**SURVEY ON NEEDS AND EXPECTATIONS OF THE NAM/CAR/SAM**

**ATS DATA LINK IMPLEMENTATION WORKSHOP**

**1. INTRODUCTION**

1.1 Your representatives to the various international meetings throughout the years have expressed interest in receiving information and instruction on implementation of data link Controller-Pilot Data Link Communications (CPDLC) and Automatic Dependent Surveillance – Contract (ADS-C)) and Aeronautical Telecommunication Network (ATN) ground-ground applications (Air traffic services Inter-facility Data Communication (AIDC) and Aeronautical Message Handling System (AMHS)). Such a workshop is now being organized.

1.2 The purpose of this survey is to identify the needs and expectations of Air Navigation Service Providers (ANSPs)/Directorates General of Civil Aviation (DGCAs) regarding information/instruction that would be beneficial in establishing and/or enhancing data link (CPDLC/ADS‑C) and ATN ground-ground applications (AIDC and AMHS) operational capabilities. Replies to this survey are intended to be used to design the programme of the NAM/CAR/SAM ATS Data Link Implementation Workshop to be held in Philipsburg, Sint Maarten, from 18 to 21 April 2016.

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:

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b. Organization (ANSP):

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c. Organization (Regulatory body):

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d. Name of Flight Information Region (FIR(s)):

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

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

|  |  |
| --- | --- |
| Name |  |
| Job Title /Department |  |
| Organization |  |
| Email |  |
| Phone number |  |

**3. CURRENT AND FUTURE ATS DATA LINK CAPABILITIES**

“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 the ATS Data Link Implementation Workshop is expected to benefit your ANSP.

3.1 Has your ANSP implemented data link services/applications? ☐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 services/applications (have your ANSP implemented (i.e. CPDLC, ADS-C, DCL, AIDC, AMHS) etc.)?

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3.3 If you have implemented data link services/applications, when did you purchase that equipment and what type and model number 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 you ANSP have plans for implementation of data link services/applications?

☐Yes ☐No

3.7 If yes, list the data link applications that you plan to implement (e.g., CPDLC, ADS-C, DCL, AIDC, AMHS 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?

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | *Not at all Very Much* | | | | |
| 1 | 2 | 3 | 4 | 5 |
| Support More Efficient Air Traffic Management |  |  |  |  |  |
| Increase Airspace Capacity |  |  |  |  |  |
| Increase Safety and Utilize as a Mitigation Tool for Specific Areas of Concern |  |  |  |  |  |
| Improve Communications |  |  |  |  |  |
| Improve Surveillance |  |  |  |  |  |
| Utilize Route Conformance Monitoring (to Support Reduced Separation Minima) |  |  |  |  |  |
| Improved Coordination |  |  |  |  |  |

3.9 Who do you think should be the target audience of NAM/CAR/SAM ATS Data link Implementation Workshop that would most benefit your ANSP ?

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | *Not at all Very Much* | | | | |
| 1 | 2 | 3 | 4 | 5 |
| Regulatory body of ANSP |  |  |  |  |  |
| ANSP Upper Management |  |  |  |  |  |
| Air Traffic Control (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 ICAO 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).

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | | *Not at all Very Much* | | | | |
| 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 (PBCS) |  |  |  |  |  |
| 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)

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | *Not at all Very Much* | | | | |
| 1 | 2 | 3 | 4 | 5 |
| ANSP System Validation |  |  |  |  |  |
| ATC Automated CPDLC/ADS‑C Functions |  |  |  |  |  |
| Contractual Considerations for Communication Service Providers |  |  |  |  |  |
| Aeronautical Information, notifications, and Interfaculty Agreements |  |  |  |  |  |
| 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)

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | | *Not at all Very Much* | | | | |
| 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 Range Deviation, Vertical Rate Change) |  |  |  |  |  |
|  | 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 ICAO to be aware of and have ready for discussion during the workshop

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