIMS:						
	REDUCE FLIGHT DISTANCE	ATC EF	FICIENCY	HARMONIZATION	CONECTIVITY		PROVEMENT			OTHERS (SPECIFY)	700	
					X							
37				ONCERNED				FIR CONC			ICAO	REGIONS
			UBA/ESTA	DOS UNIDOS				MUFH/I	(ZMA			CAR
ATS ROUTES	ROUTE to be DEL	ETED	CUR	RENT ROUTE	NEW ROUTE	REALIGN	EXTEND	TRIM	NEW ROUTE	REALIGN	EXTEND	TRIM
AIS ROUTES					Х	1	1	100				
	POINTS	LAT	LONG	DISTANCE	POINTS	LAT	LONG	DISTANCE	POINTS	LAT	LONG	
					VOR UCI	222802.68N		DISTANCE	POINTS	LAT	LONG	DISTANCE
					PTO1	2228U2.68N	0781843.08W					
					PTO2							
					PTO3							
		1			PTO4							
					MEBSA	211140N	0742601W					
					VOR ZIN	205706N	0734006W					
	TOTA	LDISTANCE		0	TOTA	AL DISTANCE		0	Ţ	OTAL DISTANCE		
					RECO	RDS						
Proposed by	HABANA		Re	viewed by:	JORGE CENTELLA, DORA F		Reviewed by	7 MATTHE	EW DEAK (EEUU)	Reviewed by		
DESPEGANDO MUCC Y E	PUNTUALIZARÁN Y POSTERIO S. de noviembre de 2018				*	7	4	f				
Type	A220	*262		T	GHTS PER MONTH	7 1						NOTES
TYPE AMOUNT	A320	A340	B737	FLI 8787	B738	B763	B772		E190		TOTAL	NOTES
	A320	A340	B737	T		B763	B772		E190		TOTAL	NOTES NOTES
	A320		B737 ANCE (NM)	T	B738	B763	B772		E190		TOTAL	



					F L O W S	- CITY PAIR	S					1
					NORTH AMERICA	-SOUTH AM	ERICA					
	REDUCE FLIGHT				OPTIMIZA	TION AIMS:						
	DISTANCE	ATC	EFFICIENCY	HARMONIZATION	CONECTIVITY	FLOW IM	PROVEMENT		1111	OTHERS (SPECIFY)		
			STATES CO	NCERNED X				FID CONC				
				DOS UNIDOS				FIR CONCE				REGIONS
	ROUTE to be D	DELETED	CUR	RENT ROUTE	NEW ROUTE	REALIGN	EXTEND	TRIM	NEW POUR	l server	T	
ATS ROUTES	M/UM7	95			772710072	REALIGIE	EXICIAD	IKIN	NEW ROUTE	REALIGN	EXTEND	TRIM
	POINTS	LAT	LONG	DISTANCE	POINTS	LAT	LONG	DISTANCE	POINTS	LAT	Lows	202045
	TANIA	240148N	079314 2W				LONG	DISTANCE	POINTS	LAI	LONG	DISTANCE
	TASNO NIBEO	220742N 200008N	0790640W 0785611W									7-0-5
	COLBY	150000N	0783200W									
	ТО	TAL DISTANCE		0	TOTA	L DISTANCE		0	Ţ	OTAL DISTANCE		
					RECO	R D S						
Proposed by	HABANA, M	IIAMI	Rev	lewed by:	JORGE CENTELLA, DORA RI	CARDO (CUBA)	Reviewed by	MATTHE	W DEAK (EEUU)	Reviewed by		
CON LA FIR DE KIMA. POSTERIORMENTE SE Fecha de publicación	ENTO TANIA -TASNO POR A LAS COORDENADAS SE PUN ENVIARÁN LOS VALORES. 8 de noviembre de 2018 ción 31 de enero de 2019	RMONIZACIÓN TUALIZARÁN Y			7 =		H					
	T				LIGHTS PER MONTH							NOTES
AMOUNT	A320	A340	B737	B787	B738	B763	B772		E190		TOTAL	
					SAVINGS							NOTES
		DI	STANCE (NM)					C	D2 (KG)			



					FLOWS	- CITY PAIR	S					
					NORTH AMERICA	-SOUTH AM	ERICA					
		,			OPTIMIZA	TION AIMS:						
	DISTANCE	REDUCE FLIGHT ATC EF		HARMONIZATION	CONECTIVITY	FLOW IM	OW IMPROVEMENT			OTHERS (SPECIFY)		
			STATES CO	NCERNED				FIR CONCERNED				PEGIONS
	ESTADOS UNIDOS / CUBA/ JAMAIC				V		K	MA-MUI			ICAO REGIONS CAR	
	ROUTE to be DE	LETED	CURF	RENT ROUTE	NEW ROUTE	REALIGN	EXTEND	TDUA	NEW COLUE			
ATS ROUTES	G/UG430				NEW ROOTE	X	EXTEND	TRIM	NEW ROUTE	REALIGN	EXTEND	TRIM
	POINTS	LAT	LONG	DISTANCE	POINTS	LAT	LONG	DISTANCE	POINTS	LAT	LONG	DISTANCE
	TANIA VOR UCA	240148N 20054.23N	0793142W 0794856.94W									
	PUTUL	185934N	0781736W									-
									(6)			7-32
	707	No.										
	1017	AL DISTANCE	Street Land	0	TOTAL	DISTANCE		0	Т	OTAL DISTANCE		
					RECO	R D S		1025				
Proposed by	HABANA, JAM	AICA	Rev	lewed by:	JORGE CENTELLA, DORA RI	CARDO (CUBA)	Reviewed by		v	Reviewed by	MATTHEW	/ DEAK (EEUU)
REALINEARLA Y ARMO Fecha de publicación 8	MENTOS TANIA-VOR UCA-PU DNIZARLA ENTRE LAS FIRS HA 8 de noviembre de 2018 ción 31 de enero de 2019			<	Drum	to				1	1	
				FL	IGHTS PER MONTH							NOTES
TYPE AMOUNT	A320	A340	B737	B787	B738	B763	B772		E190		TOTAL	NOTES
					SAVINGS							NOTES
		DIS	TANCE (NM)						02 (KG)			NOTES
								·				



					FLOWS	- CITY PAIR	S					
1					NORTH AMERICA	-SOUTH AMI	ERICA					
	REDUCE FLIGHT OPTIMIZATION AIMS:											
	DISTANCE	ATCE	FFICIENCY	HARMONIZATION	CONECTIVITY	FLOW IM	PROVEMENT			OTHERS (SPECIFY)		
			STATES CO	ONCERNED			x					
		CUBA		ESTADOS UNIDO	OS		MI	FIR CONCE				REGIONS
									.,,,,			CAN
	ROUTE to be DE	ELETED	CURI	RENT ROUTE	NEW ROUTE	REALIGN	EXTEND	TRIM	NEW ROUTE	REALIGN	EXTEND	TRIM
ATS ROUTES					X						EXILITO	EKIIV)
	POINTS	LAT	LONG	DISTANCE	POINTS	LAT	LONG	DISTANCE	POINTS	LAT	LONG	DISTANCE
					PTO 1 DETRO DE FIR KZMA							
					ZEUSS PTO1	240000N	0784745W				1.0	
					PTO2		4 (100)					
			7		PTO3	1						
					EPSIM	194845N	0780110W					
					VOR SIA	183001N	0775504W					
	TOTA	AL DISTANCE		0	TOTAL	DISTANCE	1	0	1	OTAL DISTANCE		
					RECO	R D S						
Proposed by	by HABANA, JAMAICA Reviewed by:				JORGE CENTELLA, DORA RI	CARDO (CUBA)	BA) Reviewed by COURTNEY MALCOLM (JAMAICA) Reviewed by		Reviewed by	MATTHEW DEAK (EEUU)		
MKJK, MUFH Y KZMA POR ESA RUTA SÓLO VUI EXEPTO EL QUE DESPEGA	UNTUALIZARÁN Y POSTER ; le noviembre de 2018	D EL TRÁFICO			A mar	_				M		
					FLIGHTS PER MONTH							
TYPE AMOUNT	A320	A340	B737	B787	B738	B763	B772		E190		TOTAL	NOTES
					SAVINGS							NOTES
		DIST	ANCE (NM)					C	02 (KG)			
								C	140)			

ICAO/IATA/CANSO/PBN/3 Appendix C to the Report



				F L O W	S - CITY PAI	IRS							
	NORTH AMERICA-CARIBBEAN-SOUTH AMERICA												
Identification	OPTIMIZATION AIMS:												
Number	REDUCE FLIGHT DISTANCE	ATC EFFICIENCY	HARMONIZATION	CONECTIVITY		PROVEMENT			OTHERS (SPECIFY)				
			CONCERNED	X									
		FIR CONCERNED						REGIONS					
		United St	ates - Curacao				TJZS - TI	NCF		NAM/	CAR/SAM		
	ROUTE to be DELETED		CURRENT ROUTE	NEW ROUTE	DESI ICH	T							
ATS ROUTES	NOTICE NO DECEMBE		COUNTROOTE	L327	REALIGN	EXTEND	TRIM	NEW ROUTE	REALIGN	EXTEND	TRIM		
				L321									
	POINTS	LAT LONG	DISTANCE	POINTS	LAT	LONG	DISTANCE	POINTS	LAT	T cove I	D. Company		
		20.00	Dionorce	SCAPA	15 50 02.90N	6729 58.30W	DISTAINCE	POINTS	LAI	LONG	DISTANCE		
				SAULT	20 22 00.00N	641600.00W							
				OPAUL	215123.75N	63 50 47.68W							
					-								
						-				+			
								T T		1			
	TOTAL DISTA	ANCE	0	TOTAL	DISTANCE								
				IOIAL	DISTANCE		0		OTAL DISTANCE				
Mental Control				RECO	R D S						2.1		
Proposed by	United States (San Juan Ce	nter)	Reviewed by:	Jose Arcadia (San Juan	Center)	Reviewed by			Reviewed by				
This route will connect to	o UL328 in TNCF at SCAPA. It is a bi-	directional						- 4					
	to be submitted for publication. W		of the Secretariat not inclu	ded in the report. Discussed separat	elv								
implement this on 31 Ian 2019													
			ood lon	0-mail JAC	2 JACE	LICE ATMISM RO				1			
		0		, , , , , , , , , , , , , , , , , , , ,	14	1	10.7						
				FLIGHTS PER MONTH	-						Nome		
TYPE	A320	A340 B737	B787	8738	B763	8772		E190		TOTAL	NOTES		
AMOUNT								4400		TOTAL			
				SAVINGS							NOTES		
		DISTANCE (NM)						2 (4.6)			110100		
	NAME OF THE OWNER OWNER OF THE OWNER OWNE	DISTANCE (MM)					CC	22 (KG)					

APPENDIX D

Longitudinal separation (LSEP) in NAM/CAR/SAM Regions

Common FIRs (applicable for LSEP optimization) = 79

Goal: 40NM or less by 2018 = 85%

LSEP	Q1 2019	%
5	6	8%
10	7	9%
20	11	14%
40	43	54%
80	12	15%
	05NM 10NM 20NM 40NM 80NM 80NM (Not applical	ble)

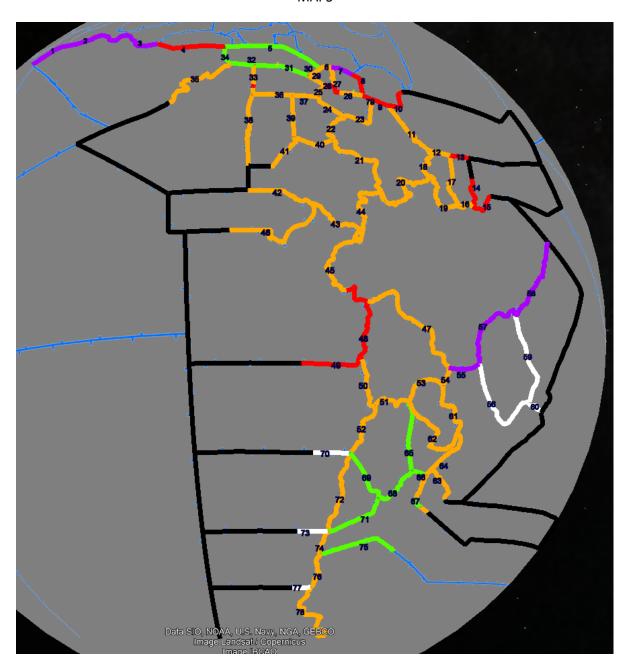
*First row number corresponds to the FIR Boundaries shown in maps

FIR #	LSEP	Comments
1	10	
2	10	
3	10	
4	80	
5	20	
6	40	FAA is having a telcon with Haiti in JUL2018 to talk about the reduction to 40NM
7	10	
8	80	
9	80	
10	80	
11	80	
12	40	
13	80	
14	80	
15	80	
16	40	

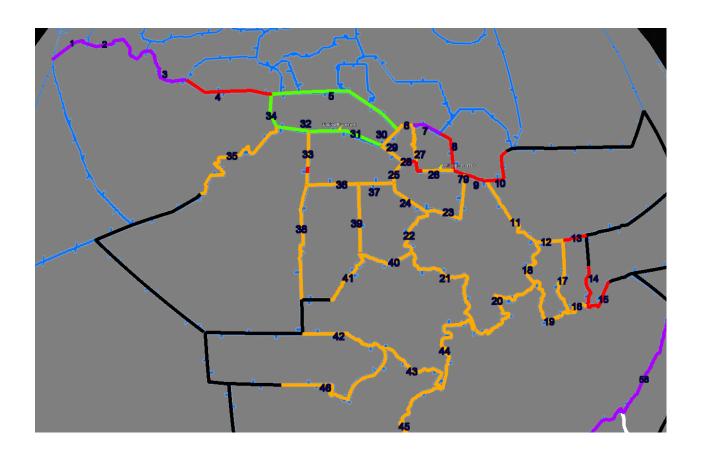
FIR #	LSEP	Comments
17	40	
18	40	
19	40	
20	40	
21	40	
22	40	
23	40	
24	40	
25	40	Curacao/Jamaica confirmed: agreed in the JUL 2018 PBN meeting to be implemeted in JAN2019
26	40	Curacao/Dominican Republic confirmed: agreed in the JUL 2018 PBN meeting to be implemeted in JAN2019 - A319 remain at 80nm to reduce the airspace complexity in Curacao with crossing traffic from Jamaica
27	40	Haiti/Dominican Republic confirmed: agreed in the JUL 2018 PBN meeting to be implemeted in SEPT2018
28	80	UG444 remain at 80nm to reduce the airspace complexity in Curacao with crossing traffic from Jamaica
29	40	agreed: Waiting fora meeting in SEPT 2018 for 40NM
30	40	Concept agreed and a meeting is expected in SEP2018 to implement the 40NM
31	20	
32	20	
33	40	in effec: Limitation is VHF at boundary with Jamaica. Request has been made by Jamaica for solution. When this is accomplished, analysis for use of 20nm will be done by Jamaica. UM782 SUR/COMMS constraint. AUG31st 2018 is expected to be reduced to 40NM
34	20	
35	40	
36	40	
37	40	
38	40	
39	40	40NM 10-2016 CONFIRM if UM787 also have 40NM
40	40	
41	40	
42	40	
43	40	
44	40	
45	40	80NM Comms issues
46	40	

47	FIR #	LSEP	Comments
49 80 50 40 51 40 52 40 53 40 54 40 55 10 56 5 57 10 58 10 59 5 60 5 61 40 62 40 63 40 64 40 65 20 66 20 SARGO=40NM DARKA=40NM; 1/1/2017, RODOV=40NM, SUGRA=40NM UB555=40nm 01-01-2017 68 20 69 20 70 5 71 20 72 40 73 5	47	40	
50 40 51 40 52 40 53 40 54 40 55 10 56 5 57 10 58 10 59 5 60 5 61 40 62 40 63 40 64 40 65 20 66 20 SARGO=40NM DARKA=40NM; 1/1/2017, RODOV=40NM, SUGRA=40NM UB555=40nm 01-01-2017 68 20 69 20 70 5 71 20 72 40 73 5	48	80	
51 40 52 40 53 40 54 40 55 10 56 5 57 10 58 10 59 5 60 5 61 40 62 40 63 40 64 40 65 20 66 20 SARGO=40NM DARKA=40NM; 1/1/2017, RODOV=40NM, SUGRA=40NM UB555=40nm 01-01-2017 68 20 69 20 70 5 71 20 72 40 73 5	49	80	
52 40 53 40 54 40 55 10 56 5 57 10 58 10 59 5 60 5 61 40 62 40 63 40 64 40 65 20 66 20 SARGO=40NM DARKA=40NM; 1/1/2017, RODOV=40NM, SUGRA=40NM UB555=40nm 67 20 01-01-2017 68 20 69 20 70 5 71 20 72 40 73 5	50	40	
53 40 54 40 55 10 56 5 57 10 58 10 59 5 60 5 61 40 62 40 63 40 64 40 65 20 66 20 SARGO=40NM DARKA=40NM; 1/1/2017, RODOV=40NM, SUGRA=40NM UB555=40nm 67 20 01-01-2017 68 20 69 20 70 5 71 20 72 40 73 5	51	40	
54 40 55 10 56 5 57 10 58 10 59 5 60 5 61 40 62 40 63 40 64 40 65 20 66 20 SARGO=40NM DARKA=40NM; 1/1/2017, RODOV=40NM, SUGRA=40NM UB555=40nm O1-01-2017 68 20 69 20 70 5 71 20 72 40 73 5	52	40	
55 10 56 5 57 10 58 10 59 5 60 5 61 40 62 40 63 40 64 40 65 20 66 20 SARGO=40NM DARKA=40NM; 1/1/2017, RODOV=40NM, SUGRA=40NM UB555=40nm 01-01-2017 68 20 69 20 70 5 71 20 72 40 73 5	53	40	
56 5 57 10 58 10 59 5 60 5 61 40 62 40 63 40 64 40 65 20 66 20 SARGO=40NM DARKA=40NM; 1/1/2017, RODOV=40NM, SUGRA=40NM UB555=40nm 01-01-2017 68 20 69 20 70 5 71 20 72 40 73 5	54	40	
57 10 58 10 59 5 60 5 61 40 62 40 63 40 64 40 65 20 66 20 SARGO=40NM DARKA=40NM; 1/1/2017, RODOV=40NM, SUGRA=40NM UB555=40nm 67 20 01-01-2017 68 20 69 20 70 5 71 20 72 40 73 5	55	10	
58 10 59 5 60 5 61 40 62 40 63 40 64 40 65 20 66 20 SARGO=40NM DARKA=40NM; 1/1/2017, RODOV=40NM, SUGRA=40NM UB555=40nm 01-01-2017 68 20 69 20 70 5 71 20 72 40 73 5	56	5	
59	57	10	
60 5 61 40 62 40 63 40 64 40 65 20 66 20 SARGO=40NM DARKA=40NM; 1/1/2017, RODOV=40NM, SUGRA=40NM UB555=40nm 67 20 01-01-2017 68 20 69 20 70 5 71 20 72 40 73 5	58	10	
61 40 62 40 63 40 64 40 65 20 66 20 SARGO=40NM DARKA=40NM; 1/1/2017, RODOV=40NM, SUGRA=40NM UB555=40nm 01-01-2017 68 20 69 20 70 5 71 20 72 40 73 5	59	5	
62 40 63 40 64 40 65 20 66 20 SARGO=40NM DARKA=40NM; 1/1/2017, RODOV=40NM, SUGRA=40NM UB555=40nm 67 20 01-01-2017 68 20 69 20 70 5 71 20 72 40 73 5	60	5	
63	61	40	
64 40 65 20 66 20 SARGO=40NM DARKA=40NM; 1/1/2017, RODOV=40NM, SUGRA=40NM UB555=40nm 67 20 01-01-2017 68 20 69 20 70 5 71 20 72 40 73 5	62	40	
65 20 66 20 SARGO=40NM DARKA=40NM; 1/1/2017, RODOV=40NM, SUGRA=40NM UB555=40nm 67 20 01-01-2017 68 20 69 20 70 5 71 20 72 40 73 5	63	40	
66 20 SARGO=40NM DARKA=40NM; 1/1/2017, RODOV=40NM, SUGRA=40NM UB555=40nm 67 20 01-01-2017 68 20 69 20 70 5 71 20 72 40 73 5	64	40	
SARGO=40NM DARKA=40NM; 1/1/2017, RODOV=40NM, SUGRA=40NM UB555=40nm 01-01-2017 68	65	20	
UB555=40nm 67 20 01-01-2017 68 20 69 20 70 5 71 20 72 40 73 5	66	20	
67 20 01-01-2017 68 20 69 20 70 5 71 20 72 40 73 5			
68 20 69 20 70 5 71 20 72 40 73 5	67	20	
69 20 70 5 71 20 72 40 73 5			01-01-2017
70 5 71 20 72 40 73 5			
71 20 72 40 73 5			
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75 20			
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77 5			
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MAPS



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