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国际民用  
航空组织

Eastern and Southern African Regional Office/Bureau régional Afrique orientale et australe

Ref: ES AN 4/0 - 0739

16 September 2015

**Subject: Operational Data Link Familiarization Seminar  
(Nairobi, Kenya, 2-6 November 2015)**

**Action Required: Confirm participation not later than 16 October 2015**

Dear Sir/Madam,

I wish to refer to the discussions within the framework of the AFI Planning and Implementation Regional Group (APIRG) on the implementation of Automatic Dependent Surveillance-Contract (ADS-C) / Controller-Pilot Data Link Communication (ADS-C/CPDLC), more particularly the availability of requisite training.

In an effort to support AFI Member States in meeting the requirement for the above-mentioned training, I am pleased to inform you that ICAO, in collaboration with the Federal Aviation Administration (FAA) and International Air Transport Association (IATA), is organizing an Operational Data Link Familiarization Seminar, to which your Administration/Organization is invited to participate. The seminar will be hosted by Kenya Civil Aviation Authority (KCAA) in Nairobi, Kenya from 2 to 6 November 2015. The venue will be communicated in due course.

The objective of the seminar is to provide the necessary knowledge and guidance to States and their air navigation services providers (ANSP) for effective implementation of ADS-C/CPDLC. The seminar will also present a networking and knowledge-sharing opportunity through which participants can share best practices and lessons learned.

The seminar will consist of presentations by subject matter experts from the member States in the AFI region, the United States, Canada and Australia on contents of Global Operational Data Link (GOLD) Manual (Doc 10037) in preparation and implementation issues, challenges and lessons learned. A group exercise for development of implementation programme and equipment familiarization is also being considered. The seminar will be conducted in English language and all documents will be provided in electronic format only. Therefore, participants should bring along their laptop computers in order to participate effectively during the seminar.

The provisional programme is provided in **Attachment A**, which will be tailored to address the needs of the seminar participants. In this regard, a survey form provided in **Attachment B** has been prepared to collect information on the status of ADS-C/CPDLC implementation and expectations on the seminar. A registration form for participants is provided at **Attachment C**.

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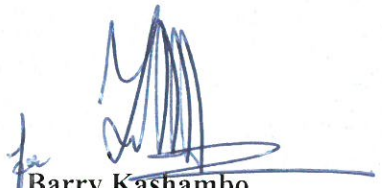
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The final seminar programme and information bulletin providing useful information for participants, including the venue of the meeting and recommended hotels, will be made available on the website of Eastern and Southern African (ESAF) Office in due course.

You are kindly requested to confirm the participation of your Administration/Organization at your earliest convenience, in any case not later than **16 October 2015** by forwarding the survey and registration forms provided at **Attachments B and C**, dully filled with particulars, to the following e-mail address [icaoesaf@icao.int](mailto:icaoesaf@icao.int), copy to [ckim@icao.int](mailto:ckim@icao.int) and [rafael.quezada@faa.gov](mailto:rafael.quezada@faa.gov).

Kindly also indicate if your Administration/Organization intends to make contributions to the seminar in the form of presentations.

Yours sincerely,



**Barry Kashambo**  
Regional Director

**Enclosures:**

- A. -Provisional programme
- B. Survey on needs and expectations of the seminar
- C. Registration form

## **OPERATIONAL DATA LINK FAMILIARIZATION SEMINAR**

### **PROVISIONAL PROGRAMME**

**(Nairobi, Kenya, 2 to 6 November 2015)**

#### **Session 1 : Introduction to data link**

- a) data link benefits
- b) overview of DLIC, CPDLC, ADS-C
- c) ICAO provisions (ASBU, SAPRs, PANS and Guidance Material)
- d) interoperability standards

#### **Session 2 : Preparation for data link implementation**

- a) air navigation service provision
  - Initial operational implementation
  - ATC automated data link functions
  - Contractual considerations for communication service provider
  - Aeronautical information, notification and interfacility agreements
  - Monitoring and data recording
- b) operator consideration
- c) flight planning

#### **Session 3 : Application of CPDLC and ADS-C**

- a) improved safety in current environment
- b) conformance monitoring and surveillance
- c) enhanced ATM communications (intervention, reroutes, etc)

#### **Session 4 : Implementation issues, challenges and lessons learned**

#### **Session 5 : Group Exercise (Under consideration) :**

- a) development of CPDLC/ADS-C implementation plan
- b) CPDLC/ADS-C equipment familiarization

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## SURVEY ON NEEDS AND EXPECTATIONS OF THE OPERATIONAL DATA LINK SEMINAR

### 1. INTRODUCTION

1.1 Your representatives to the various international meetings throughout the year have expressed interest in receiving information and/or instruction on implementation of controller-pilot data link communications (CPDLC) and automatic dependent surveillance – contract (ADS-C). Such a platform for learning and knowledge sharing is now being organized.

1.2 The purpose of this survey is to identify the needs and expectations of Air Navigation Service Providers (ANSPs)/Directors General of Civil Aviation (DGCAs) regarding information/instruction that would be beneficial in establishing and/or enhancing CPDLC/ADS-C operational capabilities. Replies to this survey are intended to be used to design the program of the Operational Data Link Seminar scheduled for 2-6 November 2015 in Nairobi, Kenya.

1.3 DGCAs are encouraged to respond to all questions and complete the survey in consultation with relevant ANSPs.

### 2. GENERAL INFORMATION

a. ICAO Member State:

b. Organization (ANSP):

c. Organization (Regulatory body):

d. Name of FIR(s):

e. Any other pertinent information, i.e. future plans, major FIR changes

f. Contact person for further coordination with respect to the replies to this survey

Name	
Job Title /Department	
Organization	
Email	
Phone number	

ATTENDANCE NOTIFICATION AND REGISTRATION FORM

<p><b>Please complete and return this form to:</b></p> <p><b>The Regional Director</b> <b>ICAO ESAF Regional Office, Nairobi</b> <b>Email: <a href="mailto:icaoesaf@icao.int">icaoesaf@icao.int</a></b> <b>Fax: +254 20 762 1092</b></p> <p>Copy to: Email: <a href="mailto:ckim@icao.int">ckim@icao.int</a> and <a href="mailto:rafael.quezada@faa.gov">rafael.quezada@faa.gov</a></p>	
1. Title : <input type="checkbox"/> Mr. <input type="checkbox"/> Ms.	
2. Surname	
3. Given name(s)	
4. Job Title	
5. State/Organization	
6. Email address	
7. Telephone number	
8. Fax number	
9. Do you wish to make presentations during the seminar : <input type="checkbox"/> Yes <input type="checkbox"/> No	
If yes, please indicate the subject of your presentation with desirable time allocation	

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### 3. CURRENT AND FUTURE DATA LINK CAPABILITIES (AIR-GROUND)

“Data link” is a generic term that encompasses different types of data link systems and sub-networks. The following questions refer to the current and future state of your ANSP’s data link service capability as well as how Operational Data Link Familiarization Seminar is expected to benefit your ANSP. The survey questions are focused on controller-pilot data link communications (CPDLC) and automatic dependent surveillance - contract (ADS-C) capabilities and future needs, which is the scope of the above-mentioned seminar.

3.1 Has your ANSP implemented Data Link ? ☐Yes ☐No

*Note: If yes, please continue to answer the following questions. If the answer is “no”, please proceed to questions 3.6 and 3.7*

3.2 Which data link applications has your ANSP implemented (i.e. CPDLC, ADS-C, DCL, etc.)

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3.3 If you have implemented CPDLC and ADS-C, when did you purchase that equipment and what type and model # do you have?

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3.4 Who are your neighbouring FIRs and do you have interfacility agreements with them ?

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3.6 Does your ANSP have plans for implementation of Data Link ? ☐Yes ☐No

3.7 If yes, list the data link applications that you plan to implement (e.g., CPDLC, ADS-C, DCL, etc.) and target dates for implementation ?

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3.8 How would you best describe your ANSP’s interest in CPDLC/ADS-C to address the following areas?

	<i>Not at all</i>			<i>Very</i>	
	1	2	3	4	5
Support More Efficient Air Traffic Management					
Increase Airspace Capacity					
Increase Safety and Utilize as a Mitigation Tool for Specific					
Improve Communications					
Improve Surveillance					
Utilize Route Conformance Monitoring (to Support Reduced					
Improved Coordination					

3.9 Who do you think should be the target audience of AFI CPDLC/ADS-C seminar that would most benefit your ANSP ?

	<i>Not at all</i>				<i>Very</i>
	1	2	3	4	5
Regulatory body of ANSP					
ANSP Upper Management					
ATC Management and ATC Supervision					
Radio Operators' Training					
ATC Training					
Automation Specialists					

#### 4. ICAO GLOBAL OPERATIONAL DATA LINK (GOLD) MANUAL(Doc 10037)

The GOLD Manual (Doc 10037) provides guidance and information concerning CPDLC and ADS-C operations and is intended to facilitate the uniform application of Standards and Recommended Practices contained in Annex 2 – Rules of the Air, Annex 10 – Aeronautical Communications (Volumes II and III), and Annex 11 – Air Traffic Services, as well as the provisions in the Procedures for Air Navigation Services – Air Traffic Management (PANS-ATM, Doc 4444) and, when necessary, the Regional Supplementary Procedures (Doc 7030). The GOLD Manual together with the Performance-based Communication and Surveillance (PBCS) Manual (Doc 9869) will supersede the regional Global Operational Data Link Document.

4.1 Does your ANSP currently utilize the regional GOLD ? ☐Yes ☐No

4.2 What aspects of CPDLC/ADS-C would benefit your ANSP's current system or future implementation? (Please refer to the GOLD Chapter 2 for further information).

	<i>Not at all</i>				<i>Very</i>
	1	2	3	4	5
CPDLC/ADS-C Benefits					
CPDLC/ADS-C Interoperability Standards					
CPDLC/ADS-C – Safety and Performance Specifications:					
Oceanic					
Continental					
Performance-Based Communications and Surveillance					
Airspace Types and their CPDLC/ADS-C Capabilities					
Procedural Separation					
ATS Surveillance					
Flight Tracking					
Global Overview					

4.3 What aspects of administrative provisions related to CPDLC/ADS C operations would benefit your ANSP's current capability or future implementation? (Please refer to GOLD Chapter 3 for further information)

	<i>Not at all</i>				<i>Very</i>
	1	2	3	4	5
ANSP System Validation					
ATC Automated CPDLC/ADS-C Functions					
Contractual Considerations for Communication Service Providers					
Aeronautical Information, notifications, and Interfacility					
Monitoring and Data Recording					
Planning and coordination with aircraft operators					

4.4 What aspects of controller and radio operator procedures related to CPDLC/ADS C operations would benefit your ANSP's current capability or future implementation? (Please refer to GOLD Chapter 4 for further information)

	<i>Not at all</i>				<i>Very</i>
	1	2	3	4	5
General Overview					
CPDLC:					
Managing CPDLC connection					
Use of Uplink Messages					
Responding to Downlink Messages					
ADS-C					
Managing ADS-C connection					
Use of the Periodic Contract					
Use of the Event Contract (Waypoint, Lateral Deviation, Level)					
Use of the Demand Contract					
Emergency and non-routine procedures					
Using CPDLC/ADS-C to apply Separation Minima:					
General					
Vertical separation minima					
Lateral separation minima					
Longitudinal separation minima					

## 5. REMARKS

5.1 Are there any uses for CPDLC and ADS-C that are not covered in other sections of this survey which you have questions about?

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5.2 Is your ANSP currently experiencing any issues or problems where CPDLC/ADS-C could potentially provide a solution to improve efficiency or safety in the airspace?

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5.3 Any other remarks, comments, or information, you would like the Panel Members to be aware of and have ready for discussion during the seminar ?

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