3.3.9 Messages containing route clearance data

3.3.9.1 Some aircraft systems are capable of loading route clearance information from CPDLC messages directly into an FMS. When available, the flight crew should use this capability to minimize the potential for data entry errors when executing clearances involving loadable data.

Note 1.— All B2, most of FANS 1/A and a few ATN B1 aircraft have the capability to load route clearance information from CPDLC messages directly into the FMS.

Note 2.— With the increase of push-to-load capabilities, the correctness of uplinked coordinates, either standalone or attached to a waypoint name, as well as the correct encoding of the type of waypoints are of primary importance. ATS units should be aware that some avionics will load the waypoint based on the received coordinates even if the coordinates do not match those of an identically named waypoint in the Navigation Database, hence possibly create a new temporary waypoint. This will result in the aircraft flying toward the newly created waypoint, not the one in the Navigation Database. If the ground system has unexpectedly/incorrectly sent coordinates of a different location than the one expected by the controller, some avionics will nonetheless support the load in the FMS.

3.3.9.2 Upon receipt of an uplinked route clearance, the flight crew should proceed as follows. Refer to section 4.1 for more guidance.

READ	Individually read the CPDLC route clearance and ensure that both flight crew have a common understanding of the clearance.
LOAD	Use the CPDLC load prompt, if available, to load the CPDLC route clearance into the FMS. *Note.— The FMS checks the clearance to ensure it is correctly formatted to be compatible with the FMS navigation database.*
REVIEW	Using the FMS and the map mode of the navigation display, verify that the loaded route clearance: i) Is complete; ii) does not contain discontinuities that cannot be resolved by the flight crew; iii) contains correct waypoint sequencing; and iv) is operationally acceptable, with respect to weather, fuel, etc. *Note: See section 3.3.1.2 for additional guidance on waypoint sequencing.*

RESPOND	Respond to the clearance by: a) Executing/activating the clearance and then responding RSPD-1 WILCO, if the clearance is operationally acceptable; or b) Respond RSPD-2 UNABLE, and contact ATC by voice when: i) The clearance is not operationally acceptable; or ii) the FMS indicates that it cannot load the clearance and the flight crew cannot resolve the failure to load the clearance; or iii) the FMS indicates unexpected discontinuities (such as those not addressed by an AIP) or other inconsistencies with the route modification that cannot be resolved by the flight crew. *Note 1.— A discontinuity resulting from the loading of a CPDLC route clearance is not necessarily a reason to respond to the clearance with RSPD-2 UNABLE, as these can be appropriate in some circumstances.* *Note 2.— The flight crew needs to respond with RSPD-3 STANDBY whenever a timely RSPD-1 WILCO or RSPD-2 UNABLE response is not possible. Refer to section 3.3.2.*

Note.— Standard Operating Procedures (SOPs) of several aircraft operators dictate that flight crew load, review, and execute the clearance before responding WILCO. This procedure avoids error-prone switching between the FMS and the CPDLC display and helps to ensure that the clearance is executed as well as acknowledged. Incidents of flight crew responding WILCO without executing/activating the clearance have been observed either due to flight crew forgetting to execute the clearance or realizing that the clearance could not be complied with after sending the WILCO response.

3.3.9.3 For downlink messages that contain route clearance data, such as flight crew requests for a specific route or a response to a ground request to RTEU-15 CONFIRM ASSIGNED ROUTE, the flight crew should utilize the capability of the FMS to populate the message, if available, to minimize the potential for data entry errors.

Note.— All B2 and most FANS 1/A aircraft have the capability of populating information directly from the FMS into the CPDLC message.

4.1 RE-ROUTE PROCEDURES

Note 1.— Due to frequent flight crew misunderstanding of the re-route message element RTEU-6, the recommended display of re-route message elements RTEU-6 and RTEU-24 has been amended in Edition 2 of this Manual. This document has been amended to show the new recommended display RTEU-6 CLEARED (departure data[O]) (enRoute data) TO (position) and RTEU-24 AT (position) CLEARED (enRoute data) TO (position). Due to the time it takes to implement the new recommended display in new aircraft and because some existing aircraft may not be upgraded, the old display versions RTEU-6 (UM79)

CLEARED TO (position) VIA (departure data[O]) (en route data) and RTEU-24 (UM266) AT (position) CLEARED (enRoute data) TO (position) will continue to be seen.

Note 2.— Due to frequent flight crew misunderstanding of the re-route message element RTEU-6, some states are appending explanatory preformatted free text message elements to the route clearance elements as a mitigation. States are reminded of the requirement in Annex 10 Volume II paragraph 8.2.11.2 to undertake consultation with operators and other ATS authorities that may be concerned before implementing such free text messages.