



Agenda Item 2: Optimisation of the SAM airspace

ICAO/IATA/CANSO Performance-Based Navigation (PBN) Harmonization, Modernization and Implementation Meeting for the Caribbean (CAR) Region

(Presented by the Secretariat)

SUMMARY	
This working paper presents a report on the preliminary results of the ICAO/IATA/CANSO Performance-Based Navigation (PBN) Harmonization, Modernization and Implementation Meeting for the Caribbean (CAR) Region, held in Fort Lauderdale (28 March - 01 April, 2016)	
References:	
<ul style="list-style-type: none">• Third Meeting of the GREPECAS Programmes & Projects Review Committee (CRPP/3)• GREPECAS/17 Meeting	
ICAO Strategic Objectives:	<i>A - Safety</i> <i>E - Environmental protection</i>

1. **Background**

1.1 The ICAO/IATA/CANSO Performance-Based Navigation (PBN) Harmonization, Modernization and Implementation Meeting for the Caribbean (CAR) Region was attended by 98 participants from CAR/SAM States, CANSO, IATA, IFALPA, Jeppesen, ICAO NACC and ICAO SAM.

1.2 The main objectives of the meeting were the following:

- a) Regional implementation of a new PBN route structure for the entire upper airspace; enhance safety and efficiency for en-route operations and enhance ATS Letters of Agreement (LOAs) between adjacent FIRs of CAR Region and adjacent Flight Information Region (FIR) of South American (SAM) Region.
- b) Ensure the PBN implementation project are in accordance with ICAO NACC Performance-Based Regional Air Navigation Implementation Plan (RPB ANIP) and ICAO SAM Air Navigation System Performance-Based Implementation Plan for the SAM Region.
- c) Ensure harmonization between PBN implementation projects of CAR States and adjacent States of SAM Region to improve Airspace Organization and Management (AOM).

2. Discussion

2.1 The main results of the meeting were the following:

- a) Under a CDM process by plenary and *ad-hoc* groups, ATCOs, procedure designers, airspace planners, regulatory body, and pilots from airline operators, general aviation and military authorities reviewed the proposed PBN routes looking forward to develop a new PBN route network for CAR Region. The agreed PBN routes will be attached to the final report of the meeting.
- b) States and ANSPs for CAR and SAM Regions agreed to review ATS LOAs not later than 30 of November 2016 to introduce applicable longitudinal separation minima of 40 NM or 20 NM between transferred air traffic operating in the FIRs of CAR Region and adjacent FIRs of SAM. The status of the Letters of Agreement in NAM/CAR Regions is attached as **Appendix A** to this working paper. A figure representing the status of agreement reached in the NAM/CAR//SAM Regions is attached as **Appendix B** to this working paper.
- c) CAR States and ANSPs also agreed to review availability of restricted areas to the air operations for prompt implementation of the flexible use of airspace (FUA)
- d) All CAR States are committed to achieve the PBN implementation targets as established in the Assembly Resolution A37-11 and the Port of Spain Declaration.
- e) Special consideration will be given by States to increase implementation of Continuous Climb Operations (CCO) and Continuous Descent Operations (CDO) criteria in all SIDs and STARs linked to the upper airspace to the greatest extent possible to obtain the most operational benefits.
- f) IATA has proposed an implementation of Random Routing in Continental Airspace, taking into consideration that Advanced Flight Planning systems are able to plan from Wpt to Wpt taking into account various factors as wind, costs, fuel. The random routing will allow the use of the Least Cost track for that day/flight. The following States accepted to host the trials: Trinidad and Tobago, Surinam and Guyana. It was mentioned that Amazonica FIR would be a suitable airspace to participate on the mentioned trials.

3. Suggested action

3.1 Based on the results, the Meeting is invited to:

- a) take note of the information contained in this working paper;
- b) update the information of Appendices A and B;
- c) consider the application of Random Routing in Amazonica FIR.

STATE/ORGANIZATION	Adjacent State/Organization	40 NM GNSS/DME Longitudinal	Proposed implementation dates	20 NM GNSS/DME Longitudinal	Proposed implementation dates	Remarks
Trinidad & Tobago	United States (San Juan)	TBD	TBD	TBD	TBD	<p>Currently 10Mins MNT</p> <p>US has advised that there is a current issue regarding the US classification of their airspace that is preventing the use of this type of separation.</p> <p>US and Trinidad and Tobago will continue discussion on this issue bilaterally.</p> <p>TJSJ has possible VHF issues at FIR BDY. This is being investigated.</p>
	Guyana	Agreed (GNSS) LOA to be finalized and signed by April 8, 2016	31-May-16	TBD	TBD	<p>Currently 10 Mins MNT</p> <p>Analysis will be conducted over the first six months of use and a decision will be made by DEC 2016 as to the timeframe to reduce to 20 NM</p>
	Suriname	TBD	TBD	TBD	TBD	<p>Currently 10 Mins MNT</p> <p>Currently there is a VHF communication challenge for T&T at position TRAPP. Solutions to this challenge are being investigated.</p>
	Venezuela	TBD	TBD	TBD	TBD	<p>Currently 10 Mins MNT</p> <p>Confirmation required from Venezuela. T&T is ready to implement 40NM GNSS with Venezuela</p>

Curacao	San Juan	TBD	TBD	TBD	TBD	<p style="text-align: center;">Currently 10 Mins MNT</p> <p>US has advised that there is a current issue regarding the US classification of their airspace that is preventing the use of this type of separation.</p> <p>US and Curacao will continue discussion on this issue bilaterally.</p> <p>TJSJ has possible VHF issues at FIR BDY. This is being investigated.</p>
	DR	Agreed A319, remain at 80nm	TBD	TBD		Currently 10 Mins MNT
	Venezuela	Agreed via telcon to be	TBD	TBD	TBD	Currently 10 Mins MNT
	Jamaica	Agreed	TBD	TBD	TBD	Currently 10 Mins MNT
	Haiti	UG444 remain at 80nm based on Curacao's VHF situation	TBD	TBD	TBD	Discussions ongoing
	Colombia	Agreed A319, UG444 remain at 80nm	Dec-16	TBD		Currently 10 Mins MNT

COCESNA	Mexico	Implemented	In effect	TBD	TBD	Challenge to Reduction to 20 is due to required separation between Mexico and Houston
	Cuba	N/A	N/A	Implemented	implemented	Data sharing agreements in effect. 2017 proposed RADAR handoffs
	Jamaica	Implemented	In effect	Discussions		Limitation is VHF at BDY with Jamaica. Request has been made by Jamaica for solution. When this is accomplished, analysis for use of 20nm will be done by Jamaica
	Panama	Implemented	In effect	Reduce to 20NM in a certain area that include the FIX points. UM659 LESIR UM328 PAPIN UR773/UA502 POXON UL655 EGODI UG440 ISEBA UA317 BUFE0 UM796 PADUR UM419 ANSON UA322 AMUBI UR505 DURAM Maintain 40NM the next points: UA552 FALLA UA321 PELRA		
	Colombia	Agreed	TBD	TBD	TBD	LOA being revised.

Dominican Republic	Haiti	In discussion	TBD	TBD	TBD	Discussions Ongoing
	Curacao	Agreed A319, remain at 80nm	TBD	TBD	TBD	
	Miami	Discussion with Miami re procedural contingency				Currently 10 NM Surveillance in use Discussion if required
	San Juan	Willing to reduce. Procedural. Discussion with San Juan	TBD			Currently 10 Mins MNT US has advised that there is a current issue regarding the US classification of their airspace that is preventing the use of this type of separation. US and Curacao will continue discussion on this issue bilaterally. TJSJ has possible VHF issues at FIR BDY. This is being investigated.

Mexico	COCESNA	Already implemented (Surveillance) Discussion about procedural use of 40NM with GNSS				Northbound traffic from COCESNA Challenge to Reduction to 20 is due to required separation between Mexico and Houston
	Houston	N/A				Continental – 10 NM miles Surveillance The proposed separation standard is currently being reviewed by FAA HQs to determine applicability in ZHU offshore airspace.
		N/A				Oceanic 10 minutes (MNT) The proposed separation standard is currently being reviewed by FAA HQs to determine applicability in ZHU offshore airspace.
	Albuquerque	N/A				Currently Continental – 10NM miles Surveillance Bilateral Discussions required
	Los Angeles	N/A				Currently 10 nm Surveillance Bilateral Discussions required
	Cuba	TBD	TBD	TBD	TBD	TBD

Haiti	Kingston	TBD	TBD	TBD	TBD	10 Mins MNT Discussions Ongoing
	Cuba	TBD	TBD	TBD	TBD	10 Mins MNT Discussions Ongoing
	Dominican Republic	TBD	TBD	TBD	TBD	10 Mins MNT Discussions Ongoing
	Miami	TBD	TBD	TBD	TBD	10 MINS MNT
	Curacao	LOA agreement in place				
Guyana	Trinidad & Tobago	Agreed	May 31 2016	TBD	TBD	
	Suriname	Agreed	31-May-16	TBD	TBD	
	Brazil	Signed	Implemented	TBD	TBD	
	Venezuela	TBD	TBD	TBD	TBD	
Suriname	Guyana					10 Mins MNT
	Brazil	Suriname in favour	TBD	TBD	TBD	Sent draft to Brazil. TELCON on April 7 for discussion
	French Guiana	TBD	TBD	TBD	TBD	10 Mins MNT
	Trinidad and Tobago	Suriname willing, Trinidad and Tobago has challenges with	TBD	TBD	TBD	Currently 10 NM MNT Currently there is a VHF communication challenge for T&T at position TRAPP.
Antigua and Barbuda (with Trinidad)						
Bahamas	TBD				Discussions needed with US	
Barbados (with Trinidad)						
Belize (with COCESNA)						

Colombia	PANAMA	Agreed Air traffic flying between the FIRs maintain 20 nm separation	Dec-16	As agreed between FIRs	Dec-16	
	JAMAICA	Agreed				20nm will depend on establishing communication in the north of the Barranquilla FIR
	CURACAO	Agreed	Dec-16	TBD	TBD	
	VENEZUELA	TBD	TBD	TBD	TBD	
Costa Rica (with COCESNA)						
Cuba	COCESNA	N/A	N/A	Implemented	Implemented	Data sharing agreements in effect. 2017 proposed RADAR handoffs
	MEXICO	TBD	TBD	TBD	TBD	Currently 40 nm (surveillance) Discussion regarding use of 40NM procedural under a letter of agreement
	HAITI	TBD	TBD	TBD	TBD	10 Mins MNT Discussions Ongoing
	JAMAICA	TBD	TBD	TBD	TBD	Currently 40nm overflight based on surveillance, 20nm landing based on surveillance. Use of GNSS procedural minima to be discussed

Honduras (with COCESNA)						
Panama	COCESNA	In effect	Implemented	<p>Reduce to 20NM in a certain area that include the FIX points.</p> <ul style="list-style-type: none">• UM659 LESIR• UM328 PAPIN• UR773/UA502 POXON• UL655 EGODI• UG440 ISEBA• UA317 BUFEO<ul style="list-style-type: none">• UM796 PADUR• UM419 ANSON• UA322 AMUBI<ul style="list-style-type: none">• UR505 DURAM <p>Maintain 40NM the next points:</p> <ul style="list-style-type: none">• UA552 FALLA• UA321 PELRA		

	COLOMBIA	Agreed Air traffic flying between the FIRs maintain 20 nm separation	Dec-16	As agreed between FIRs	Dec-16	
	JAMAICA	Agreed	1-May-16	TBD	TBD	
United States	TRINIDAD AND TOBAGO	TBD	TBD	TBD	TBD	<p>Currently 10Mins MNT</p> <p>US has advised that there is a current issue regarding the US classification of their airspace that is preventing the use of this type of separation.</p> <p>US and Trinidad and Tobago will continue discussion on this issue bilaterally.</p> <p>TJSJ has possible VHF issues at FIR BDY. This is being investigated.</p>
	CURACAO	TBD	TBD	TBD	TBD	<p>Currently 10 Mins MNT</p> <p>US has advised that there is a current issue regarding the US classification of their airspace that is preventing the use of this type of separation.</p> <p>US and Curacao will continue discussion on this issue bilaterally.</p> <p>TJSJ has possible VHF issues at FIR BDY. This is being investigated.</p>

	DR	Willing to reduce Procedural Discussion with San Juan				<p>Currently 10 Mins MNT</p> <p>US has advised that there is a current issue regarding the US classification of their airspace that is preventing the use of this type of separation.</p> <p>US and RD will continue discussion on this issue bilaterally.</p> <p>TJSJ has possible VHF issues at FIR BDY. This is being investigated.</p>
	MEXICO (Reference Above)					
	HAITI	TBD	TBD	TBD	TBD	10 MNT
Jamaica	Curacao	Agreed	TBD	TBD	TBD	<p>Currently 10 Min MNT in use</p> <p>Discussions on ground to ground communications in progress and LOA revision to be signed soon.</p> <p>Automated coordination being investigated.</p>
	COCESNA	Implemented EXCEPTION: UM782 10 MIN MNT	In effect	Discussions	TBD	<p>Limitation is VHF at BDY with Jamaica. Request has been made by Jamaica for solution. When this is accomplished, analysis for use of 20nm will be done by Jamaica</p>
	PANAMA	agreed	1-May-16	TBD	TBD	
	COLOMBIA	Implemented	In use	TBD	TBD	

	HAITI	TBD	TBD	TBD	TBD	<p>Currently 40nm overflight based on surveillance, 20nm landing based on surveillance.</p> <p>Use of GNSS procedural minima to be discussed</p>
	CUBA	TBD	TBD	TBD	TBD	

Estado del acuerdo de implantación NAM/CAR/SAM de la
Separación Longitudinal Mínima de 40/20 NM

