AERONAUTICAL CHARTING FORUM
Charting Group
Meeting 15-01 – April 28 - 30, 2015

RECOMMENDATION DOCUMENT

FAA Control # ACF-CG RD 15-01-289

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.

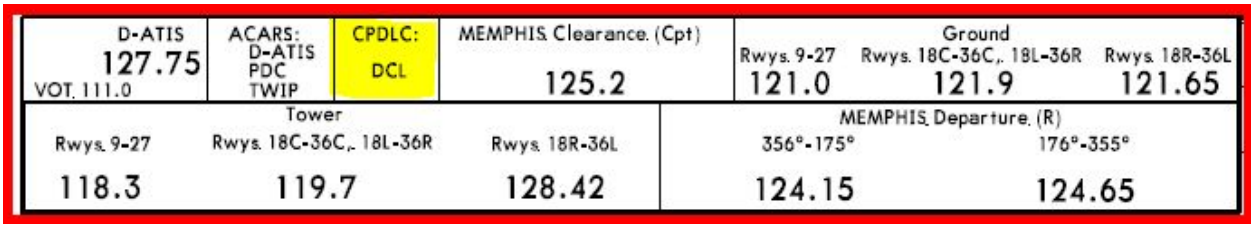
During the trial, it was discovered that flight crews utilized an ACARS based DCL ATS service known as 623 ACARS Departure Clearance used by many Air Navigation Service Providers (ANSPs) in other parts of the world. The 623 ACARS DCL application is part of the aircraft ACARS architecture HMI and has 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 ornot.

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 memberhave 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)*

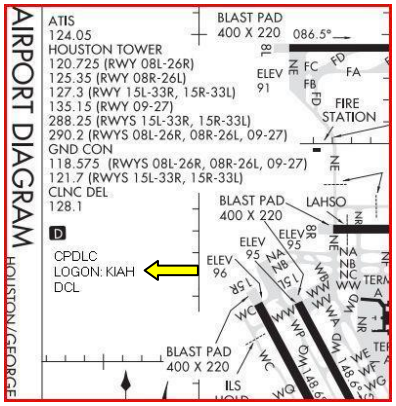
COMMUNICATIONS:
D–ATIS ARR 123.775 (972) 615–2701 **D–ATIS DEP** 135.925 (972) 615–2701 **UNICOM** 122.95
®RGNL APP CON 125.025 133.525 (E) 119.875 133.625 (W)
DFW TOWER 126.55 127.5 (E) 124.15 134.9 (W)
GND CON 121.65 121.8 (E) 121.85 (W)
CLNC DEL 128.25
CPDLC: LOGON: KDFW, DCL (*New Information for 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—ICAO 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:



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:

Submitted by: David Cherry, Contract Support to DataComm
Organization: DataComm
Phone: 202-567-2514
E-mail: dcherry@thaneincorp.com
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.

MEETING 15-02:

Valerie Watson, AJV-553, reviewed the topic. Valerie stated that the charting specification is in place. She showed the group chart and AFD entry examples of how CPDLC would be depicted on FAA products.

Rick Mayhew, AJV-533, stated that the CPDLC information will be published in NASR (and the NFDD) as a Tower Services entry.

Lynette Jamison, AJR-B1, stated that there are complexities with CPDLC that were not initially apparent. Tech Ops has commented that CPDLC utilizes two different services and systems. This adds a layer of complexity in issuing a NOTAM because CPDCL services may be available through one system, but through another. The NOTAM office is considering how this should be handled.

On the subject of digital communications, Rich Boll, NBAA, presented a briefing on Terminal Weather Information for Pilots (TWIP). This is a digital weather reporting service that is installed at a number of major airports. TWIP provides pilots text information and a simple graphic of weather activity that may impact airport operations. Rich recommends that TWIP availability be depicted on IAPs, DPs and STARS in the same way CPDLC will be shown. Rich also recommends that the outdated AIM guidance regarding TWIP be updated.

Ted Thompson, Jeppesen, commented that Jeppesen has in the past attempted to include digital communication services on the charts and expressed that is has been problematic. He expressed that reliable source for the information and ensuring that it is maintained has been difficult.

Valerie stated that as technology advances and more communications are transmitted digitally verses vocally, we need a long term plan for sourcing, databasing and publishing digital communications. Valerie asked the audience if the charted communications listings should be expanded to include TWIP. It was agreed that digital services would be of value on the charts. Valerie stated that she would attempt to track down the appropriate office within the FAA that oversees digital communication services and research the issue. She will also attempt to determine the FAA office responsible for update of the AIM TWIP guidance and task them with its revision.

STATUS: OPEN

ACTION: Valerie Watson, AJV-553, will research digital communications availability, usage, source.

ACTION: Valerie Watson, AJV-553, work to see that the TWIP AIM guidance is updated.

MEETING 16-01:

Valerie Watson, FAA/AJV-553, reviewed the issue. Valerie stated that the CPDLC potion of this recommendation has been completed and that the RD has now become a discussion about Terminal Weather Information for Pilots (TWIP), another digital communications system brought up by Rich Boll, NBAA, at the last ACF. Rich was concerned with the sorely outdated AIM text regarding TWIP, its use and availability.

Valerie reported that she has been working with Gordon Rother, FAA/AFS-430, on the publication of Rich's suggested AIM revisions to the TWIP entry. The new guidance has been submitted and should appear in the May 2016 edition. Valerie also reported that AFS-430 had a difficult time finding a source for TWIP availability. The AIM guidance will list 43 airports with current TWIP availability.

Valerie also had an IOU from the last ACF to research digital communications availability, usage and source, with an eye to possible publication on and in FAA products. Valerie found that there is no single FAA office that handles digital communications. Many current digital communications systems are private-use, may require subscription and/or special equipment in the cockpit. She stated that if and when a request is submitted to the ACF to look into a specific digital communication type (like CPDLC), it can be investigated, but that she is unable and doesn't believe it appropriate for the charting offices to anticipate user needs and solicit these many communication systems for their suitability for publication as public-use systems on FAA products.

STATUS: OPEN

ACTION: Valerie Watson, FAA/AJV-553, to provide an update on publication of revised AIM guidance regarding TWIP.

MEETING 16-02:

Valerie Watson, FAA/AJV-553, reviewed the topic. Valerie showed the audience the new Aeronautical Information Manual (AIM) guidance regarding Terminal Weather Information for Pilots system (TWIP) that was published in the 26 May 2016 release. It was agreed to close this RD since all actions related to Controller Pilot Data Link Communication (CPDLC) and TWIP have been completed. If the charting of new digital communications is requested in the future, a new RD can be submitted.

STATUS: CLOSED