



## INTERNATIONAL CIVIL AVIATION ORGANIZATION

### AFI PLANNING AND IMPLEMENTATION REGIONAL GROUP NINETEENTH MEETING (APIRG/19) (Yamoussoukro, Cote d'Ivoire, 30 November - 2 December 2015)

#### Agenda Item 2.4: Communications, Navigation and Surveillance (CNS)

#### IMPLEMENTATION OF ADS-C/CPDLC

*(Presented by Ghana Civil Aviation Authority)*

SUMMARY	
<p>This working paper seeks to shed light on the provision of Air Traffic Services using Automatic Dependent Surveillance-Contract (ADS-C) and Controller Pilot Data Link Communication (CPDLC) as a tool. The experiences of the Accra Flight Information Region are shared in this regard. This would be seeking to enhance service provision and point out the benefits that the AFI region can derive from the implementation of ADS-C/ CPDLC.</p>	
<b>REFERENCE(S):</b> - ICAO GOLD Manual (Doc. 10037)	
Strategic Objective(s)	This Information Paper relates to Strategic Objectives <b>A and B.</b>

#### 1. INTRODUCTION

1.1 This is an overview of operations in the Accra FIR, pertaining to the use of ADS-C/CPDLC, its impact on air traffic, controller workload and coordination with the adjacent FIRs.

1.2 Accra implemented ADS-C/ CPDLC in the year 2011 mainly over the oceanic airspace.

1.3 The implementation has enhanced the safety and efficiency of Air Navigation Service over the oceanic airspace.

1.4 There has been a reduction of “no comms” reports and improved coordination between Accra ACC and the adjacent FIRs.

#### 2. DISCUSSION

2.1 The advent of the ADS-C/ CPDLC has greatly improved control of air traffic in the oceanic airspace. Most operators who hitherto had not equipped their fleet have done so now. Aircraft communication via CPDLC and surveillance via ADS-C has greatly reduced controller

workload, enhanced transfer of control and improved coordination. All neighboring FIRs have now implemented ADS-C/CPDLC. Traffic numbers in the oceanic airspace have also seen an increase. All the major airlines and most of the executive jets using the Accra oceanic airspace are equipped as per their flight plans. An AIP supplement has been published to indicate the use of ADS-C/CPDLC over the ocean. We intend to publish a new supplement to cover the entire FIR. For now, some operators who fly the continental airspace also log onto the CPDLC.

2.2 Initially some FIRs were not ready and some operators had not also equipped their fleet so there were challenges in transfer of control and coordination. There have been occasional cases of aircraft failing to log on, or breaks in network connection. These are however always resolved in a timely manner. The system generally is very robust and reliable.

### **CONCLUSION**

2.3 The implementation of ADS-C/CPDLC, together with inter-operable ATM systems and data sharing will have a positive effect on safety and efficiency of flight operations in the AFI Region.

### **3. ACTION BY THE MEETING**

3.1 The meeting is invited to:

- (a) Encourage ANSPs to implement ADS-C/ CPDLC in accordance with the ICAO GOLD manual.
- (b) Urge ANSPs to ensure their ATM systems are AIDC compliant to provide silent handovers and reduce controller workload.
- (c) Urge SITA as the sole communication service provider (CSP) to keep their system resilient with backups to forestall breaks in connections and also provide technical support to ANSPs whenever possible.

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