



ICAO

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WORKING PAPER

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Third Eastern Caribbean Civil Aviation Technical Group Meeting (E/CAR/CATG/3)
Basseterre, Saint Kitts and Nevis, 19 to 21 October 2016

Agenda Item 3: Air Navigation Matters

3.2 Follow-up on the implementation of the NAM/CAR Regional Performance Based Air Navigation Plan (RPBANIP) and the *Port-of-Spain* Declaration Air Navigation Targets in the Eastern Caribbean:

3.2.1 Progress reports of the AIM, AGA, ATM, CNS, MET and SAR Committees

TECHNICAL COOPERATION REGIONAL PROJECT RLA/09/801 “IMPLEMENTATION OF PERFORMANCE-BASED AIR NAVIGATION SYSTEMS IN THE CAR REGION” CONTROLLER-PILOT DATA LINK COMMUNICATION/AUTOMATED DEPENDENT SURVEILLANCE-CONTRACT (CPDLC/ADS-C) IMPLEMENTATION GO-TEAM MISSION

(Presented by the Secretariat)

EXECUTIVE SUMMARY	
This working paper presents the results obtained from the ICAO RLA 09801 Project Assistance Mission for CPDLC/ADS C Implementation in the PIARCO FIR.	
Action:	The suggested actions are detailed in Section 3.
Strategic Objectives:	<ul style="list-style-type: none">• Safety• Air Navigation Capacity and Efficiency
References:	<ul style="list-style-type: none">• ICAO RLA/09/801 Project, Implementation of Performance based Air Navigation Systems

1. Introduction

1.1 The CAR States agreed on the establishment of the ICAO Regional Technical Project RLA/09/801 “Implementation of Performance-Based Air Navigation Systems in the CAR Region”, whose Phase I: Provided assistance to States/Territories of the CAR Region to progress with the implementation of performance based air navigation systems leading to a seamless global ATM system. The Project implementation plan is harmonized with the Global Air Navigation Plan (GANP), CAR/SAM Regional Air Navigation Plan (ANP) and NAM/CAR Regional Performance Based Air Navigation Implementation Plan (NAM/CAR RPBANIP).

1.2 The Third Steering Committee Meeting of the RLA/09/801 Project (Trinidad and Tobago on 29 April 2014) approved the establishment of the Go-Team initiative.

1.3 The purpose of the Go-Team is to support the development of the State's own implementation through technical assistance, assessments, gap analysis, and expert advice to assist States in the implementation of air navigation and safety matters, based on the regional priorities contained in the NAM/CAR Regional Performance-Based Air Navigation Implementation Plan (RPBANIP), (such as Performance-Based Navigation (PBN), Air Traffic Flow Management (ATFM), Safety Management System (SMS)/State Safety Programme (SSP), aerodrome certification, Aeronautical Information Management (AIM), Air Traffic Services Inter-Facility Data Communication (AIDC), telecommunication improvements, etc.).

2. Discussion

2.1 Based on the GoTeam mechanism of the RLA/09/801 Project the ICAO NACC Regional Office proposed a mission to Port of Spain, Trinidad and Tobago, from 20 to 22 October 2015, for a Go Team Mission on CPDLC implementation. The mission Team was composed of an ICAO Regional Officer and two CPDLC Subject Matter Experts (SMEs). The Mission purpose was to provide States with assistance required for effective CPDLC/ADS-C implementation.



2.2 The Go-Team provided Project Member State (Trinidad and Tobago) with technical assistance to meet the regional goals as agreed in the Port-of-Spain Declaration through the following:

- Development of CPDLC/ADS-C implementation gap analysis
- Assistance in the application of the Global Operational Data Link Document (GOLD)
- Evaluation of CPDLC/ADS-C trials results
- Assistance to Trinidad and Tobago with development of a CPDLC/ADS-C Operational concept and an action plan for effective CPDLC/ADS-C implementation

2.3 An analysis of the CPDLC/ADS-C implementation was conducted, including the review of test results conducted by Trinidad and Tobago in their first trial (April-June 2015) through the Communication Service Provider, Aeronautical Radio, Inc. (ARINC). From this analysis, clarifications and service lessons learned were provided, as well as explanation of the top messages being used in the North Atlantic (NAT) region, the description of the regional Global Operational Data Link Document (GOLD) - 2nd Edition, the implementation considerations being applied in the NAT, the NAT Implementation mandate, and improvements needed for inclusion in publications for successful implementation. The TEAM reviewed the System Manufacturer plan for system improvements, its configuration parameters, and evaluated the necessary activities for coordination and evaluation of service performance.

2.4 The TEAM observed good progress towards successful implementation: the formation of a multidisciplinary TEAM, analysis of test results, and coordination with the regulators. Required training is also being conducted, ongoing coordination with the user community and the International Air Transport Association (IATA), as well as system customization and improvements were noted.

2.5 For a successful CPDLC/ADS-C implementation, the TEAM recommended short-term measures, such as: the review of the Concept of Operations (CONOPS), with active coordination between the users and the adjacent FIRs (New York Oceanic, Santa Maria, Rochambeau and Dakar), leading to safety/situational awareness improvements in the PIARCO oceanic airspace. Mid-term efforts should include reduction of longitudinal separation minima, implementation of the Air Traffic Services Inter-facility Data Communication (AIDC) service to enhance the CPDLC/ADS-C implementation, and provide adequate performance monitoring, as stated by Required Communication Performance (RCP) 240 and Required Surveillance Performance (RSP)-180.

2.6 Based on the considerations for the implementation of CPDLC and the template action plan for the implementation of CPDLC/ADS-C, an Action Plan was agreed with estimated completion date by April 2016. The success of this implementation will be achieved with the active participation of all operational/technical staff and involvement of users (airlines and IATA lines).

2.7 The Follow-up actions formulated were:

- a) Trinidad and Tobago should inform ICAO and the Regional Implementation Groups like the ANI/WG about any update and progress to the implementation activities following the Action Plan and the testing.
- b) Experts from Nav Canada and the Federal Aviation Administration (FAA) can support the optimal adjustment of system parameters, if required by Trinidad and Tobago. This can be carried out by email.
- c) To meet the requirements for complying the monitoring and performance of CPDLC/ADS-C service, ICAO can coordinate these actions with United States (FAA) and Canada (Nav Canada) if required by Trinidad and Tobago, once the service is operationally implemented - Action for 2016. Also under this requirement, Trinidad and Tobago must ensure constant monitoring for any errors that may occur, and determine if they are procedural, flight plan or failure of control systems. For this action, CPDLC/ADS-C statistics and traffic analysis tool will be a valuable support to consider.

- d) Inform ICAO and the regional groups such as the ANI/WG and the ECAR/CATG on updates to the implementation dates and actions agreed under the Action Plan. The successful implementation of CPDLC/ADS-C service will contribute to regional RPBANIP goals.d) Inform ICAO and the regional groups such as the ANI/WG and the ECAR/CATG on updates to the implementation dates and actions agreed under the Action Plan. The successful implementation of CPDLC/ADS-C service will contribute to regional RPBANIP goals.

2.8 Once the CPDLC/ ADS-C Service is implemented, the Performance monitoring shall be implemented by PIARCO. PIARCO is located between the NAT and SAT traffic corridor. The NAT and the SAT have different Performance monitoring groups. PIARCO needs to define to which monitoring and performance of CPDLC/ADS-C service Performance Monitoring Group shall join to ensure Service levels.

3. Suggested Action

3.1 The Meeting is invited to:

- a) take note of the TEAM conducted to Trinidad and Tobago for the CPDLC/ADS C Implementation;
- b) Trinidad and Tobago reports the current status of this implementation; and
- c) Trinidad and Tobago to define to what monitoring and performance of CPDLC/ADS-C service Group shall join.