Subject: Adding “CPDLC” Information to the Airport Diagram and Terminal Procedures Pages and Updating the Airport Facility Directory

Background/Discussion:

With the FAA NextGen introduction of FANS 1/A Controller Pilot Data Link Communication (CPDLC) into the NAS the Data Communications Program initiated a Departure Clearance (DCL) Trial to support pre-operational demonstrations of key aspects of the tower controller-pilot data link communication (CPDLC) services in the field. DCL trials are operational at both the Memphis and Newark Tower facilities in utilizing the Departure Clearance service with Revisions for participating airlines.

The DCL trials are designed to validate the concept of operation for the delivery of departure clearances and revised departure clearances through advanced automation and CPDLC. The trials ensure procedures and training plans are appropriate, and will provide airspace users an opportunity to experience the benefits associated with Data Communication services.

During the trial, it was discovered that flight crews utilized an ACARS based DCL ATS service known as 623 ACARS Departure Clearance used by many Air Navigation Service Providers (ANSPs) in other parts of the world. The 623 ACARS DCL application is part of the aircraft ACARS architecture HMI and has caused confusion as to which data communications application (ACARS or FANS CPDLC) flight crews should make use of when participating in the CPDLC DCL Trial.

When crews use the ACARS 623 based DCL ATS application, controllers and flight crew members are unable to communicate due to the different data communications environment which they are based on – ACARS vs. FANS CPDLC. This creates additional workload on both the controller and pilot to determine why they cannot communicate via CPDLC and why DCLs are not being delivered, or if their FANS CPDLC Logon is active or not.

The FAA Data Communication Implementation Team (DCIT) Flight Deck Working Group (FDWG) working with industry partners have determined that flight crews require additional information in their airway manuals to differentiate what communication services are available at each facility – ACARS or CPDLC. DCIT FDWG team members have determined that adding an additional CPDLC communications block to the Airport Diagram, and when appropriate, to other Terminal Procedures pages, will help flight crews select the appropriate data communications application in the cockpit to participate in CPDLC services.
**Recommendations:**

Recommend adding an additional CPDLC communications block to the Airport and when appropriate to other Terminal Procedures pages similar to below.

Additional information can be added into this block such as LOGON: KMEM (unique to each facility) while the US is in the deployment phase of Data Comm. When the US goes to a common national logon, then it would be LOGON: KUSA. As new CPDLC services are offered in the NAS such as D-TAXI or D-HZWXR this information would be included in the CPDLC block to advise crews of additional ATS Data Comm services.

The Airport Facilities Directory should include in the COMMUNICATION/NOTAM SERVICE section CPDLC services and Logon Information as appropriate for those participating airports. Below are suggested definition enhancements as well as example inserts for consideration.

**AIRPORT/FACILITY DIRECTORY LEGEND**

**SAMPLE (Section)**

**COMMUNICATIONS:**

D–ATIS ARR 123.775 (972) 615–2701 D–ATIS DEP 135.925 (972) 615–2701 UNICOM 122.95

®RGNL APP CON 125.025 133.525 (E) 119.875 133.625 (W)

DFW TOWER 126.55 127.5 (E) 124.15 134.9 (W)

GND CON 121.65 121.8 (E) 121.85 (W)

CLNC DEL 128.25

CPDLC: LOGON: KDFW, DCL *(New Information for CPDLC)*

**AIRPORT/FACILITY DIRECTORY LEGEND:**

**COMMUNICATION / NOTAM SERVICE** *(New definition Information for CPDLC)*

Controller Pilot Data Link Communications (CPDLC)—uses FANS ATC data communication capability from the aircraft to the ATC Data Link system.

LOGON: (CPDLC) e.g. KDFW—IACO Facility ID used to log on for obtaining CPDLC services only.

Departure Clearance (DCL – CPDLC)—FANS ATC CPDLC Departure Clearance service to obtain a pre-departure and/or revised clearance while on the ground, used with CPDLC services only.
Also, Airport Diagrams should include text to highlight CPDLC services similar to the example below:

![Airport Diagram](image)

Adopting this recommendation would reduce confusion in the cockpit of available ATS services and with appropriate training enhance the benefits of NextGen services with improved flight crew and controller participation.

**Comments:**

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**Date:** 30 January 2015

**MEETING 15-01:**

Greg Anderson, AJM-34, briefed the topic. The FAA has recently begun implementing Controller Pilot Data Link Communication (CPDLC) into the NAS. CPDLC provides a digital communication between pilots and ATC for clearances, instructions and traffic flow management. Over the next two years, CPDLC will be rolled out to 56 towers. Greg provided a detailed presentation on how the system works.

Greg reviewed the ACF recommendation which proposes that CPDLC services be indicated with the airports communication information on the airport diagram, IAPs, and in the AFD. Valerie Watson, AJV-553, asked if CPDLC was still in test phase or certified for use? Greg responded that currently, the system is in test phase at Memphis and Newark, but will soon be active at the two test airports. Soon thereafter, the system will be incrementally implemented to more airports and will be fully commissioned and functional.
Greg stated that initially, users will log in to the system using the subject airport’s ICAO location identifier (“KMEM”). In the later phase of deployment, access to CPDLC will be through the identifier “KUSA” for all airports. This will be explained in AIM guidance.

Valerie also asked Greg if the subscription service needed to utilize CPDLC was free or a paid service. Greg responded that the CPDCL service is free. He stated that in order for aircraft to be able to access and utilize CPDLC service, the aircraft have to be outfitted with the appropriate FANS 1/A capable equipment.

Discussion ensued as to how these and other digital communication services are currently published on the charts, e.g., D-ATIS, and how they should be depicted in the future. The question was raised if there should be a listing of digital services available at a given airport and on which products they would best be published. Valerie stated that she would look into how D-ATIS is currently being charted. She queried the audience as to where and on what charts this information should be published. Consensus was that the presence of CPDLC should be shown in the comm data block of charts on which CLNC DEL is currently published and that the details of specific services (DCL, D-TAXI, D-HZWXR) should be listed in the AFDs. She inquired of Greg that since the logon would be explained in AIM guidance, does the location identifier need to appear on the chart. Greg agreed that it did not need to be on the charts, but that in the initial phases it might be helpful to add it to the AFD entries. Once the logon for all services at all airports is KUSA, the individual logon idents can be removed.

Valerie stated that she will work on charting specifications for publication of CPDLC, but that the data must be sourced through conventional means (NASR). NFDC needs to investigate how to incorporate digital communications into NASR. Mike Wallin, AJV-5223, agreed to look into both a short term NASR solution (possibly referenced remarks “CPDLC: DCL LOGON KMEM” in the comm data resource) and a long term solution (a separate digital comm data resource with specific dropdown services). Greg stated that the Data Link office, AJM-34, can provide D-ATIS, PDC, and CPDLC data to NFDC for entry into NASR. Valerie made clear that only commissioned systems (NOT test or those in trial phase) should be submitted to NFDC for publication. Rich Boll questioned whether Terminal Weather Information for Pilots (TWIP) services should also be included in this list.

The question was raised as to whether CPDLC services could be announced via NOTAM as a means to help announce establishment of CPDLC services at an airport until the information is published on the charts and in the supplements. Lynette Jamison, AJR-B11, said yes, the establishment of a new CPDLC system could be announced via NOTAM. Greg stated that AJM-34 can send a list of commissioned systems to the NOTAM office.

**STATUS: OPEN**
**ACTION**: Mike Wallin, AJV-5331, will investigate how NFDC can publish the digital communication information in the short term and also look into the long term solution of adding a digital communications field to the NASR database.

**ACTION**: Greg Anderson, AJM-34, will supply a list of commissioned D-ATIS, PDC, and CPDLC systems to NFDC.

**ACTION**: Greg Anderson, AJM-34, will work with Lynette Jamison, AJR-B11, on the release NOTAMs for commissioned CPDLC locations.

**ACTION**: Valerie Watson, AJV-553, will draft an IACC Requirement Document for the depiction of CPDLC on all applicable charts.

**ACTION**: Rich Boll, NBAA, to investigate the use of TWIP to determine if it should be charted along with the other digital communications.