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North American, Central American and Caribbean Office (NACC)

Thirty-Third Eastern Caribbean Working Group Meeting

(E/CAR/WG/33)

Christ Church, Barbados, 4 to 8 June 2012

Agenda Item 3:

Air Navigation Matters

3.2 Follow-up on the implementation of the NAM/CAR Regional Performance Based Air Navigation Plan (RPBANIP) in Eastern Caribbean

UPDATE ON THE IMPLEMENTATION OF A PBN AIRSPACE CONCEPT

(Presented by Trinidad and Tobago)

SUMMARY	
This information paper presents the update on the PBN implementation and the progress on the implementation of a PBN airspace concept within the ECAR Region – Piarco FIR/CTA/UTA.	
References:	
• Report on the CAR/SAM Roadmap for Performance-Based Navigation (<i>Version 1.4</i>) • Report on the NAM/CAR Regional Performance-Based Air Navigation Implementation Plan (NAM/CAR RPBANIP <i>Version 2.0, May 2011</i>)	
Strategic Objectives	<i>This paper is related to Strategic Objective A.</i>

1. Introduction

1.1 This information paper serves the purpose of providing an update on the known progress made by Trinidad and Tobago and other States within Piarco's airspace with regards to the implementation of Performance Based Navigation within the NAM/CAR/SAM Region.

2. Discussion

2.1 According to the CAR/SAM PBN Roadmap, air traffic growth within the Region is expected to occur at an average of four percent (4%) until 2015. It is the view of the CAR/SAM Regions that the increase in air traffic could affect ATM efficiency within limited airspaces. There is a need for both Air Navigation Service Providers (ANSPs) and Aircraft Operators to continue investing in ways to reduce travel time, reduce fuel consumption and

emissions, improve safety and airspace utilisation.

2.2 One means of achieving the above stated objectives while addressing the concerns of the NAM/CAR/SAM Regions and Aircraft Operators would be through the implementation of Performance Based Navigation (PBN). By exploiting aircraft capabilities, PBN can increase airspace capacity and traffic movements while providing the realisation of economic benefits to both ANSPs and aircraft operators, ensuring safety of flight operations and providing more environmentally friendly aircraft operations.

2.3 Trinidad and Tobago as well as Barbados, Grenada and other States within the ECAR Region have adopted regulations for operation approvals for the implementation of the RNAV routes in Piarco's CTA/UTA (oceanic and continental en route airspace), in the ECAR's TMA and with certain approach phases.

2.4 Trinidad and Tobago and other ANSPs within the ECAR Region have begun restructuring the respective airspace/s to implement PBN departures, routes and approaches that provide operational rewards for airspace users and ANSPs.

2.5 Through Trinidad and Tobago's draft PBN Roadmap work has already begun on the implementation of a PBN airspace concept that focuses on the harmonization of the navigation specifications in the different airspace strata. Work has begun in collaboration with the International Air Transport Association (IATA) to collect and analyse data concerning international air traffic movements to/from the NAM/SAM, EUR/NAT and WACAF Regions, for the implementation of RNAV routes according to aircraft navigation capabilities. Attempts have been made during the first quarter of 2011 to attain information from the respective Point-of-Contacts for those States within the ECAR Region.

2.6 In meeting the requirements of PBN implementation, Trinidad and Tobago has begun ensuring that personnel for the ANSP receive the requisite training. Training officially began with the attendance of ATS personnel to a six-week Basic ICAO Procedures for ANS – Operations (PANS-OPS) Course during the second quarter of 2012. There is an intension for these personnel to attend an advanced PANS-OPS Course in preparation for the continued implementation of PBN within Piarco's airspace. Once these personnel have attained the required skill sets, Trinidad and Tobago will be in a position to assist in advancing the PBN programme for the ECAR Region by the first quarter of 2013.

2.7 The implementation of a PBN airspace concept covers harmonization between respective stakeholders and the approval and certification criteria of the aircraft and operators. Work has begun on the verification of the application of a determined airspace navigation specification based on the assessment of, the NAVAID infrastructure, communications and surveillance infrastructure, fleet capacity, the provision of ATS and safety within the ECAR Region.

PBN Implementation in en route/terminal areas and approach procedures

2.8 The **Appendix** shows known PBN applications that have been implemented within the ECAR Region. The RNAV route UM791, will be introduced into the Piarco CTA/UTA with effect from June 28, 2012.

Requirements of States within the ECAR Region

2.9 Greater harmonisation and Collaborative Decision Making (CDM) is required from all the States within the ECAR Region if the continued implementation of PBN applications is to become a reality. Trinidad and Tobago continues to be willing to work along with other States to achieve the objectives.

3. Conclusion

3.1 In order for the ECAR Region to effectively implement a PBN airspace concept, in accordance with ICAO's PBN Airspace Concept for this Region there is a need for greater harmonisation and CDM between the concerned States.

4. Suggested Action

4.1 This Meeting is invited to note the contents and conclusions of this information paper.

APPENDIX

FIR/CTA/UTA	RNP/RNAV Approach Procedures, SIDs and STARs									RNAV Routes in Piarco CTA/UTA
PIARCO	State (# Aerodromes)	Aerodrome	RWY	SIDs	STARs	APPs (RNP)	TOTAL	Publication In AIP	Remarks	UL435, UL695, UL375, UL337, UL776, UL205, UM791, UL462, UM402
	Anguilla – UK (1)	TQPF	10/28			0	0			
	Antigua & Barbuda (2)	TAPH								
		TAPA	07/25							
	Barbados (1)	TBPB	09/27	2		2	4	May 2009	RNAV (GPS)	
	Dominica – UK (1)	TDPD	27	1		1	2	Jun 2011	RNAV (GNSS)	
	France (5)	TFFM	09/27							
		TFFR	11/29	4	1	2	7	Apr 2009?	RNAV (GNSS)	
		TFFF	09/27	4	2	2	8	Jan2009?	RNAV (GNSS)	
		LVFM	12/30							
		LFVP	08/26	1	1	2	4	Sep 2005?	RNAV (GNSS)	
	Grenada (2)	TGPY	10/28			2	2	Mar 2012	RNAV (GNSS)	
		TGPZ								
	Montserrat – UK (1)	TRPG								
	St. Kitts & Nevis (1)	TKPK	07/25	3		2	5	Jun 2011	RNAV (GNSS)	
		TKPN	10/28	1		2	3	Mar 2012	RNAV (GNSS)	
	St. Lucia (2)	TLPC	09/27					Jun 2011	RNAV (GNSS)	
		TLPL	10/28			2	2			
	St. Vincent & the Grenadines (2)	TVSV	07/25							
		TVSC	13/31			2	2	Jan 2009	RNAV (GNSS)	
	Trinidad & Tobago (2)	TTPP	10/28			2	2	Aug 2009	RNAV (GPS)	
		TTCP	11/29			2	2	Jan 2009	RNAV (GPS)	

Source: ECAR AIP

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