



The European Organisation for Civil Aviation Equipment
L'Organisation Européenne pour l'Équipement de l'Aviation Civile

Change 1
-to-
EUROCAE ED-120

**SAFETY AND PERFORMANCE REQUIREMENTS STANDARD FOR
AIR TRAFFIC DATA LINK SERVICES IN CONTINENTAL AIRSPACE
(CONTINENTAL SPR STANDARD)**

Change 1 to ED-120
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SUMMARY OF CHANGES

Change 1 to ED-120/DO-290 is summarized as follows:

Description of change	Affected pages, tables, and figures
1. The operating method and time sequence diagrams for the ATC Communications Management (ACM) service were revised to reposition the sequence of the CPDLC message element (UM183).	
a) Transfers from T-ATSU to R-ATSU both ATSUs using CPDLC	Pages 43 and 44 (Table 5-1) Page 46 (Figure 5-2)
b) Transfers from T-ATSU not using CPDLC to R-ATSU using CPDLC (includes initial CPDLC establishment)	Page 47 (Table 5-3) Page 48 (Figure 5-3)
c) Transfers and/or change of frequency with no change in the established CPDLC, both sectors using CPDLC	Page 52 (Table 5-6) Page 53 (Figure 5-5)
d) Transfers and/or change of frequency, with no change in the established CPDLC, T-sector not using CPDLC (OFF), R-sector using CPDLC (ON) (Table 5-8 and Figure 5-6)	Page 54 (Table 5-8) Page 55 (Figure 5-6)
e) Transfers from a T-ATSU to a R-ATSU both using CPDLC, but controller does not use CPDLC for the transfer instruction (Table 5-15 and Figure 5-9)	Page 65 (Table 5-15) Page 67 (Figure 5-9)
2. Safety requirements SR-ACL-11, SR-DCL-11, and SR-DSC-11 were changed to clarify intent.	
a) ATC Clearance (ACL) service	Page 95 (Table 5-29) Annex A, Page 214 (Table A-3)
b) Departure Clearance (DCL) service	Page 126 (Table 5-43) Annex A, Page 228 (Table A-3)
c) Downstream Clearance (DSC) service	Page 145 (Table 5-51) Annex A, Page 235 (Table A-3)
3. Safety requirements SR-ACL-12, SR-DCL-12, and SR-DSC-12 only apply to the ATSU and do not apply to the aircraft. Annex A was changed to remove the allocation of these requirements to aircraft.	
a) ATC Clearance (ACL) service	Annex A, Page 214 (Table A-3, ACL)
b) Departure Clearance (DCL) service	Annex A, Page 228 (Table A-3, DCL)
c) Downstream Clearance (DSC) service	Annex A, Page 235 (Table A-3, DSC)
4. Update CPDLC – Message set per ICAO PANS/ATM	
a) Revised message element UM215	Page 163 (Table 5-54)
b) Added message element UM237	Page 163 (Table 5-54)

TABLE 5-1 : OPERATING METHOD FOR TRANSFERS FROM T-ATSU TO R-ATSU BOTH ATSUS USING CPDLC

Step	Operating Method
Issuing the transfer instruction and termination of CPDLC between T-ATSU (CDA) and aircraft	
3	The T-ATSU controller instructs the flight crew to transfer voice communications using a CPDLC message (i.e., contact (UM117) or monitor (UM120) the R-ATSU on the specified frequency/channel). This is sent with a CPDLC termination request. The transfer instruction may also require the flight crew to provide the assigned level (UM135) to the T-ATSU upon acceptance of the transfer instruction. Once the T-ATSU initiates the transfer instruction, it is prohibited from transmitting any other CPDLC messages unless and until: - the flight crew refuses the transfer, or - the transfer fails. <i>Note: The transfer instruction requests the flight crew to tune the appropriate receiver to the specified frequency/channel.</i>
4	The flight crew acknowledges the instruction to transfer voice communications and CPDLC. The acknowledgement is a CPDLC WILCO or UNABLE message to the T-ATSU: Upon flight crew WILCO response to the transfer instruction, CPDLC with T-ATSU is terminated. Upon flight crew UNABLE response to the transfer instruction, the aircraft continues the capability to exchange CPDLC messages with the T-ATSU. When the transfer instruction is a contact, upon WILCO response, the flight crew tunes and contacts the R-ATSU by voice on the specified frequency/channel. When the transfer instruction is a monitor, upon WILCO response, the flight crew tunes and monitors the R-ATSU on the specified frequency/channel. When the transfer instruction includes the request of the assigned level, the flight crew includes the assigned level with the WILCO response (DM0+DM38).
Aircraft considers R-ATSU as CDA, and CPDLC enabled between R-ATSU and aircraft	
5	After termination of CPDLC with the T-ATSU, the aircraft recognizes the R-ATSU as the current data authority enabling CPDLC message exchange between the aircraft and the R-ATSU. The aircraft notifies the R-ATSU that it is the current data authority. An indication of which ATSU is the current data authority is made available to the flight crew.
6	Upon notification that the R-ATSU is the current data authority, the R-ATSU, when applicable, sends a CPDLC message to the aircraft indicating that logical acknowledgements are not used.

TABLE 5-1 : OPERATING METHOD FOR TRANSFERS FROM T-ATSU TO R-ATSU BOTH ATSUS USING CPDLC (CONTINUED)

Step	Operating Method
7	When required, the aircraft transmits a CPDLC message to the R-ATSU indicating that a given frequency/channel has been tuned. <i>Note: When the R-ATSU uses the monitoring message, upon receipt of the message indicating that the specified frequency/channel in the transfer has been tuned, the R-ATSU controller will be informed that the flight crew is monitoring the frequency specified.</i>
8	The R-ATSU considers CPDLC enabled only upon receipt of a CPDLC message and/or receipt of the monitoring message, and satisfaction of required local conditions (if any). The R-ATSU indicates to the controller when CPDLC is enabled. The R-ATSU sends a CPDLC message indicating its facility designation, facility name and facility function. Until CPDLC is enabled, the R-ATSU prohibits the controller from sending any CPDLC messages.

5.1.1.1.1.2 Transfer of data communications with open dialogues

When the ACM service is initiated and there are open dialogues, the ATSU and aircraft behave as shown in [Table 5-2](#).

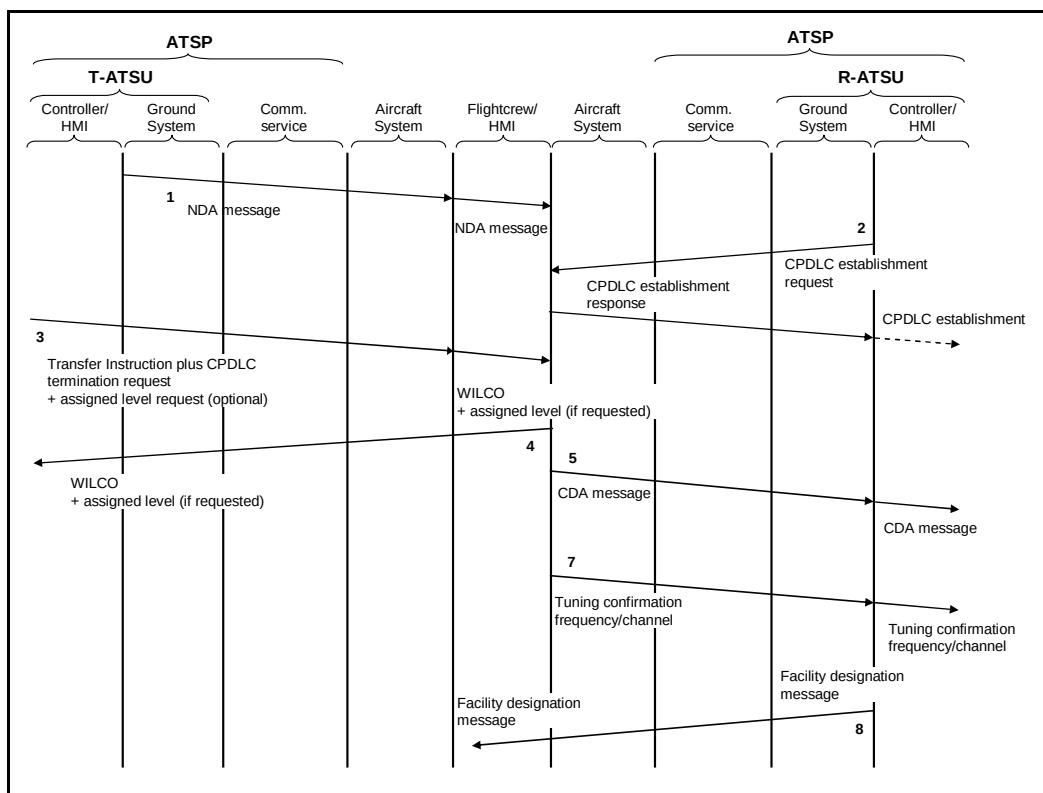


FIGURE 5-2 : ACM SERVICE TIME SEQUENCE DIAGRAM FOR TRANSFERS FROM T-ATSU TO R-ATSU BOTH ATSUS USING CPDLC

5.1.1.1.2 Transfers from T-ATSU not using CPDLC to R-ATSU using CPDLC (includes initial CPDLC establishment)

5.1.1.1.2.1 Operating method

There are no CPDLC messages between the aircraft and the T-ATSU. The transfer instruction is provided by voice.

NOTE: This configuration also covers the case when CPDLC is initially established.

The ACM service operating method for transfers from a T-ATSU not using CPDLC to a R-ATSU using CPDLC (includes initial CPDLC establishment) is provided in [Table 5-3](#).

TABLE 5-3 : OPERATING METHOD FOR TRANSFERS FROM T-ATSU NOT USING CPDLC TO R-ATSU USING CPDLC (INCLUDES INITIAL CPDLC ESTABLISHMENT)

Step	Operating Method
Establishment of CPDLC between a R-ATSU/initial ATSU and aircraft	
1	The R-ATSU/initial ATSU requests CPDLC establishment with the aircraft. <i>Note: The precise timing of this request and the means (e.g., ATSU-ATSU co-ordination) by which the request is triggered is outside the scope of this document.</i> The aircraft responds to the R-ATSU/initial ATSU indicating whether or not the request for CPDLC was accepted. <i>Note: Some ATSUs consider CPDLC available at this step and may indicate this to the controller.</i>
Aircraft considers R-ATSU/initial ATSU as CDA	
2	The aircraft recognizes the R-ATSU/initial ATSU as the current data authority enabling CPDLC message exchange between the aircraft and the R-ATSU/initial ATSU. The aircraft notifies the R-ATSU/initial ATSU that it is the current data authority. <i>Note: Some ATSUs indicate to the R-ATSU controller when CPDLC has been successfully established between the aircraft and the R-ATSU.</i> An indication of which ATSU is the current data authority is made available to the flight crew.
3	Upon notification that the R-ATSU is the current data authority the R-ATSU when applicable, sends a CPDLC message to the aircraft indicating that logical acknowledgements are not used.
Issuing the transfer instruction (not applicable in initial ATSU case)	
4	When CPDLC is not with an initial ATSU, the T-ATSU controller instructs the flight crew via voice to contact or monitor the R-ATSU on its voice channel.
5	When CPDLC is not with an initial ATSU, the flight crew acknowledges the verbal instruction to transfer voice communications. The acknowledgement is via voice to the T-ATSU controller.
6	When CPDLC is not with an initial ATSU, and when the transfer instruction is a contact, upon WILCO voice response, the flight crew tunes and contacts the R-ATSU by voice on the specified frequency/channel. When CPDLC is not with an initial ATSU, and when the transfer instruction is a monitor, upon WILCO voice response, the flight crew tunes and monitors the R-ATSU on the specified frequency/channel.
Step	
Operating Method	
7	When required, the aircraft transmits a message to the R-ATSU indicating that a given frequency/channel has been tuned. <i>Note: When the R-ATSU uses the monitoring message, upon receipt of the message indicating that the specified frequency/channel in the transfer has been tuned, the R-ATSU controller will be informed that the flight crew is monitoring the frequency specified.</i>
8	The R-ATSU considers CPDLC enabled only upon receipt of a CPDLC message, and/or receipt of the monitoring message, and satisfaction of required local conditions (if any). The R-ATSU indicates to the controller when CPDLC is enabled. The R-ATSU sends a CPDLC message indicating its facility designation, facility name and facility function. Until CPDLC is enabled, the R-ATSU prohibits the controller from sending any CPDLC messages.