



ICAO

**Twenty First Meeting of the Africa-Indian Ocean Planning and Implementation Regional Group
(APIRG/21)
(Nairobi, Kenya, 9 – 11 October 2017)**

Agenda Item 5: Regional Air Navigation Issues

5.2: Industry initiatives and other air navigation matters

**ONGOING ACTIVITIES IN IMPLEMENTATION OF DATA LINK IN THE
AFI REGION**

(Presented by Secretariat)

SUMMARY

This paper presents the outcome of a regional workshop organized by the FAA in collaboration with ICAO Regional Offices in the application of the ICAO PBCS Manual (Doc 9869) and GOLD Manual (Doc 10037) and datalink implementation.

Action by the meeting is at paragraph 3.

REFERENCES:

1. **APIRG Conclusion 20/09:**
2. **Implementation of ICAO PBCS Manual (Doc 9869)**
3. **GOLD Manual (Doc 10037)**
4. **Doc 4444**
5. **ICAO Circular 343**

Strategic Objective(s) : This Working Paper is related to Strategic Objectives: A, B & E

1. INTRODUCTION

1.1 APIRG Conclusion 20/09 urged that:

- a) States, Air Navigation Service Providers and users take necessary actions to apply the technical and operational guidance provided in the second edition of Performance Based Communication and Surveillance Manual (Doc 9869) and the Global Operational Data Link Manual (Doc 10037) once published;
- b) The APIRG 20/09 also urged ICAO to provide assistance to States facing implementation challenges under the No Country Left Behind (NCLB) initiative to ensure that communication and surveillance requirements are met by AFI States.

1.2 The workshop recalled the ongoing work being done by the APIRG Project Team for the implementation of Data Link Central Monitoring and Reporting Agency (DL/CMRA), pursuant to APIRG 20/24 and noted that some of members participated in the workshop.

2. DISCUSSION

2.1 There has been significant implementation of CPDLC by many States and Air Navigation Service Providers in the AFI Region. ADS-C/CPDLC is utilized in the provision of ATS in many Oceanic and Remote Continental operations and also serves as backup communication medium for some continental operations. Additionally, there is increase utilization of CPDLC by Users across the AFI region, resulting in the need for increasing awareness among the stakeholders.

2.3 Pursuant to the APIRG 20/09, ICAO has been collaborating with the Federal Aviation Administration (FAA) to provide assistance to States facing implementation challenges and also provide awareness to the region in order to better utilize the capability afforded by datalink applications. Accordingly, the FAA, in cooperation with the United States Department of Transportation Safe Skies for Africa Programme, in conjunction with the ICAO, conducted the Global Operational Data Link Document (GOLD) Workshop/Familiarization with Performance Based Communications Surveillance (PBCS) Data Link Monitoring Activities. This workshop was hosted by the ICAO in Dakar, Senegal, from 11 to 15 September, 2017.

2.4 Participants were made familiar with PBCS, Data Link Monitoring activities, ICAO Provisions on Data Link Implementation, Data collection and analysis, monitoring of ADS-C surveillance data delivery times, CPDLC transaction times and system availability whereby participants were introduced to GOLD Performance Analysis Tool (G- PAT) which is a software developed by the United States to assist ANSPs in the task of post- implementation analysis and monitoring.

2.5 Participants were issued with copies of the G- PAT tool and taken through a practical exercise on how to use the tool. Additionally, the FAA Advanced Technologies and Oceanic Procedures (ATOP) which enables the application of many datalink functionalities in ATM was presented to workshop. Participants were also introduced to the Airways New Zealand On-line Analysis tool and informed that there were other tools available, and urged States/ANSPs to select tools appropriate to their needs.

2.6 The workshop noted the need for the AFI Region to develop an airspace concept and determine the Required Communication Performance (RCP) and Required Surveillance Performance figures for the region. In doing so, the workshop emphasized the need to be conversant with ongoing developments in adjacent regions with respect to RCP and RSP values and PBCS implementation. The workshop provided essential guidelines to enable ANSPs to negotiate better contracts with Communication Service Providers (CSP).

2.7 The workshop conducted an exercise in the development of a PBCS Implementation Guidelines for States, ANSPs and Aircraft Operators in the AFI region using the template in ICAO PBCS Manual (Doc 9869), and recommended, that the draft Guidelines which is presented in Information Paper IP15 be submitted to APIRG AAO and IIM Sub-Groups for consideration in the

future.

2.8 The workshop was briefed of ongoing global activities relating PBCS application and was informed of the decision by the EUR/NAT region to progress from RCP 240 and RSP 180 to PBCS implementation with Time Based Separation from 29th March 2018. Participants identified that implementation of PBCS in the EUR/NAT region, though does not impart directly on many AFI ANSPs, States will have to address issues relating to PBCS approvals of operators.

2.9 Following the publication of the 16th Edition of PANS ATM Doc 4444 and the introduction of the PBCS requirements in the provision of ATM, an EURSAM corridor new airspace concept on Time Based Separation is adopted to replace previous airspace concept at the twenty-second Meeting on the improvement of Air Traffic Services over the South Atlantic (SAT/22), which was held in Paris, France from 6 to 10 June 2017.

2.10 It is important to note that Sal FIR and Dakar Oceanic are part of the EUR SAM Corridor and are therefore expected to implement PBCS in accordance with the roadmap that has been adopted by FIRs in corridor.

2.11 In considering the implementation of the PBCS concept requirements for flights operating to EUR/NAT region from 29 March 2018, the SAT Group has decided to study the implementation of Reduced Separation Minima in line with PBCS requirements to facilitate the provision of seamless services in future within the entire SAT area which involves Johannesburg, Luanda, Accra, Abidjan, Dakar and SAL Oceanic airspaces.

2.12 Performance-based separation

It is important to note that prior to November 2016, 30/50nm Longitudinal and 30 Lateral separations were requiring CPDLC and ADS-C equipage. From November 2016, these separation requirements became more stringent, requiring RCP240 and RSP180. The amendment also introduced new separation minima (longitudinal-5 min and lateral-23 NM) that require RCP240 and RSP180.

2.13 Optional provisions:

The application of PBCS is optional, in other words, the provisions are only applicable, when States or region wish to implement based on predetermined operational needs assessment and user requirements. For ANSP and their States, PBCS provisions will only become applicable, when applying performance-based separation requiring RCP/RSP specifications (Longitudinal – 50NM, 30 NM and 5 min, Lateral-23NM).

2.14 So far in the AFI region, only SAL and Dakar Oceanic are the currently likely to be candidates for application of the above separations by virtue of their association with the EUR SAM Corridor. The priority for the AFI region currently is for **data link implementation**, and not PBCS.

2.15 For Operators and their States

African airlines will require an operational approval from their State of Operator or Registry if they operate in the airspace over the NAT and South Pacific Oceans, which are planning the use of the above-mentioned separations. There are a number of activities ongoing to urge and assist State of

Operator (or State of Registry) to get ready for granting appropriate approvals for their airlines in order for them to be eligible for the performance-based separations.

3. ACTION BY THE MEETING

3.1 The meeting is invited to:

- a) note the information contained in this working paper;
- b) urge States to be in readiness for granting appropriate approvals for their airlines to be eligible for the performance-based separations; and
- c) request the APIRG AAO and IIM Sub-groups to consider the proposed draft Guidelines emanating from the datalink workshop held in Dakar in September 2017, in relation to the PBCS for the AFI region