CRA number	Region	Status	Type	Title	Description	Findings
2014 PRs						
1478-SN	SOPAC	CLOSED	AIR-p	Loss of ADS-C - B772	During the attempted application of reduced separation, ADS-C was lost for the flight. An attempt to reduce the ADS-C reporting rate was unsuccessful. A number of demand contract requests were unsuccessful. Shortly after the flight crew to confirm ADS-C was armed, ADS-C was re-established (at 2118) – it is unknown if this was a factor.	Indications in the log were that the ADS function was turned off until the flight crew were queried by ATC. All ADS contract requests up to that point received a response that the function was turned off.
1479-MM	NAT	OPEN	GROUND	Position Reports Not Delivered	LOGGED ON TO CZQX CPDLC FUNCTIONS NORM. ADVISE POS REPORT... NOT WORKING AT 40W and 50W. WORKED OK WITH EGGX	Nav Canada indicated at NAT CNSG/11 that it has submitted an internal software change request to address this issue (not presenting received ADS-C reports to the controller).
1480-SN	SOPAC	OPEN	AIR-t	Unexpected latdev report - MD11	Apparently coincident with the uplinking of a CPDLC [illegible], a lateral deviation event report was received.This type of behavior has been observed before with an MD11.	Problem has been corrected in the -922 FMC which will be certified 24 March 2015.
1481-SN	SOPAC	OPEN	None	No NCDA received from GL5	A request for a CPDLC position report was uplinked to the airplane while it was still CPDLC connected to KZAK. No "Not Current Data Authority" downlink was received.	The airplane did send a Not Current Data Authority message in reply to the position report request. The downlink included a message reference number, which the ground automation would not have expected (no response expected for a pos report request). The ground automation responded with an error uplink ("unrecognizedMsgReferenceNumber"). There is no guidance in DO-258A as to whether an MRN should or should not be included with the NOT CURRENT DATA AUTHORITY message. The same is true for 'errorinformation'.
1482-MM	ASIA	CLOSED	TBA	Loss of ADS CPDLC	After initial logon to [illegible] and ADS would display ATC DATALINK COMM NOT AVBL, ADS would sometimes be available and logged on to "MELCAYA" a[illegible] CPDLC was intermittent, another aircraft was used to relay messages and clearance was obtained to enter Australian Au[illegible] airspace. We were going to have to descend to FL310 because HF comms were very poor and SATCOM was also not avail[illegible]	The datalink issues are due to poor SATCOM and HF performance. It could come from the installation of SATCOM and HF. The airline was contacted to know if the issue was recurrent and Airbus proposed its support. No answer from the airline was received we guess it means that the issue is no more encountered.
1483-GS	SOPAC	OPEN	AIR-t	Loss of CPDLC - B788 (1)	Flight [illegible] weather deviation clearance at 1258 by CPDLC. No response was received. [illegible] was uplinked AT ONOXA CONTACT UJUNG CTR ON 128.3. No response was received. [illegible]ce messages were uplinked at 1315 and 1319. No Disconnect request was received.	This problem was caused by a known software issue that causes comm NOT to transition from VHF to SATCOM. This problem is expected to be fixed in late 2014.
1484-GS	SOPAC	CLOSED	AIR-t	Loss of CPDLC - B788 (2)	[illegible] was received and CPDLC established OK (1543). At 1605 an SSR code was issued by CPDLC. No response was received. At 1609 the SSR code was re-issued by CPDLC. No response was received. At 1611 an indication was received that an expected ADS-C report had not been received. Apparently this is an ongoing problem with this operator's B788.	The airplane seems to have only had VHF available. After 1552z, all uplinks appear to get an "UP INTERCEPT AIRCRAFT NOT LOGGED ON" response. Basically, the airplane was in NO COMM. Further investigation is being tracked under PR-1512.
1485-MM	SOPAC	CLOSED	AIR-t	Failed CPDLC transfer from NFFF to NZZO	AUTO-CHANGEOVER FROM NFFF TO NZZO DID NOT OCCUR	NFFF (Airports Fiji Limited) confirmed that automated generation of an END SERVICE message is dependent on receipt of a flight crew response to a CONTACT/MONITOR instruction. Given that the flight crew was actively using CPDLC (having sent a climb request shortly before), that the avionics acknowledged receipt of the CONTACT instruction, and that there is no missing ACARS message sequence number that would indicate a failed attempt to send the response, this problem appears to be another occurrence of the 777 'ack & toss' issue (Ref PR 923). This PR is accordingly closed because that issue was corrected in BPv16 software.
1486-SN	SOPAC	ACTIVE	TBA	Erroneous ADS-C estimate - A332	At 1640 an ADS-C report was received from an aircraft, with an estimate KAKOP of 1656. At the time, the aircraft was approximately 11NM prior to KAKOP (passing abeam KAKOP). ADS-C reports indicated that the aircraft passed abeam KAKOP at 1641.	Airbus investigation in progress.
1487-SN	NAT	CLOSED AS DUPLICATE	AIR-t	B748 Logon Flood	A B748 sent approximately 1800 logons between 04:20 and 06:32. Last logon request received at Shannon is at a time consistent with the aircraft arrival at destination (according to information in filed FPL).	PR closed as a duplicate of PR 1262-RP which the CRA has been using as the master PR for this problem. This problem has been corrected in the latest B748 FMC update. The service bulletin for installation of the corrected software was released in December, 2013.
1488-SN	SOPAC	CLOSED	AIR-t	Loss of CPDLC, ADS-C - B763	Aircraft had previously logged on, ADS-C and CPDLC established. At approx 1217 a warning message was displayed that an expected ADS-C report had not been received. Demand contract requests were unsuccessful. CPDLC uplink to confirm ADS-C was armed was unsuccessful. Symptoms of no SATCOM.	The airplane lost satcom at 08:01:08. There was apparently some sort of maintenance at the turn around, because satcom was back for the next flight (Satcom Established media advisory at 22:17:56).
1489-MM	SOPAC	ACTIVE	TBA	Failed CPDLC transfer from YBBB to NFFF	YBBB ADV-DO NOT DICONNECT CPDLC. LOGON TO NFFF. LATER MSG-NFFF UNABLE TO ESTABLISH DATALINK COMMS WITH YOUR A/C.	Attempt by YBBB to perform AFN address forwarding to NFFF failed. PR assigned to NFFF to investigate further, particularly whether YBBB initiated address forwarding too early or aircraft position was unanticipated (considering that aircraft recently started diversion from NZCH to NZAA).
1490-SN	NOPAC	ACTIVE	AIR-t	Numerous downlinks received from B77W	Starting at 1634z, we began to receive the following downlink: "REQUEST CLIMB TO F370" over and over again for a total of 53 times. This was followed by the FN_COMP which was received a total of 937 times between 1643z and 1859z. The pilot reported that he was trying to perform a reset at 1644z, however the downlinks did not stop until about 20 minutes after the aircraft landed at Vancouver.	Honeywell investigation in progress; probably related to PRs 1215-SN and 1380. Also see PR 1495-SN which involved the same flight.
1491-SN	SOPAC	ACTIVE	TBA	Incorrect CPDLC route request received - C17	CPDLC route clearance received appeared to be different from what the flight crew downlinked. In the route clearance request, all the waypoints seemed to have been replaced by their lat/lons.	Boeing analysis in progress.
1492-SN	SOPAC	CLOSED	AIR-t	Loss of CPDLC and ADS-C - A332	CPDLC/ADS-C had been previously established with aircraft. At approximately 0440, a warning message was displayed that an expected ADS-C report had not been received. Subsequently, there was no response to CPDLC uplinks. A number of End Service messages sent approaching and crossing the FIR boundary were unsuccessful. At 0523 a pilot initiated termination was received that had been sent at 0509. Symptoms were a SATCOM failure leaving VHF coverage. The receipt of the pilot initiated DR.1 would be close to when the aircraft entered VHF coverage associated with New Caledonia. However, the flight plan indicated only "IS" (i.e. SATCOM only).	Per Airbus analysis, the airplane's satcom system failed and recovered after being reset.
1493-MM	ASIA	ACTIVE	GROUND	Failed CPDLC transfer VRMF to VCCF and excessive ADS-C contract requests from VRMF	VRMF (Male) did not transfer CPDLC authority to VCCF (Colombo). Also, VRMF (Male) sent approximately 285 incorrect ADS-C event contract requests to the aircraft during the 43-minute period from 10:25 to 11:08.	PR should be assigned to Maldives Airports Company Limited (MACL, the Maldives ANSP) to further investigate [1] why the CPDLC transfer did not occur and [2] why the large number of ADS-C event contract requests was sent, but MACL is not currently registered on the ISAPCG website for PR reporting.
1494-MM	ASIA	ACTIVE	GROUND	Failed CPDLC transfer from VCCF to YMMM	VCCF (Colombo) did not transfer CPDLC authority to YMMM (Melbourne).	VCCF (Colombo) did not attempt to transfer CPDLC authority to YMMM (Melbourne). PR should be assigned to Airport & Aviation Services Limited (AASL, the Sri Lanka ANSP) to further investigate why the CPDLC transfer did not occur, but AASL is not currently registered on the ISPACG website for PR reporting.
1495-SN	NOPAC	OPEN	GROUND	Oakland and Anchorage - ping pong-ing transfer attempts	Reference PR-1490 - During the course of reviewing the log for PR 1490, it was noted that Oakland and Anchorage attempted to transfer the airplane between themselves 24 times over a period of approximately 90 minutes.	Per the FAA contact at Oakland Center, this was an in-out-in flight going from Oakland into Anchorage very briefly (~80NM) and then going back into Oakland airspace. Consequently, while the controller in Oakland was attempting to forward the data link connection over to Anchorage, the same attempt was being made by Anchorage to forward the data link connection back to Oakland. This finally concluded at 1508z when the flight entered Anchorage airspace. The CRA has asked the FAA if they intend to correct this behavior.
1496-MM	SOPAC	CLOSED	NETWORK	Failed CPDLC transfer from KZAK to NZZO	NO AUTO TRANSFER FROM KZAK TO NZZO	CPDLC transfer failed because KZAK did not send END SERVICE message before aircraft entered NZZO airspace at 505. KZAK reported no delivery confirmation or response was received for a Sigmet uplink sent 4 hours earlier. Consequently the Automatic EOS failed due to "1 pending uplink" at 1217z. The pilot manually terminated CPDLC at 1221z. KZAK confirmed that described behavior occured per design.
1497-RP	ASIA	CLOSED	GROUND	UNABLE TO LOGON TO COLOMBO (VCCF)	While operating flight Jeddah (OEJN) - Jakarta (WIII) We have succeeded to logon to Mumbai (VABF) but we were unable to logon to Colombo (VCCF).	This was identfied as having been due to an issue with the ground system operated by Colombo (VCCF). Problem has been corrected.
1498-SN	NOPAC	CLOSED AS DUPLICATE	AIR-t	Extra chrarcters/gibberish in CPDLC downlink request	Third line of CPDLC downlink altitude request from a B763 was filled with extra characters/gibberish.	This is a known problem with the avionics on the B757s and B767s. This problem is being tracked under PR1155-GS - CPDLC Downlink message unreadable from B763.

CRA number	Region	Status	Type	Title	Description	Findings
1499-RP	ASIA	OPEN	mult	Logon request sent immediately followed by a connection rejected (DR1)	The operator's Chief Technical Pilot was flying this airplane from Jakarta (WIII) to Medina (OEMA) and has reported : "we could log on to VCMF and VABF. They connected but would not work".	There were multiple issues which caused the behavior described in this PR. Data analysis shows that: 1) The aircraft logged on successfully to WIII. WIII initiated an automatic transfer to VCCF. However, this transfer was not successful due to the uplinks from Colombo being rejected by the network (the uplinks did not contain the MFI; duplicate of issue described in FIT PR 1497-RP). 2) WIII did not uplink an end service. WIII should have uplinked an end service regardless of whether the transfer was successful or not, once the aircraft was out of their airspace. 3) Later in the flight, the flight crew attempted to manually logon to other centers (VOMF, VABF). However, every time the new center (VOMF or VABF) uplinked a CR1, the aircraft downlinked a DR1 because it still had an active connection with WIII. The flight crew should have disconnected the active connection prior to attempting to connect to a new center. The DR1 downlinks in this instance were per design. Indonesia (WIII) has not registered with the CRA website.
1500-SN	NAT	CLOSED	None	Edge of VHF coverage retry issues and auto error detection	CPDLC uplink sent over VHF, at very edge of coverage. Aircraft able to receive message but ground unable to hear acknowledgement sent from aircraft. Aircraft therefore thought message good, display to crew who issued WILCO sent by satcom. Ground then sent message again over VHF, which again acknowledged by aircraft but ground not receiving acknowledgement. Then automatic message sent from CPDLC system to contact ATC on voice, but ground controllers not expecting call, as they saw the WILCO message. Problem seems to be in ground sticking to VHF when no acknowledgement and Satcom available. Changes need to handle edge of coverage issues	The reported behavior - one end of the communication pathway receiving a message but the other end not receiving an acknowledgement for the message - can occur when communicating at the edge of VHF coverage.
1501-SN	NAT	CLOSED	AIR-t	Latitude and Longitude contained in AFN LOGON incorrect	Aircraft was southbound from KJFK to TIST. Aircraft initiated AFN LOGON to KZWY at 1358Z. ADS-C and CPDLC connections were established. We had many problems with the aircraft from the start. For example, many Connection Confirm messages were received from initial LOGON until 1448Z. Then, starting at 1453Z, we started to get a lot of ERROR : ERROR [Command termination] downlink messages. That continued until 1713Z. The aircraft left New York Oceanic airspace and entered San Juan Center airspace at 1634Z. However, at 1723Z, we received an ADS report for 395041N0724406W 20 minutes in the past. Then, at 1728Z, we received an ADS report at 360928N0692700W for a time 11 minutes in the future!!!! To further add to the confusion, at 17:53:53 we received an AFN LOGON that indicated that the aircraft was at 344848N0681124W. When we received this, our automated system alerted us to the fact that an AFN LOGON had been received for an aircraft for which we did not have a flight plan. That was correct considering the fact that the aircraft had landed at St. Thomas at 1706Z.	SITA found no evidence of any SITA comm issues during the day the problem occurred. Due to the length of time between the date the problem occurred and the determination of no network issue, it was too late for the CRA to procure additional data to support further investigation.
1502-SN	NAT	ACTIVE	TBA	ADS-C performance issue with one operator's A345 in New York	Low ADS-C performance observed for 2 aircraft in one operator's A345 fleet in New York for Jan-Jun 2013 GOLD analysis. Performance dropped further in Jul-Dec 2013. Note: These aircraft used I-3 via AOW2 and AOE2 during this period.	Beginning 2015 FAA reported that the aircraft performance was still very bad. The airline has again been contacted for data retrievals (internal logs and status of communication means). Airbus is waiting for these data.
1503-MM	ASIA	ACTIVE	TBA	No auto transfer	No auto transfer from VCCF to VRMF. YMMM to VCCF auto transfer also did not work well. After logging off from VCCF and manually logging on to Male, contact was established. No auto transfer from Male to Mumbai either at BIBGO on L894. Manually logged on to Mumbai (VABF).	PR should be assigned to Airport & Aviation Services Limited (AASL, the Sri Lanka ANSP) to further investigate, but AASL is not currently registered on the ISPACG website for PR reporting. YMMM-VCCF transfer: The transfer from YMMM to VCCF (from 0330Z to 0344Z) appears to have succeeded, as evidenced by the flight crew sending a CPDLC position report to VCCF immediately upon VCCF becoming the CDA. More specifically, YMMM properly designated VCCF as the NDA, performed AFN address forwarding to VCCF, sent a MONITOR COLOMBO CENTER uplink, and sent an END SERVICE message element to terminate its CPDLC connection. VCCF-VRMF transfer: The transfer from VCCF to VRMF (from 0408Z to 0411Z), however, did fail. More specifically, VCCF improperly sent free-text CONTACT MALE CONTROL and DR1 uplinks and did not properly designate VRMF as the NDA, perform AFN address forwarding to VRMF, and send an END SERVICE message element to terminate its CPDLC connection.
1504-GS	SOPAC	CLOSED	AIR-t	B787 - no response to ADS contract request in VHF coverage	Aircraft logs on after departure NZAA climbing through 10000 ft. ADS-C contract request and CPDLC connection request sent at 2129 and CPDLC CC is received. No response to ADS-C contract request which times out at controller position at 2139. A new contract request is sent at 2140 and ADS-C downlink is received at 2140:25 with ACK1 ACK0 and periodic report which has a basic position timestamp of 2129:49 - the time of the original contract request. A further downlink is received at 2140:31 NAK - request for contract 0 rejected due duplicate request number.	The ADS report was delayed behind a CC1 downlink. When that CC1 downlink was timed out and retransmitted, the ADS report was then immediately transmitted. The second ADS request was then rejected due to it using the same contract number. This is believed to be due to a known B787 software issue that has now been corrected.
1505-SN	NAT	ACTIVE	TBA	Duplicate waypoints in ADS reports	This is just one example of a repeated problem where we received ADS waypoint reports with duplicate positions for the "now" and the "next" position. It was originally thought that aircraft were reported a few minutes ahead of the waypoint and then the next was showing up as the actual waypoint however there is an example where the next is actually behind the reported waypoint.	The CRA have asked for some more recent events to investigate. For the primary flight addressed in this PR the positions for the "now" and the "next" positions were NOT the same. Also, the problem involving an Airbus airplane appears to be a different issue under investigation by Airbus (documented in PR 1368).
1506-SN	SOPAC	CLOSED AS DUPLICATE	mult	CPDLC disconnection during position report out of SYD	In the climb, ATC centre YMMM was notified (Approx 041115Z 20000ft), CPDLC and ADS was established and connected. Position reporting was sent and immediately CPDLC disconnected. Melbourne centre advised us that we appeared to be logged on CPDLC, but position reporting was not coming through.	Closed as a duplicate of PR 1540.
1507-MM	ASIA	CLOSED AS DUPLICATE	AIR-t	Datalink connection problem with Colombo	Datalink established with Colombo. However, "Colombo Radio" advised that datalink disconnected. Reestablished datalink with "VCCF" but unable to send messages. Messages received from "VCCF" ok, but again unable to accept. No auto transfer to/from VCCF was informed through company NOTAM, confirmed to be the case on previous day, however messages sent ok. Nil aircraft faults evident and YMMM datalink Ok.	Closed as a duplicate of PR 1145.
1508-MM	NAT	OPEN	AIR-t	Poor performance in AOR via XXH	ADS-C downlink performance over XXH (I-4 Americas [Paumalu] Classic Aero via ARINC) is meeting 95% GOLD criteria but is notably lower than most other paths indicated by GES ID. Appears to be an operator and/or aircraft issue.	Analysis of relevant performance indicates that one operator's B744 fleet is the likely source of poor performance. The CRA advised the operator to confirm that SDU ORT for B744 fleet is configured for high-speed Inmarsat Classic Aero and if it already is then to contact ARINC (their DSP) to confirm that other ORT settings are those that ARINC recommends.
1509-MM	NAT	CLOSED	AIR-t	CPDLC worked till passing 30W	CPDLC WORKED UNTIL WE PASSED 30W. THEN IT DID NOT SENT POS REPORTS.	Apparent Iridium (or other) avionics problems caused CPDLC and ADS-C message delays sufficient to prevent normal operation. In the downlink direction, multiple downlink messages delivered via Iridium were delayed by more than 60 seconds and the CMU reverted to delivering multiple other downlink messages via HFDL (perhaps because it did not receive acknowledgments when it attempted to deliver them via Iridium; whether the SDU did not receive them from the Iridium network or the CMU did not receive them from the SDU is unknown). In the uplink direction, multiple uplink messages failed to be delivered via Iridium (i.e., were not acknowledged by the aircraft) but were successfully delivered via HFDL. These behaviors collectively indicate likely Iridium (or other) avionics problems on the airplane in question. Informed aircraft operator of assessment and obtained permission to close PR with recommendation to check the SDU and its installation.
1510-MM	NAT	OPEN	NETWORK	Failed CLX Delivery	Failed CLX delivery. ARINC indicated "AIRCRAFT NOT LOGGED ON 234" MAS failure to CZQX.	ARINC unable to deliver CLX to aircraft via VHF datalink, but ARINC indicated "AIRCRAFT NOT LOGGED ON [to SATCOM] 234" MAS failure to CZQX even though aircraft not SATCOM-equipped. PR assigned to ARINC to investigate discrepancy. ARINC responded that "[t]he ARINC ATC Gateway is configured for a fixed response to Nav Canada and other directly connected ANSPs. The default setting is 'Fixed' where a fixed response is sent to the ANSP. This response is set to Code 234 'Aircraft Not Logged On'; other options include 'Last' and 'Preferred'. ('Last' would return the last intercept received from either the ARINC GMP or SITA. 'Preferred' would send the one received which has the highest preference of a predefined list.)"
1511-MM	NAT	CLOSED	None	Failed CPDLC Uplink Delivery	Failed CPDLC uplink delivery. ARINC indicated "AIRCRAFT NOT LOGGED ON 234" MAS failure to CZQX.	Aircraft was apparently transitioning between satellites/GESs at time SITA attempted to deliver CPDLC uplink in question. SITA confirmed that the network performed as designed, indicating that "For the first uplink in question SITA was going to attempt via SATCOM, however, SITA detected that the aircraft was not logged on, likely due to transitioning, so then attempted via VHF. At the time of the second uplink, the aircraft was logged onto SATCOM, so, the uplink was attempted and successfully delivered via SATCOM." When this PR is briefed at the next set of FIT/CRA meetings, however, the CRA should pose the question whether ATS units in this situation should resend failed uplinks, just as flight crews may resend failed downlinks. Another possible change is for DSPs to implement more dynamic uplink routing logic to possibly better handle situations like this.
1512-GS	SOPAC	OPEN	mult	Loss of data link - B788 (multiple aircraft)	Numerous instances of B788 data link problems. All appear to be SATCOM related.	Problem has occurred with multiple operators. Two causes have been identified: 1) Aircraft not logged on to an Inmarsat satellite (Also see PR 1484-GS). Reason for aircraft not being logged on is under investigation 2) Known software issue that causes comm NOT to transition from VHF to SATCOM (Also see PRs 1439-GS and 1483-GS; to be fixed in late 2014)
1513-SN	SOPAC	CLOSED	AIR-t	ADS-C periodic report not received - GLF5	An expected periodic ADS-C report was not received, but a WCE report was received shortly afterwards.	A/C lost VHF about the time of the issue, so I suspect it was trying VHF and it took it a while to fail the media and switch to using SATCOM.

CRA number	Region	Status	Type	Title	Description	Findings
1514-SN	SOPAC	OPEN	AIR-t	Loss of CPDLC, ADS-C - A332	CPDLC/ADS-C had been previously established. At approximately 0420, a warning message was displayed that an expected ADS-C report had not been received. Subsequently, there was no response to CPDLC End Service message. A number of End Service messages sent approaching and crossing the FIR boundary were unsuccessful. Symptoms were similar to a SATCOM failure leaving VHF coverage.	This problem was the result of a known satcom failure with one Satcom manufacturer (Rockwell-Collins). Satcom dropped off in flight and got back few minutes later. The problem will be corrected at the next opportunity.
1515-SN	SOPAC	OPEN	AIR-t	Unable to load UM80 - A332	At 0617 the following was uplinked: CLEARED [TABAL JORDY (3223.6S 15441.2E) SHARK MARLN SY], where TABAL was an existing point on the route of the aircraft, and waypoint JORDY included an optional lat/long. The flight crew advised that the clearance "could not load, probably because of the lat/long included" AT 0628 a similar clearance was uplinked: CLEARED [TABAL 3224S 15441E SHARK MARLN SY], where TABAL was still an existing point on the route of the aircraft. The flight crew advised that this clearance also could not be loaded, and when queried advised that the error was "Duplicate waypoint"	Per Airbus analysis, the load failed as SHARK was a duplicate waypoint that could not be resolved by the avionics. The flight crew would have been notified by the avionics of the need to resolve the duplicate waypoint.
1516-GS	NAT	OPEN	AIR-t	Unexplained UM117 Uplink Message	At time 1203, Shanwick received a FANS message stating the following: [UNABLE EGTT ON 132.95] Controller could not understand why they would be trying to contact EGTT as he was at approximately 17W, and flying westbound. Investigation has shown that neither Shanwick nor UK Domestic Datalink systems sent any such message. It is not clear how the aircraft received this message.	On the preceding flight, the last operational uplink was a CONTACT + end-service (um117+um161). There was no response to this, and the ATSU disconnected with an ERROR+end-service (um159+um161). On this flight, around the time that a message with the same MIN as that previous CONTACT was sent, the crew saw (and apparently WILCO'ed) a CONTACT message. They then sent a free text, indicating they could not comply. This is under investigation by Boeing and Honeywell.
1517-MM	NAT	CLOSED	None	Failed CPDLC Uplink Delivery	Failed CPDLC uplink (END SERVICE) delivery. ARINC indicated "AIRCRAFT NOT LOGGED ON 234" MAS failure to CZQX.	ARINC unable to deliver END SERVICE uplink because aircraft transitioning from XXH (Inmarsat I-4 Classic Aero Americas [AMER] Region via ARINC) satellite/GES to XXF (Inmarsat I-4 Classic Aero Europe / Middle East / Africa [EMEA] Region via ARINC) satellite/GES. PR closed because network functioned as designed.
1518-SN	NAT	ACTIVE	GROUND	Automatice WPR Not Received	GANDER DID NOT GET AUTOMATIC REPORT AT 49N040W. MADE VIOCE REPORT. It appears that aircraft disconnected the ADS-C at 1352 and received new contracts at 1430. The expected arrival at N49W40 was 1416z (estimated) so the automatic system could not have made the report. The question is whether or not Gander received the Disconnect.	Per the ARINC log, Gander sent an ADS Cancel all and Terminate message to the airplane at 13:20 and demand (i.e., one shot) contracts at 13:27 and 13:36. When the FMC receives a demand contract request, it responds with the requested report and then sets a 16 minute inactivity timer. When that timer expires, the FMC terminates the ADS connection. The FMC sent an ADS disconnect at 13:52, 16 minutes after sending the demand report to Gander. So, there was no ADS connection at the time the airplane passed 49N040W. PR assigned this to Nav Canada for further investigation.
1519-GS	NAT	CLOSED	None	Unexplained Uplink Message (1)	A B772 active on CPDLC between 1051 - 1116 reported receiving "...a flash of a message" and queried whether they should change frequency; the message did not persist, and the crew seemed to be unsure of the exact frequency. They had previously been sent a CPDLC CONTACT message by the previous LAC controller.	This was reported too late to obtain ARINC logs. SITA logs are available, but indicate the airplane was using ARINC at the time. It is not therefore possible to undertake a thorough investigation. The report sounds as if there was a very brief display of an erroneous message, which sounds like a display anomaly, rather than a message log issue. There are no records of any such issues having occurred on 777 previously.
1520-GS	NAT	CLOSED	None	Unexplained Uplink Message (2)	A B788 active on CPDLC between 1800 - 1821 checked in with the S23 controller and was climbed. The aircraft then left the frequency. When it re-established communication with the S23 controller it reported some kind of CPDLC message, then left the frequency. At all times the flash was yellow (London not CDA). The controller instructed the aircraft to turn off CPDLC which was confirmed by the crew. The aircraft was then reconnected by the ground system around the time of the NDA notification - the crew confirmed they had done nothing to prompt this.	It's not at all clear what the flight crew saw. All we know is that they "reported some kind of CPDLC message". After the initial CPDLC connect, the ATSU sent two free text messages, both using MIN 0. The second arrived before the crew had responded to the first, so the avionics correctly sent an ERROR response indicating that a duplicate MIN had been received. The crew would have seen a display of "INVALID ATC UPLINK". It is possible that this is what the crew reported. Contrary to what is stated in the report, the crew did not terminate CPDLC from the flight deck. There was no disconnect (DR1) downlink, and if they had, the uplink connect request from the ATSU (without an additional logon) would not have worked. Given that the avionics was responding correctly, and that the erroneous uplink could explain the (admittedly rather sketchy) description in the report, I would put the issue down to the erroneous uplink. I propose to close this PR on this basis.
1521-SN	ASIA	OPEN	GROUND	No successful logon to WIII	NOTAM 1A1935/12 states to Log on to WIII. 1A1935/13 ALL ACFT FLT WITHIN JAKARTA UTA SECTOR MEDAN WEST ON ROUTE P570, M300,N563, P574,P756, P627, INDIAN OCEAN ON ROUTE L897, L896, M766, N628, N633 AND UPPER BANDUNG ON ROUTE N646, N752,L764, L895, B469, A585 SHOULD BE LOG ON ADS/CPDLC ADDRESS WIII FOR ATC MONITORING. REF AIP SUPPLEMENT NR 08/13 No Auto Trasfer from YMMM Datalink manually disconnected from YMMM, then logon attempted with WIII Numerous logon attempts resulted in Pending to ATC comm message. No successful Logon Achieved	Air Services Australia reported that YMMM is not currently configured to support automatic data link transfers to Jakarta. Also, the network mapping of Jakarta's 4-character logon identifier to their 7-character network address was not fully in place.
1522-SN	SOPAC	OPEN	AIR-t	No response to Climb Clearance	At 05:19:26 a climb clearance was issued which appeared to be received at 05:19:31, however there was no response. This clearance was later re-issued via ARINC. At 07:31:53 a climb clearance for F380 was issued to a different flight which appeared to be received at 07:32:01, however there was no response. At 07:35:59, a request for F380 was received from the pilot. The clearance for F380 was then re-issued via ARINC and the pilot reported that the climb clearance via CPDLC was never received.	The uplinks were delivered to the airplane (ack received from the CMU) but were apparently not delivered to the FMC. There have been several similar events reported involving B763s, B744s, and MD11s. Boeing is working with the CMU supplier and the affected operators to determine the source of the problem.
1523-MM	NAT	CLOSED	NETWORK	Failed CPDLC Uplink Delivery	Failed CPDLC uplink delivery. ARINC indicated "AIRCRAFT NOT LOGGED ON 234" MAS failure to CZQX.	Based recent similar PRs, aircraft was transitioning between satellites/GESs at time SITA attempted to deliver CPDLC uplink in question. Given that the network functioned as designed, this PR is closed. (Note: This PR is one of an increasing number of PRs [e.g., PR 1344-MM, PR 1511-MM, and PR 1517-MM] for uplinks that could not be delivered via Inmarsat Classic Aero SATCOM due to aircraft transitioning between satellites/GESs. These PRs suggest the need for ATS units to resend failed uplinks and/or for DSPs to implement more dynamic uplink routing logic.)
1524-SN	NAT	CLOSED	None	A330 sends END_SERVICE related error to non-CDA ATSU	Aircraft logged on at 06:15. Welcome message sent at 06:39 (indicating inbound boundary crossing) but rejected as Not_CDA. This sequence of Welcome/Not_CDA repeated three more times, the last Not_CDA received at 06:54:11. At 06:56:28 received a DR1 with an associated DM62 error reporting endServiceWithNoValidResponse. According to ED-100A paragraph 4.6.2.2.2 a) this is normal behaviour in response to an END SERVICE by the CDA (CZEG) which includes a UM159 error message (the recommended error being commandedTermination) in order to specifically provoke an abnormal termination by the aircraft. We fail to see the purpose of that uplink.	Per Airbus investigated, Edmonton sent an abnormal termination request (END SERVICE paired with [errorinformation]). The airplane responded correctly by terminating both the active and inactive CPDLC connections.
1525-MM	NAT	CLOSED AS DUPLICATE	GROUND	Unable to Logon to Bird FIR	Failed to logon CPDLC with BIRD FIR	Between 1049 and 1127, flight crew sent four AFN contact messages and BIRD responded with four corresponding positive AFN acknowledgment messages, but BIRD never sent any CPDLC connection requests (or at least none are present in the message log from ARINC). BIRD confirmed that PR caused by same issues that caused PRs 1443-GS and 1451-MM. This PR accordingly closed as a duplicate.
1526-SN	NAT	CLOSED	AIR-p	Oceanic Clearance Rejected	DATALINK OCEANIC CLEARNC REJECTED BY SHANWICK DUE TO INVALID REGISTRATION. ALSO UNABLE TO DO CPDLC LOGIN WITH SHANWICK/EGGX. WE WERE ABLE TO LOGIN WITH BOTH SHANNON/EISN AND GANDER/CZQX.	This OCL failed because the first downlink contained an incorrect 3-letter callsign – the scenario is as follows. In this instance, the first RCL was >90mins ahead of the boundary so the FSM advisory was uplinked to tell the crew to resubmit later. However, when this downlink is received (with incorrect callsign), it creates a profile in the ground system associated with the incorrect flight id. The a/c then followed up with an RCL shortly after with the correct callsign, but because the ground system had previously created the profile, FSM advisory was issued stating the downlink was invalid.
1527-MM	NAT	CLOSED	None	ADS-C WPR not Received	DISPATCH REPORTED THAT AUTOMATIC REPORTS (WPR) WERE NOT RECEIVED IN MONTREAL AIRSPACE OVER POSITION YBC.	Flight crew generated problem report indicating that company dispatch did not receive ARINC 702 AOC position reports for YBC, PEPKI, and 8050N. PR closed because the problem is not a FANS or ARINC 623 problem. (The DLMA did, however, briefly investigate the problem report and indicate to the aircraft operator that ARINC 702 AOC position reports for YBC and 8050N are in fact present in the DSP's message log and that communications appear to have been successful around the ETA at PEPKI.)
1528-SN	SOPAC	CLOSED	None	CPDLC downlink received before it was sent - A332	A CPDLC downlink was received with a time stamp of AFTER it was actually received.	The problem was reported too late to acquire logs for review.
1529-SN	ASIA	CLOSED	AIR-p	UNABLE LOGON WIIF	As par company NOTAM NO AUTO TRSF to WIIF and was unable to establish CPDLC contact with WIIF	Pilot used the wrong logon identifier. The logon id for Jakarta is WIII. There are plans to change to WIIF at some time in the future.
1530-SN	ASIA	OPEN	GROUND	No Auto transfer	Autotransfer from VCCF to VOMF did not occur. NDA was blank Other than that other CPDLC functions worked normally.	VCCF did not initiate any of the messages required for transfer (no NDA, AFN_CAD, or End Service). At 0352z, VCCF uplinked a free text message, "AT DUGOS CTC VOMF DATA LINK OR 6655/11285HF".
1531-SN	NOPAC	OPEN	GROUND	CPDLC downlink ERROR [Invalid Data]	Four different a/c responded to CPDLC route clearances with ERROR [Invalid Data]over a 2 hour period. Don't know if this was a problem with our ground system (ATOP), avionics (doubtful considering it was 4 different a/c) or SITA network.	The FAA reported that this PR was due to an ATOP problem. Anytime we include a STAR other then the domestic format as part of an UL80, it will get rejected by the FMS. When that occurs, we get a SQ message telling us that it was rejected. This is scheduled to be fixed in T23 software.

CRA number	Region	Status	Type	Title	Description	Findings
1532-SN	NAT	ACTIVE	AIR-t	ADS Timestamp the Same in Each Downlink	Every ADS timestamp received from this aircraft had the value 58:18.375. Looks like their clock had stopped?	The operator confirmed that the frozen timestamp originated from the aircraft. They are waiting to hear back from avionics engineering on the likely cause.
1533-SN	NAT	OPEN	AIR-t	INACCURATE CPDLC LEVEL CHECK	ATC issued a CPDLC climb clearance from FL330 to FL350 which the aircraft "WILCO'd" at time 0942. At time 0943, ATC received a CPDLC message saying "LEVEL 350". ATC issued an ADS DEMAND CONTRACT to the flight to confirm that it was actually maintaining the new level. The flight was only at FL333 climbing and in actual fact did not level at FL350 until 0949. The flight crew confirmed that they had not sent the report.	This problem has been duplicated at Honeywell. The fix is targeted to 777 Block Point 17A.
1534-GS	NOPAC	CLOSED	AIR-t	Datalink Anomolies	GOT A SAT CALL FROM ATC HQ IN CRAWLEY UK TO FIND OUT WHAT WAS UP WITH OUR SAT DATALINK. THEY HAD RCVD RPTS FROM BOTH RJJJ AND KZAK ABOUT THIS FLIGHT. WE HAD GOTTEN SAT DATA ADS AND CPDLC GOING AGAIN SHORTLY AFTER OCEAN ENTRY BY DL RESTART BUT AUTO POSN RPTS WERE SLOW TO STARTUP. ALSO LOST DL AGAIN XING FIR INTO KZAK SO LOGGED ON MANUALLY.	Investigation shows it was most likely a repeat of the issue where SATCOM datalink is not used after loss of Cat B VHF. The issue only happens when the timing makes it happen, so it doesn't happen every time. The issue was corrected in 787 software release BP2.5. The transfer failure (from RJJJ to KZAK) was a result of the issue of AFN contact advisory uplinks being ignored in certain circumstances, and was also corrected in BP2.5. The Service Bulletin for the BP2.5 software was released on 1/23/2015.
1535-SN	SOPAC	CLOSED AS DUPLICATE	None	CPDLC downlink received before it was sent - A332/KZAK	From 02/19/2014 - 02/20/2014 received multiple downlinks from one operator's aircraft that appeared to be sent approximately three seconds after they were received.	Closed as a duplicate of 1587
1536-SN	SOPAC	ACTIVE	TBA	CPDLC downlink received before it was sent - C17	Received multiple CPDLC downlinks from 1/7/2014 2310z - 1/8/2014 0321z that appeared to be sent over three minutes after they were received. This discrepancy was also observed in the ADS reports.	Operator investigation in progress
1537-SN	SOPAC	CLOSED	AIR-t	CPDLC downlink received before it was sent - GLF5	Received one CPDLC downlink that was sent 2 seconds after it was received. Additionally, at 1721z and 1735z, there were two ADS position reports that were received before they were sent. This occurred when the aircraft logged back on to Oakland center after going through Honolulu Center.	Event occurred too long prior to receipt of the report to get logs for investigation
1538-MM	NAT	CLOSED	AIR-t	CPDLC and ADS-C downlink delays of 6-7 minutes around W018	Crew noticed that some of the CPDLC messages took a very long time to send. When looking closer they noticed the HF IN USE msg on MCDU3. Apparently, the CMU didn't have a good signal for SATCOM and reverted to HF. Crew then disabled HF data. SATCOM IN USE then displayed on MCDU3 and the msg sent within about 20 seconds. This happened at least 2 times during their crossing. Initial Review by Boeing showed CPDLC and ADS-C downlink delays of 6-7 minutes around W018.	Operator reported no further problems with this aircraft and provided CMU h/w and s/w part numbers. Queried CMU supplier regarding next-on-busy functionality; supplier responded that CMU does have next-on-busy functionality.
1539-MM	NAT	OPEN	GROUND	SATCOM issues	Difficulties with ACARS functions. ACARS switching between VHF and SATCOM in a 10 min/6 min repeating cycle. Yesterday LHR/LAX we had random datalink comms difficulties commencing about an hour out of LHR. E.G. Shanwick received our RCL, we received a CLA but we did not receive the CLX. Scottish advised us they had received it - long and short is we reverted to VHF procedures. And other random uplinks/downlinks were not received. A photo of the MANAGER > SATCOM menu taken about the time things returned to normal showed a clear pattern of SATCOM Link Established for 6 minutes then no SATCOM Link for 10 minutes repeatedly. ACARS VHF and SATCOM was enabled and ACARS MANAGER page indicated normal ops.	NATS reported the following: "The CLX was not sent by Shanwick due to an incorrect route point (671.0N) error in the clearance data. The internal gateway therefore correctly rejected the message and the system 'failed' the datalink transaction warning the Controller. For some unknown reason the clearance timer did not reset so the reminder msg sent to the a/c for a clearance they didn't get." The DLMA queried NATS as to whether they will submit change requests for those problems (the incorrect route waypoint and the failed clearance timer reset) or if they believe that the problems were isolated issues.
1540-SN	SOPAC	OPEN	GROUND	Unable to establish CPDLC - A388	A CPDLC connection was established at 0332. At 0334 REQUEST POSITION REPORT was uplinked At 0339 REQUEST POSITION REPORT was uplinked The flight crew did not receive either message. On VHF, the flight crew reported that they did not have an active connection with YBBB. They did advise that when logging on to YBBB had been unsuccessful, they logged on to YMMM and successfully established a CPDLC connection. ADS-C appeared to be working correctly. Data link context management was re-set by the YBBB controller (a cumbersome procedure), and the subsequent logon was successful.	The pilot sent a logon to YBBB at 03:32:15. YBBB acknowledged and established a CPDLC connection with the airplane (CC1 received at 03:32:17). I assume something occurred on the airplane (possible avionics reset?) because the flight crew sent another logon to YBBB at 03:33:44. YBBB acknowledged the logon, but did not send a new connect request. The airplane consequently ignored the first Position Report request. At 03:35:06, the pilot sent a logon to YMMM. YMMM acknowledged the logon and established a CPDLC connect (CC1 received at 03:35:09). The airplane consequently ignored the second position report request from YBBB. DO-258A recommends that, "upon receipt of an AFN Contact (FN_CON) message while a CPDLC connection appears to already exist with the aircraft, the ATS Provider system should assume that a failure recovery has occurred in the aircraft CPDLC application". Assigned to Air Services to consider for a future enhancement to their ground automation.
1541-SN	NAT	ACTIVE	TBA	Aircraft reporting a rate of decent of -6016 ft/min	An event report was received indicating that the aircraft was descending at the rate of 6016 ft/min. Additional ADS-C reports were demanded from the aircraft, everything seemed normal by then.	The aircraft involved was a G5. Honeywell investigation in progress.
1542-MM	NOPAC	CLOSED	AIR-t	FANS PROBLEM REPORT OF LOG OFF	Departing KSFO, approximately, 45 minutes prior to waypoint KYLLE CPDLC logon with KZAK was successful with "ATC COMM. ESTABLISHED" message. Approaching KANUA, CDU showed KZAK as active center with CZVR as next controlling authority. Passing KANUA, CPDLC automatically logged off with "ATC COMM TERMINATED" message. After VHF voice contact and under positive radar control with CZVR, manual logoff of SATCOM was made for troubleshooting inability to establish data-link communications with company. Re-logon to SATCOM was later not possible. Thus CPDLC over SATCOM was not possible. For the remainder of the flight of the flight communications were via voice over HF radio except when within VHF range.	The CPDLC problems were caused by the same SATCOM issue that caused the company communications problems. Although SATCOM appeared to function during the previous flight, it did not function for this flight. After departing SFO, the aircraft used only VHF and (poor-performing) HF data link. The CRA (Boeing) has recommended to the operator that it test the SATCOM avionics on this aircraft and perform any indicated maintenance if they have not already done so, as it appears that the SATCOM issue occurred in the SATCOM avionics, not in the SATCOM network.
1543-SN	EUROPE	CLOSED	GROUND	FANS failure to transfer	CPDLC DID NOT SWITCH OVER FROM EDYY TO EGPX. HAD TO LOG OFF AND THEN MANUALLY LOG ONTO EGPX.	The ARINC log confirmed that Maastricht made no attempt to transfer the airplane to EGPX. There were no CPDLC messages exchanged after the connection was established at 0820z. We do not have anyone from Maastricht registered with the FIT CRA website. This FANS PR was closed and the CRA recommended that the operator file a PR with the CRO for this event.
1544-SN	EUROPE	CLOSED	GROUND	CPDLC Transfer Anomoly	APPCHING COAST-OUT FIX PIKIL WE WERE LOGGED ONTO EISN WITH EGGX ON DECK. 1 MIN PRIOR TO PIKIL WE RECD AN /ATC COMM TERMINATED MSG. WE THEN HAD TO LOG ON MANUALLY TO EGGX.	EISN sent the Next Data Authority message and then the End Service message without initiating the FN_CAD process, so EGGX was not alerted to establish a CPDLC connection. PR assigned to Shannon for further investigation.
1545-SN	NAT	ACTIVE	TBA	CPDLC Failure to Transfer	CPDLC DID NOT SWITCH FM EGGX TO CZQX AT 30W. WE HAD TO MANUALLY LOG ONTO CZQX.	EGGX never sent the Next Data Authority message to the airplane. This message must be sent to the airplane to enable the next data authority to establish an inactive CPDLC connection and facilitate a clean transfer. PR assigned to Shanwick for further investigation.
1546-SN	NAT	CLOSED AS DUPLICATE	AIR-t	Unable to CPDLC	UNABLE TO LOG ON CPDLC ALSO SEND POS. REPORTS.	The so-called "peripheral downlink lockup issue" problem was confirmed fixed in Rockwell-Collins CMU -012 core software.
1547-MM	NAT	CLOSED	NETWORK	Lost CPDLC	LOST CPDLC APPROACHING 30W EASTBOUND / UNABLE TO CONNX TO SHANWICK	EGGX stated that they actually did respond to multiple downlinks from the aircraft, but that those uplinks were rejected. Considering that EGGX attempted to send the uplinks via SITA and that the aircraft was receiving service from (i.e., was connected to) ARINC, this appeared to be an internetworking issue. PR accordingly was assigned to SITA to investigate further. SITA subsequently reported that the aircraft has been configured in their system with ARINC as its default SATCOM service provider, which will prevent further occurrences of this issue.
1548-SN	NAT	CLOSED AS DUPLICATE	AIR-t	Failure to Log-on	FMC WOULD NOT LOG ON TO CPDLC OR COULD NOT MAKE ANY FMC REPORTS TO DISPATCH. TRIED SWITCHING AUTOPILOTS AND FMC WITH NO HELP. UNABLE TO RECEIVE WIND UPLINKS TO FMC.	The so-called "peripheral downlink lockup issue" problem was confirmed fixed in Rockwell-Collins CMU -012 core software.
1549-SN	NAT	CLOSED	AIR-p	Failure to Log-on	OVER VIG TRIED TO LOGON W/BIRD N WAS REJECTED 3 TIMES.	Closed with originator's concurrence based on feedback from Isavia. "The aircraft was estimating our boundary at 10:50. At 10:15:50, 10:16:35 and 10:23:51 we received logons which we rejected with FAK4. The following guidelines on when to log on for FANS-1/A are contained in GOLD V.2 5.2.2 When to log on initially for data link services 5.2.2.1 When operating outside data link airspace, the flight crew should initiate a logon 10 to 25 minutes prior to entry into airspace where data link services are provided. Our system was simply not ready for the logon at the times mentioned above (though that last one was close!). At 10:49:52, just before the boundary, the crew logged on again and we accepted the logon. There then seems to have ensued a voice conversation between the crew and the ground because at 10:51 (while the "welcome message" was being transmitted) we see the radio operator relay to the crew the message to "try logging on again" – which they did at 10:51:36. We don't accept logons until the upstream centre has effected coordination with us. Premature logon attempts were the cause for the three rejects – but a fourth one 5 minutes later would have worked."

CRA number	Region	Status	Type	Title	Description	Findings
1550-MM	NAT	OPEN	GROUND	ANSP Unable to Receive Reports	CZQX WAS UNABLE TO RECIEVE POS REPORTS. ALSO RECEIVED MANY DOWNLINK ERRORS WITH CZQX. CPDLC WORKED FINE WITH EGGX.	Investigation of this PR revealed multiple problems. [1] The CPDLC climb request that the flight crew sent to CZQX at 1411Z contained invalid characters in an appended free-text message element. This caused CZQX to respond with a CPDLC message containing the ERROR invalidData message element, which explains to the flight crew's report of "downlink errors with CZQX". Invalid characters in an appended free-text message element is a known issue with the Pegasus FMS and is already being tracked with open PR 1155-GS. [2] Likely because CZQX did not receive a response to a CONFIRM ALTITUDE request (due to network and perhaps avionics issues), it sent an END SERVICE + ERROR commandedTermination uplink to the aircraft in accordance with contradictory ICAO GOLD guidance. This combination of uplink message elements caused the aircraft to terminate its CPDLC connection with subsequent NDAs instead of transferring authority to them. This issue is being tracked with open PR 1444-GS. [3] The aircraft experienced severe downlink delays during two periods due to apparent Iridium avionics and/or network issues that caused the aircraft to revert to HFDL. These delays explain the flight crew's report of "CZQX was unable to receive POS reports". The DLMA has requested ARINC to investigate these delays and has created PR 1643-MM to track this set of problems.
1551-MM	NAT	CLOSED AS DUPLICATE	GROUND	Failure to Send Position Report	FANS FAILED TO REPORT 50W	Contrary to the flight crew report that "FANS failed to report 50W", message log analysis shows that ARINC received an ADS-C waypoint change event report for W050 from the aircraft. The aircraft generated the report at 13:59:07 and ARINC both received the report and sent the report to CZQX (YQXE2YA) at 13:59:50 (43 seconds later). This PR is assigned to Nav Canada to confirm that they received the report and (presuming that they did) investigate how they handled it.
1552-MM	NAT	ACTIVE	GROUND	Failure to Transfer	CPDLC FAILED HANDOFF FROM EGPX TO EISN	Message log analysis substantiates flight crew report that EGPX did not transfer CPDLC authority to EISN. PR accordingly assigned to UK NATS to investigate further.
1553-MM	NAT	OPEN	GROUND	Failure to Transfer	CPDLC DID NOT TRANSFER FROM CZQX TO CDQX	Nav Canada indicated that it did not send the END SERVICE due to an open CPDLC dialogue, which was caused by Nav Canada receiving two duplicate versions of the flight crew's 1349Z climb request (one via VHF and one via Iridium) and treating them as independent messages. (The duplicate versions almost certainly occurred because the aircraft had weak VHF coverage and did not receive ARINC's ACARS uplink acknowledgements to the downlink climb request.) This PR and its implications for possible formal avionics and ATS unit requirements to detect and discard duplicate message versions (as some avionics and ATS units already do) should be discussed at NAT CNSG/11.
1554-MM	NAT	CLOSED AS DUPLICATE	GROUND	Failure to Transfer	HAD TO SELECT ATC COMM OFF AND RE-LOG ONTO CZQM TO ESTABLISH ACTIVE COMM	This PR is closed as a duplicate of PR 1553-MM because they share a common cause, namely CZQX failing to transfer CPDLC authority to CDQX so CDQX could in turn transfer CPDLC authority to CZQM.
1555-SN	NAT	CLOSED	None	Iceland Unable to Contact Aircraft	Current position N83W043. Iceland radio just advised they were unable to contact us for 30 minutes. We have had SatComm and Data Link going in and out constantly.	An ADS report sent at 2048z indicating the airplane was at 84deg N latitude. That's at the hairy edge of Inmarsat's coverage. Comm kept changing between satcom and HFDL. The airplane appeared to have stayed in comm, but communication was slow. Given where the airplane was, I think the comm system behaved as expected.
1556-GS	NAT	OPEN	AIR-t	Unable CPDLC	UNABLE CPDLC WITH GOOO/DAKAR OCEANIC	The log shows multiple AFN logons, all of which receive a successful response. After each logon, ADS contracts are requested and responded to successfully. When the CR1 (CPDLC connect request) was sent, there was a network ack, but no application response. The root cause for the CR1 uplink being effectively ignored has been found by Honeywell, and will be resolved in 787 software release BP3 (4Q15).
1557-SN	NAT	CLOSED	AIR-p	Unexpected Route Point in ADS Report	The following is the narrative reported by ATC: At time 1302 we received an ADS report showing DOGAL direct 3936N7400W instead of 55N020W as cleared. We ping'd the flight immediately to get an update and the next ADS report at 1303 said the same. We issued correcting route instructions to the flight on HF which was read back straight away and the flight then sent us an ADS update routing to55N020W. When we told the flight we had received this pos report they stated that they were going to 55N020W track E. The system logs confirm the downlinks contained this route point.	PR 1557 air/ground traces were not analysed as the event description pointed out a pilot modification rather than a system error (once pilot received corrective instruction from ATC the route was immediately corrected as it reflects in ADS-C contract).
1558-SN	NAT	CLOSED	None	ADS-C and CPDLC disconnected without crew intervention	Aircraft was westbound from the Santa Maria FIR into the New York FIR. The aircraft was logged on Santa Maria. Santa Maria transferred the connection to New York at 1217Z. A successful ADS-C and CPDLC connection was obtained with New York by 1218Z. The aircraft crossed over the FIR boundary at 1222Z and when it did, both the ADS-C and CPDLC connection became disconnected with New York. The aircraft then sent a new FN_CON and a new ADS-C and CPDLC connection was established. At 1235Z I asked the aircraft why it disconnected and reconnected to New York and the crew stated "WE DIDNT MANUALLY LOG OFF AT 40W". So, if the crew did not do it then who did?	The second logon was the result of the airplane having received a duplicate contact advisory uplink. From the airborne perspective, the airplane behaved correctly.
1559-GS	NOPAC	CLOSED	AIR-t	Data Link Lost	Data Link lost	The time in the PR is noted as 1350z, which was the time of the crew report from the flight deck (delivered over HF, and there's a media advisory saying HF was established at 1347z). Interestingly, origin, destination and scheduled date are invalid in that crew report. The last transmission on SATCOM from the airplane was at 0947z, when it sent a network ack. The flight number was still 0000, so I assume it was on the ground – it changed to a "real" flight number right after that. Then, nothing, until 2041z, when it sent an FMC position report timed at 1136z, so that must have been sitting in the queue all that time. All media advisories from 1121z up to (but not including) the one at 2041z show SATCOM as not available. So, here we have a blocked FMC downlink, that probably prevented any further FMC downlinks (this was the only one after 0811z on this flight). The loss of SATCOM explains the DATALINK LOST, and I propose to close this on that basis. Investigation of the SATCOM loss and FMC downlink issues will be conducted by Boeing/Honeywell separately.
1560-GS	OUT OF REGION	CLOSED	AIR-p	CPDLC Problems	Having problems logging into CPDLC	Flight was outside of FIT/DLMA area of responsibility.
1561-SN	NAT	CLOSED	None	Position Reports	FMC pos repots not sending. ACARS shows connected	Issue related to FMC WPRs, not CPDLC. PR closed since it was not a FANS problem.
1562-GS	NOPAC	CLOSED	None	Position Reports not Transmitting	Will not send auto FMC position reports.	Issue related to FMC WPRs, not CPDLC. PR closed since it was not a FANS problem.
1563-GS	NOPAC	CLOSED	None	Position Reports Failure	Can not send FMC position reports. Have to send manual reports	Issue related to FMC WPRs, not CPDLC. PR closed since it was not a FANS problem.
1564-GS	NOPAC	CLOSED	GROUND	CPDLC Handoff Failure	About 4 times an hour we got the temp Comm interrupt message - resend message. Also no auto change from PAZA to PAZN. Had to turn off ATC com. Then re-logon to PAZN manually.	The first part of the report is an FMS datalink issue, so not part of the CRA investigation. The remainder of this discussion relates to the transfer failure. Oakland (KZAK) set up for a transfer, starting at 2056z, by sending an NDA (nominating PAZA), and an AFN contact advisory. PAZN had an NDA CPDLC connection established by 2059z. Between 2123z and 2131z, the airplane requested a climb to FL390 from Oakland, received the clearance and executed the climb. AT 2136z, Oakland instructed the airplane to contact PAZA, and received a WILCO. But there was no end-service. Between 2159z and 2226z, PAZA attempted to transfer to PAZN by sending an NDA message, an AFN contact advisory and an end-service. The CPDLC messages (including the attempt to establish an NDA connection by PAZN) resulted in rejections, because Oakland was still the CDA. At 2228z, Oakland finally sent an end-service, causing PAZA to finally become the CDA. At this time, an ADS report shows the airplane at around N56W167 (well inside PAZN airspace). The crew then attempted a logon to PAZN at 2256z, which failed to create a CPDLC connection (because PAZA was the CDA, and there was no designated NDA). Finally, at 2259z, the crew terminated CPDLC and then logged onto PAZA successfully. The causes of this event were therefore: (a) Oakland failing to send the end-service in a timely manner, and (b) PAZA continuing to attempt the transfer to PAZA, even though the messages it sent were rejected because PAZA was not the active center.

CRA number	Region	Status	Type	Title	Description	Findings
1565-MM	NAT	CLOSED AS DUPLICATE	GROUND	Position Reports Failure	CPDLC failed to transmit position report to CZQX	Analysis of ARINC's message log revealed that the aircraft actually did send the W030 waypoint change event report to CZQX. Transmission of the report was delayed by 219s, however, apparently due to a temporary high concentration of other ATS and AOC messages. The other ATS messages include the W030 waypoint change event report for EGGX as well as event contract request numbers 3 and 4 that ARINC received from CZQX 150s apart but transmitted to the aircraft only 26s apart (again likely due to the temporary high concentration of other messages). The aircraft combined into one ADS-C message the W030 waypoint change event report, the ADS-C acknowledgements to the two event contract requests, and the two altitude range change event reports that the event contract requests triggered (because the aircraft was at FL350 but both contract requests specified 33,700'-34,300' as the altitude range), which indicates that the additional contract requests likely contributed to the delay in the avionics and/or network. This PR is assigned to Nav Canada to confirm that CZQX received the W030 waypoint change event report and (presuming that it did) investigate how it handled the report. Closed as a duplicate of PR-1479.
1566-MM	NAT	CLOSED AS DUPLICATE	GROUND	Position Report Failure	CPDLC failed to send 40W position report to CZQX	Analysis of ARINC's message log revealed that the aircraft actually did send the W040 waypoint change event report to CZQX at 1044Z and that the report experienced only 9s of delay. This PR is assigned to Nav Canada to confirm that CZQX received the W040 waypoint change event report and (presuming that it did) investigate how it handled the report. Closed as a duplicate of PR-1479.
1567-MM	NAT	CLOSED AS DUPLICATE	GROUND	Position Report Failure	CZQX did not receive our 50W position report via CPDLC even after logging off and back on prior to the fix. CPDLC confirmed logged on.	Analysis of ARINC's message log revealed that the aircraft actually did send the W050 waypoint change event report to CZQX at 1128Z and that the report experienced only 10s of delay. As the flight crew indicated in their description of the problem, in an effort to resolve recurring ADS-C issues for this flight (see also PRs 1565-MM and 1566-MM) they manually terminated the aircraft's CPDLC connection with CZQX at 1104Z and then manually reestablished it, which was unnecessary because the CPDLC and ADS-C applications are independent and indicates an opportunity to improve flight crew and/or controller training. This PR is assigned to Nav Canada to confirm that CZQX received the W050 waypoint change event report and (presuming that it did) investigate how it handled the report, as well as determine if the controller instructed the flight crew to terminate and then reestablish the CPDLC connection. Closed as a duplicate of PR-1479.
1568-RP	NOPAC	CLOSED	None	HF Datalink Lost	HF Datalink lost	The data analysed shows that at 1129z the aircraft only had HF connection. Then at 1151z, the aircraft had only SATCOM connection. HF connection was not re-established till 1222z which concurs with the reported HF datalink lost. The system looks to be working correctly and the message was appropriate.
1569-RP	NAT	OPEN	GROUND	CPDLC Logon Issues	Experienced CPDLC log on issues. Logged on normally to domestic EISN. Would not make the transfer to EGGX. Past N57W020 still unable to log on. We had no problem with our comm or originally signing on with EISN.	CRA investigation in progress.
1570-RP	NAT	CLOSED	AIR-t	Failure to Log On	CPDLC inop. Tried to toggle freqs. Logged on/off -3 times - unsuccessful	The analysis shows that there was intermittent media loss during the time the PR was reported (for about 40min). Without a media to transmit the messages, CPDLC would not have logged on or worked correctly. SATCOM was re-established at 1122z as was HF connection. After this the aircraft logs on to CZQX. The ATC connection is completed successfully and normal CPDLC communication was seen.
1571-SN	CANADA	CLOSED	AIR-p	Old/Miscellaneous CPDLC Uplink	Tonight at 0042z flight at FL370 said that he received a CPDLC climb to FL350. The flight originated out of PANC and entered our airspace around 0006z. We asked the pilot who he showed as CDA and he responded CZEG. We sent a test message which took about 4 minutes to go through but did work. We then asked if he could see who sent the climb message, and he said that it came from PANZ and was time stamped 2314z."	Based on this problem description, the initial theory was that the reported problem was the issue addressed in Interim Operating Procedure 2-228A - PEGASUS FMS - ATC LOG DATA (FANS ENABLED). Review of datalink air/ground communication logs from March 27 to April 1 for the aircraft involved confirmed that no clearance to climb to FL350 was issued during that time frame. The reported problem was likely the result of the flight crew misinterpreting the text of a downlink in the FMC's ATC LOG. At 2314z the flight crew transmitted a CPDLC Position Report. Since the airplane was climbing when the position report was sent, the position report downlink included an indication that the airplane was climbing to FL350. Addition of the "climbing to" message element is not visible when the crew sends a position report. It is visible when the downlink message is selected for view from the ATC LOG. For this particular case, the text of the downlink would have been displayed as: POSITION REPORT. CLIMBING TO FL350.
1572-SN	ASIA	CLOSED AS DUPLICATE	GROUND	Position not updated inspite of issuing demand contracts	Aircraft FPL routing via L645 SAMAK.Pilot reported routing via L645 DUBTA P574 NOPEK.Despite giving demand contract aircraft position displayed as continuing on FPL routing via L645 SAMAK.	Closed as a duplicate of PR 1573.
1573-SN	ASIA	OPEN	GROUND	Position not updated after giving demand contract.	Aircraft position appeared over waypoint BIKEN when aircraft was actually East of waypoint IGOGU.Aircraft crossed IGOGU at 1400 FL340. Inspite of repeated demand request position not updated on Situation display.	Per Airbus analysis, The ADS-C data reported in the PR is not what is sent by the aircraft and recorded in the air/ground traces. ADS-C report displayed to the controller is not correct whereas the ADS-C report sent is correct (matching aircraft position).
1574-SN	ASIA	CLOSED AS DUPLICATE	GROUND	Position not updated after giving demand contract.	Aircraft position crossed waypoint SULTO in Situation display , whereas as per DEMAND ACK the aircraft position was East of DUBTA on P574	Closed as a duplicate of PR 1573.
1575-SN	ASIA	CLOSED	AIR-t	ADS Disconnected Automatically	ADS Disconnected Automatically and connection was re-established shortly.	Per Airbus feedback this problem has been corrected in FANS A+ (CLR4).
1576-SN	ASIA	CLOSED	None	CPDLC message not Transmitted	CPDLC UPLINK Message not deliverd to Aircraft.	The event date in the problem report was incorrect and Airbus were consequently unable to procure logs to investigate.
1577-SN	ASIA	CLOSED	NETWORK	Receiving error messages	Connected on ADS/CPDLC but only error messages received. Message exchanges with other aircraft normal.	SITA believes this problem to have been the result of an Inmarsat problem on February 5, 2014.
1578-SN	ASIA	CLOSED AS DUPLICATE	GROUND	Position not getting updated on Situation Display	Aircraft ADS/CPDLC connected and estimating IGOGU 0100. Aircraft position displayed near BIKEN. Repeated demand request not updating the aircraft position on Situation Display.	Closed as a duplicate of PR 1573.
1579-SN	ASIA	CLOSED AS DUPLICATE	AIR-t	ADS Emergency indication	ADS Emergency indication received twice.Aircraft confirmed both on CPDLC and VHF all operations normal.	Based on a review of the logs for this event, we suspect that this is the result of an issue we've seen a few times over the last several years. The 747-400 has a foot rest for the first officer on the side of the aisle stand, near to the MCDU (the primary interface to the flight management computer). When the FO has the ATC LOGON/STATUS page displayed on the MCDU, it is possible for him to inadvertently activate ADS in emergency mode with his foot. When we developed the new FMC for the 747-8 (retrofittable to the B744) we purposely placed the ADS emergency prompt where the FO couldn't get to it with his foot.
1580-MM	SOPAC	CLOSED	GROUND	Failed CPDLC transfer from YBBB to NZZO	NZZO WAS SHOWN AS NEXT CENTRE. ATC COM TERMINATED BY YBBB REQUIRING MAN LOGON NZZO.	Air Services confirmed that this software fault was corrected August 2014.
1581-MM	CANADA	ACTIVE	GROUND	Unable to log on to CZEG	UNABLE TO LOGON TO CZEG. EDMONTON ADVISED GOOD CPDLC WITH OTHER A/C. AUTO REPLY TO A/C WAS RE-LOGON TO ATC COMM.	CZEG responded to all six AFN contact messages with AFN acknowledgement messages containing reason code 4 ("Could not match ID/position to flight plan"). PR assigned to Nav Canada to investigate further.
1582-MM	SOPAC	ACTIVE	GROUND	Failed CPDLC transfer from YBBB to NZZO	ON EXPECTED TRANSFER YBBB-NZZO COMS TERMINATED INSTEAD OF TRANSFER.	NZZO appears to have sent its CPDLC connection request too late. PR assigned to NZZO to assess further.
1583-MM	ASIA	ACTIVE	GROUND	No auto transfer from VRMF to VABF	No auto transfer from Male to Mumbai too at BIBGO on L894. Manually log on to Mumbai (VABF).	The transfer from VRMF to VABF at 0527Z failed. VRMF did not properly designate VABF as the NDA, perform AFN address forwarding to VABF, and send an END SERVICE message element to terminate its CPDLC connection. The flight crew manually terminated the CPDLC connection with VRMF and manually performed an AFN log on to VABF, which allowed VABF to establish a CPDLC connection with the aircraft. PR assigned to MACL (Maldives Airports Company Limited) to investigate further.
1584-SN	NAT	ACTIVE	TBA	C17 sent DR1 along with DM62	A DR1 message was received from the A/C along with an error message; "[DM62] ERROR NO AVAILABLE MIN". According to our logs, the MIN of the last CPDLC message sent by the A/C was 2.	Boeing C17 team investigation in progress
1585-GS	NAT	OPEN	AIR-t	B788 did not response to ADS contract requests	Aircraft did not response to ADS contract requests and made no ADS reports, other communications proceeded normally. MAS-Success was received three seconds after the contract request was sent.	The apparent failure to respond to the ADS contract request was investigated by Honeywell, and found to be a timing issue that caused the downlink (and all subsequent ADS downlinks) to be lost. This problem was corrected in BP 2.5. Also see PR 1586). The second part of this PR (message that combined a CPDLC label, an ADS disconnect IMI and a previous CPDLC disconnect downlink) is under investigation.
1586-GS	NAT	CLOSED	AIR-t	B788 did not response to ADS contract requests	Aircraft did not response to ADS contract requests and made no ADS reports, other communications proceeded normally. MAS-Success was received 4 seconds after the contract request was sent.	The apparent failure to respond to the ADS contract request was investigated by Honeywell, and found to be a timing issue that actually caused the downlink (and all subsequent ADS downlinks) to be lost. This problem as corrected in BP 2.5. Also see PR 1585).

CRA number	Region	Status	Type	Title	Description	Findings
1587-SN	NAT	CLOSED	AIR-p	Timestamps in messages from A333 show that messages were sent after they were received	Timestamps in messages from the aircraft show that messages were sent after they were received.	Airbus provided the following analysis: "For some ATC messages the ground trace is less than the timestamp, and the time difference varies is only of a few seconds. As per the analysis it seems that the issue may be related to the clock, either the aircraft clock or with the ATC clock. Or, there might be another possibility, if the clock has been switch manually from GPS synchronized to Internal mode enough long, it may results in time discrepancy. But above assumption having no clear evidence, as there is no Clock/MMR issue detected from maintenance message analysis. The issue would then be linked to either: - Aircraft clock not GPS synchronized - ATC center clock. To conclude the same investigation should be done on ground to detect if no issue reported and if ground clock was also GPS synchronized. If the issue is recurrent with an aircraft come back to us so that we can check with the airline if the clock is GPS synchronised and was not put into internal mode"
1588-GS	NAT	CLOSED	AIR-p	CPDLC Auto Transfere Failure	CPDLC fails to auto transfer from center to center. Required manual log off from domestic Gander and manual logon to Gander Oceanic. Also same for transition from Gander Oceanic to Shanwick center.	CRA investigation in progress.
1589-SN	EUROPE	CLOSED	AIR-p	Failure to Auto Transfere	Logged onto EGTT okay but failed transfer to EISN. Manual login to EISN was okay.	The stated problem was that the flight crew logged onto EGTT (London UIR) and there was no automatic transfer to EISN. This was because London never had control of the flight; it was controlled from Prestwick Center. Had the flight crew logged onto Prestwick, there still would have been no CPDLC communication, other than that the automatic transfer to Shannon would have occurred. CRA are confirming with the operator that guidance is in place directing flight crews to make the first logon with Shannon.
1590-MM	NOPAC	ACTIVE	GROUND	Failure to Auto Transfere	Failure for auto switch PAZA to PAZN crossing 165W. Had to manually switch when ATC requested. Happening often lately.	Message log analysis indicates that PAZA transferred CPDLC authority to PAZN approximately 11 minutes late -- the aircraft crossed W165 at approximately 0140, but PAZA did not send END SERVICE until 0151. PR assigned to FAA to investigate further.
1591-SN	NAT	CLOSED AS DUPLICATE	mult	Failure to Auto Transfere	No CPDLC handoff from EGGX to CZQX. ATC com terminated. Logged onto CZQX manually.	This PR is a duplicate of the problem described in PR 1444-GS; EGTT sent the END SERVICE message with an errorinfo element. This combination is known to cause every subsequent transfer attempt to fail.
1592-SN	CANADA	CLOSED AS DUPLICATE	mult	Failure to Auto Transfere	No auto CPDLC handoff from CZQX to CDQX. ATC com terminated. Logged onto CDQX manually.	This PR is a duplicate of the problem described in PR 1444-GS; EGTT sent the END SERVICE message with an errorinfo element. This combination is known to cause every subsequent transfer attempt to fail.
1593-SN	CANADA	CLOSED AS DUPLICATE	mult	Failure to Auto Transfere	CPDLC failed to auto transfer from CDQX to CZQM. ATC com terminated. Manually logged on to CZQM.	This PR is a duplicate of the problem described in PR 1444-GS; EGTT sent the END SERVICE message with an errorinfo element. This combination is known to cause every subsequent transfer attempt to fail.
1594-SN	SOPAC	CLOSED	AIR-t	Loss of CPDLC - A333	A CPDLC connection was established, but CPDLC downlinks were not received.	This airplane had a flakey satcom. The airplane seemed to have suffered a satcom failure as indicated by a media advisory message at 14:36 indicating loss of satcom. Melbourne's End Service at 15:12 and Brisbane's pos report request both received the dreaded "UP INTERCEPT NO STATION TO" response. It somehow got better between 18:40, when I see a media advisory message indicating there's no satcom, and 18:45 when a media advisory proclaims satcom is available. Satcom was lost again at 18:53.
1595-SN	NAT	ACTIVE	GROUND	Shanwich Did Not Receive Pos Report	Shanwich radio did not receive our position report at N51W020. ADS was active.	The "missing" position report was sent to Shanwick, but was concatenated with an ack to a subsequent demand contract request and the demand report. This can happen if the airplane is NO COMM when a report is due to be sent. Assigned to Shanwick for further investigation.
1596-MM	NAT	CLOSED AS DUPLICATE	GROUND	Position Report Failure	40W position report did not automatically transmit to CZQX although we were logged in and received confirmation of log in.	Message log analysis indicates that the aircraft generated the W040 waypoint change event report for CZQX at 14:09:11Z, that ARINC received the report at 14:09:13Z (two seconds later), and that ARINC sent the report to CZQX (YQXE2YA) at 14:09:13Z (zero seconds later). This PR is assigned to Nav Canada to confirm that CZQX received the W040 waypoint change event report and (if it did) investigate how it processed the report. Closed as a duplicate of 1479
1597-MM	EUROPE	CLOSED	GROUND	Failure to Transfer	CPDLC login did not auto transfer from EDYY to EGTT. CPDLC login did not auto transfer from EISN to EGGX.	Regarding the failed transfer from EDYY to EGTT, message log analysis indicates that EDYY designated EGTT as the NDA but EDYY did not perform AFN address forwarding to EGTT (which presumably would have triggered EGTT to send a CPDLC connection request) by the time that EDYY terminated its CPDLC connection at 1050Z. The DLMA provided this information to UAL and recommended that UAL submit a European CRO PR for this event. Regarding the failed transfer from EISN to EGGX, message log analysis indicates that EISN designated EGGX as the NDA but EISN did not perform AFN address forwarding to EGGX (which presumably would have triggered EGGX to send a CPDLC connection request) by the time that EISN terminated its CPDLC connection at 1214Z. The following information was received from IAA: "IAA\PT update 21st July '14:- The fault was traced to the EISN System periodically not sending EN_CAD after an uptime period. EISN software upgrade on the 10th June '14 fixed the problem."
1598-GS	NAT	CLOSED	AIR-t	Unable CPDLC	Unable to CPDLC LPPO. All other comm normal.	LPPO is one of three oceanic centers that got assigned ATN addresses in the EUR NSAP Address Registry (v3), although they have no near-term plan implement it. The others are Bødo and Shanwick. On the airplane, the database contains the addresses for Bødo and Santa Maria (Shanwick was not included, because it was known to have no immediate plans for ATN). So, if you enter LPPO or ENOB, and don't select the FANS check box, you'll be trying to perform an ATN logon. This airplane has ATN enabled, so my suspicion is that this was what happened. Certainly, there is no FANS logon to LPPO in the log, and the log shows no indication of any VDL Mode 2 operation at all. By the time the report of the problem was sent, the airplane was using SATCOM only. The crew would therefore have seen NETWORK NOT READY, with no SEND button, which seems to correspond to what was reported. Note that v4 of the Address Registry also includes Reykjavik. For the next update of the database, Reykjavik, Shanwick, Bødo and Santa Maria ATN addresses will all be excluded.
1599-SN	NAT	CLOSED AS DUPLICATE	AIR-t	Failure to Transfer	For the forth time CPDLC did not change over from CZQX to CDQX. Manual input was successful.	The transfer failure was due to receipt earlier in the flight of an END SERVICE message paired with an error message. This is known to result in failure of all subsequent transfers. This problem is being tracked under PR-1444-GS.
1600-GS	NAT	CLOSED AS DUPLICATE	AIR-t	Unexplained UM117 uplink Message (2)	Close to position ABAGU the pilot report having received a CPDLC message "CONTACT LFRR on 129.500". This message was not sent by EISN at this time.	CRA investigation in progress.
1601-MM	NOPAC	OPEN	GROUND	Failed CPDLC transfer from KZAK to RJJJ	NO TRANSFER FROM KZAK TO RJJJ EVEN THO THEY ADVSD NEW H/F..POS RPT SENT TO KZAK STILL NO TRANSFER.	KZAK indicated [1] that END SERVICE for transfer of authority to RJJJ at ~0450Z not automatically sent to aircraft due to 0357Z CONTACT PGZU pending uplink (which was permanently pending because KZAK sent END SERVICE immediately before) and [2] that it will submit a local problem report / change request to inhibit pending uplinks from preventing an automatic END SERVICE. PR status changed to OPEN.
1602-SN	SOPAC	ACTIVE	AIR-t	DR1 did not contain ERROR [commandedTermination]	A disconnect was received from HAL451 that did not contain ERROR [commandedTermination]].	A reset of the FANS application occurred with two pending uplinks which were then not answered. The scenario was played in lab but the problem was not reproduced.
1603-DK	SOPAC	ACTIVE	GROUND	Unable to establish CPDLC - Not next data authority	Unable to establish CPDLC connection due to not being the next data authority. NFFF stated that they had re-sent the NDA message several times, but CPDLC connection requests were still unsuccessful.	The NDA uplink from NANCDYA came 20 minutes after the expected logon. Nadi didn't designate YBBB as the NDA. PR assigned to NFFF to investigate further.
1604-SN	SOPAC	ACTIVE	AIR-p	ETA change with FMS active route manipulation	Multiple waypoint event reports received approaching hand-off to domestic NZZC boundary not at any filed waypoint: 2359:28 ETA 371525S1703924E 0004:53 0000:20 ETA 371525S1703924E 0009:41 0001:20 ETA 371525S1703924E 0004:53 2nd report has an error of 5 minutes. While this is most probably crew manipulating active route the predicted route positions did not change. However, the 0000:20 report contained INVALID Alt data	Aircraft involved was a FA7X. Honeywell investigation in progress.
1605-SN	NAT	CLOSED	AIR-t	A343 sends DR1 as a response to CPDLC message	Aircraft logged onto CPDLC, after connection was confirmed an automatic greeting message was sent to the aircraft. Instead of responding to the greeting message, the aircraft sent DR1 message back and disconnected. No error messages were sent with the DR1 messages except for the last DR1 message. The aircraft immediately tried to log on again but that attempt followed the same pattern as the previous logon attempt. This was repeated 10 times while the aircraft flew through BIRD area. The last message received from the aircraft was: CPDLC DISCONNECT REQUEST: [DM62] ERROR COMMANDED TERMINATION	The analysis shows that CPDLC connections are correctly established. Each time a CPDLC uplink message is received or sent on the connection, and the message has to be displayed on DCDU an ATC reset is observed. This issue is a known issue: when a new message must be displayed on DCDU and the time reference of the aircraft is out of the determined range (older than 1997) it resets. This anomaly has been corrected on the last FANS A+ standard Note that at first ATC reset, CPDLC and ADS are disconnected, but then ADS does no more start again. This is due to a known anomaly on FANS A corrected in FANS A+: After an ATC reset, ADS application will not restart until a manual ATSU disconnection is performed. This PR can be closed as the anomaly is already corrected in the latest FANS A+ standard.

CRA number	Region	Status	Type	Title	Description	Findings
1606-MM	NAT	CLOSED	GROUND	Transfer Anomaly	CPDLC log-in to EGTT was normal and EISN was showing as next, but approaching EISN border the CPDLC suddenly dumped both EGTT and EISN. Manual log-in to EISN was normal.	Message log analysis indicates that EGTT sent a CPDLC message containing the same MIN that was contained in a pending CPDLC message, which caused the aircraft to respond with a CPDLC ERROR duplicateMsgIdentificationNumber message and in turn caused EGTT to respond with a CPDLC END SERVICE + ERROR commandedTermination message. As described in NAT CNSG/10 WP/08 concerning PR 1444-GS and multiple duplicate PRs, sending END SERVICE + ERROR to Boeing 757 and 767 aircraft causes those aircraft to terminate CPDLC connections with subsequent NDAs instead of transferring CPDLC authority to them. (RTCA DO-219, the CPDLC standard to which those aircraft were built, does not define END SERVICE + ERROR as a valid CPDLC message element combination and ICAO GOLD ed. 2 contains contradictory text on this point.) UK NATS indicated that "the CPDLC 'double welcome message' from EGTT has now been eliminated. The last 'CPDLC ACTIVE' was sent on 13/11/2014. Hopefully this will alleviate some of the issues that have previously been observed, e.g. 'Duplicate MIN' issues."
1607-MM	NAT	CLOSED AS DUPLICATE	GROUND	Transfer Anomaly	Approaching coast out fix, the CPDLC again dumped. Went from showing EISN as active center with EGGX as next to ATC terminated. Manual log-in to EGGX was successful.	This PR is assessed to be a duplicate of PR 1444-GS and is closed accordingly. As described in that PR, abnormal CPDLC connection termination by a CDA (i.e., sending END SERVICE + ERROR) causes Boeing 757 and 767 FANS avionics to terminate CPDLC connections with subsequent NDAs instead of transferring authority to them until power is cycled to the avionics, in part because RTCA DO-219 (the CPDLC standard to which those avionics were built) does not define END SERVICE + ERROR as a valid CPDLC message element combination. In this case, EGTT sent END SERVICE + ERROR to the aircraft (a Boeing 757) at 0653Z, which caused it to send CPDLC DR1 messages to both EISN and EGGX at 0802Z in response to the CPDLC END SERVICE message that EISN sent at 0802Z.
1608-MM	NAT	CLOSED AS DUPLICATE	GROUND	Transfer Anomaly	For the 3rd time in a row the CPDLC did not switch over automatically. This time we were logged on to EGGX with CZQX on deck when we go the ATC terminated message. Manual log-on was ok.	This PR is assessed to be a duplicate of PR 1444-GS and is closed accordingly. As described in that PR, abnormal CPDLC connection termination by a CDA (i.e., sending END SERVICE + ERROR) causes Boeing 757 and 767 FANS avionics to terminate CPDLC connections with subsequent NDAs instead of transferring authority to them until power is cycled to the avionics, in part because RTCA DO-219 (the CPDLC standard to which those avionics were built) does not define END SERVICE + ERROR as a valid CPDLC message element combination. In this case, EGTT sent END SERVICE + ERROR to the aircraft (a Boeing 757) at 0653Z, which caused it to send CPDLC DR1 messages to both EGGX and CZQX at 0906Z in response to the CPDLC END SERVICE message that EGGX sent at 0905Z.
1609-DK	NAT	CLOSED	GROUND	Failure to Transfer	CPDLC did not switch automatically from EISN to EGGX. All other transfers occurred normally.	No AFN address forwarding from EISN to EGGX. This should have happened after the NDA from EISN. IAA provided the following feedback: "IAA\PT update 21st July '14:- The fault was traced to the EISN System periodically not sending FN_CAD after an uptime period. EISN software upgrade on the 10th June '14 fixed the problem".
1610-DK	CANADA	ACTIVE	TBA	Failure to Transfer	CPDLC did not auto transfer from CZQX to CDQX west bound.	It appears that the flight flew through Gander Domestic using voice. It was 42 minutes after disconnecting from Gander Oceanic that a manual logon to Moncton Domestic was made. No CR1 from CDQX (YQXD2YA) was observed. Assigned to Nav Canada for further investigation.
1611-GS	NOPAC	CLOSED	AIR-p	Unable to Logon	Unable logon CPDLC KZAK.	The crew logged in seven times (1509z, 1511z, 1514z, 1519z, 1523z, 1534z, and 1553z) using an incorrect flight number, getting rejected ("flight plan mismatch") every time. They sent a company report about the issue at 1540z, and then finally realized their mistake. At 1555z, they logged on using the correct flight number and got CPDLC and ADS connections. This was purely a crew data entry error.
1612-GS	NAT	CLOSED	AIR-p	Failure to Transfer	CPDLC failed to switch over automatically from BIRD to CZQX. Manual loading was normal.	At first sight, this looked like the problem that we see when a 757 or 767 has received an (ERROR + end-service) uplink, when all subsequent transfers fail, with both CDA and NDA being disconnected when the CDA sends an end-service. However, the logs revealed no sign of an (ERROR + end-service) uplink, but did show transfers working successfully on the previous flight. So this was unlikely to be the cause. Looking more closely, the logs show the disconnects of both CDA and NDA, after receiving the end-service at around 1240z from BIRD, both indicated a "commanded termination". The end-service uplink was time-stamped 12:38:43, but the delivery over Iridium was time-stamped 12:40:21, with the network ack not received by the ground until 12:40:38. The disconnects to both CDA and NDA were time-stamped 12:40:25, which is probably too soon for the uplink to have been received and processed. The subsequent logon to CZQX was time-stamped 12:40:38 (i.e. 13 seconds after the disconnect). I believe that the crew was concerned by the non-transfer, terminated CPDLC and logged on again. The logon position was N61°01.1 W030°32.5, which appears to be pretty much on the BIRD/CZQX boundary, so this was probably rather premature.
1613-GS	CANADA	CLOSED AS DUPLICATE	GROUND	Position Report Failure	CZQX shown as active center on CPDLC but Gander stated that they did not receive an automatic report.	FIT PR 1614-GS refers to another ADS report to Gander, which was "missing" on the same flight a few minutes later. This is the same issue. This PR is being CLOSED AS DUPLICATE of PR 1614-GS, which will cover the analysis of this issue.
1614-GS	CANADA	CLOSED AS DUPLICATE	GROUND	Data Link Failures	CPDLC did not send a pos report at 50W. It appears that we are receiving Gander reports but they are not getting ours. CPDLC did switch from CZQX to CDQX normally.	This also addresses the earlier missing report from PR 1613-GS (which was closed as a duplicate of this one). This analysis will cover both PRs. The log shows the 40W report delivered to CZQX at 1316z and the 50W report also being delivered to CZQX at 1358z. CZQX terminated ADS at 1417. Nav Canada indicated at NAT CNSG/11 that it has submitted an internal software change request to address the issue of not presenting received ADS-C reports to the controller. This PR is closed as a duplicate of PR 1479-MM.
1615-GS	NAT	CLOSED AS DUPLICATE	AIR-t	Unable Logon	Unable KZNY logon CPDLC.	The report was of being unable to logon to KZNY, which, of course, doesn't actually exist. But what happened first (at 0341) was a logon to KZWY, which resulted in a FAK0 response, a CR1 uplink and then nothing. They then tried KZNY (presumably wondering if they'd got it wrong, because they had no connection). Then they went back to KZWY and got the same bad behaviour from CMF. The logon to Santa Maria (LPPO) later got the same treatment. This behaviour of ignoring a CPDLC connect request (CR1) after an apparently successful AFN has been seen several times with 787 BP2 airplanes. Closed as a duplicate of that PR 1556-GS which will be fixed in 787 BP3, 4Q15.
1616-MM	NAT	ACTIVE	GROUND	Failure to Transfer	Automatic switchover from EGGX to EISN did not occur. All other transfers were ok.	After EGGX designated EISN as the NDA, EGGX performed AFN address forwarding to EISN, and EISN established a CPDLC connection as the NDA, then EGGX re-designated EISN as the NDA. This caused the aircraft (per DO-219/DO-258A) to terminate its CPDLC connection with EISN and prevented transfer of CPDLC authority from EGGX to EISN. This PR is assigned to NATS to determine why it re-designated EISN as the NDA. (Given that EGGX did not again perform AFN address forwarding to EISN -- which would have caused EISN to re-establish a CPDLC connection as the NDA -- EGGX may have intended to prevent transfer of CPDLC authority to EISN.) UK NATS investigation in progress.
1617-MM	CANADA	OPEN	GROUND	Position Report Failure	CZQX is linked but not receiving position reports.	Regarding the missing W030 ADS-C waypoint change event report to CZQX, the aircraft did not send that report because CZQX sent its first ADS-C waypoint change event contract request shortly *after* the aircraft passed W030. (The aircraft composed its W030 ADS-C waypoint change event report to EGGX at 11:55:12 and ARINC sent the first ADS-C waypoint change event contract request from CZQX at 11:55:38.) Regarding the missing W040 ADS-C waypoint change event report to CZQX, the aircraft composed that report at 12:46:34, ARINC received the report at 12:46:44, and ARINC sent the report to CZQX (YQXE2YA) at 12:46:44. Additionally, for both W030 and W040 the CZQX controller sent CPDLC free-text messages requesting corresponding position reports from the flight crew, but when the flight crew complied by sending CPDLC ROGERs and CPDLC position reports (dM48), CZQX responded with CPDLC free-text "MESSAGE NOT SUPPORTED BY THIS FACILITY" messages. After responding to those messages with CPDLC ROGERs, the flight crew sent CPDLC free-text quasi-position reports. (Even without knowing that the airborne ADS-C waypoint change event function worked properly, these two high-workload message exchanges likely frustrated the flight crew and led to their submission of this PR.) This PR is assigned to Nav Canada to confirm that CZQX received the W040 waypoint change event
1618-GS	NAT	ACTIVE	AIR-t	Transfer Anomaly	Transfer to EGGX ok. Transfer to CZGX late. CPDLC did not connect until 16 min after 30W. ATC position report did not work at 30W. System is slow.	The SITA logs showed no SATCOM connection, and the ARINC SATCOM logon/logoff data indicated that SATCOM was available. The issue is now under investigation by Honeywell.
1619-GS	NAT	CLOSED AS DUPLICATE	AIR-t	Multiple AFN Logon Messages	A/c initiated multiple downlink AFN msgs. An initial review of the Shanwick log files show that a/c sent >40 AFN CONTACT messages for around 1hr from 1508. We are aware of an issue with certain B748 aircraft generating multiple AFN downlinks, but this a/c appears to be a B788. The incident coincided with an internal sub-system failure of the sector equipment managing the flight. The sector failure is being investigated to establish if the multi d/l issue was a contributing factor.	The message logs showed that: (1) Between 1508z and 1609z (i.e. from around 10°W to about 23°W) there were 34 logons sent to Shanwick (EGGX) (2) Between 1550z and 1644z (i.e. from around 19°W to around 31°W) there were 7 logons sent to Gander (CZQX) This has been referred to as a "logon storm" (and has been seen on other Boeing airplane types, though typically many more than the 40 messages mentioned here). But the way the messages stopped about the time a crew might want to start logging on to Gander, and then a series of logons to Gander that stop once inside their airspace doesn't seem to correspond to a typical avionics problem. There was another factor at work here. The airplane was experiencing the problem reported in FIT PR 1615-GS of not responding to CPDLC CR1 uplinks. So, after the logon, nothing appeared to happen on the flight deck. There was no CPDLC connection. It is reasonable to suppose a crew would react to that by logging on again (and again when that didn't work). A request via the airline brought the report that the Captain had made several logon attempts, but didn't believe he had sent that many, and that the relief crew (he was on a break for at least part of this) had not provided any feedback on logon attempts. Given the difficulty of working out which (if any) were generated by the system, rather than being actual crew logons, and the fact that multiple logon requests initiated by the crew (probably as a result of encountering the problem in PR 1615-GS), this will be CLOSED AS DUPLICATE of PR 1615

CRA number	Region	Status	Type	Title	Description	Findings
1620-SN	SOPAC	OPEN	AIR-t	Low FOM in ADS-C reports from from A320	ADS-C rpeorts with low FOM have been received from this operator for several weeks.	Low FOM is due to the fact the aircraft time reference was not GPS synchronized (timestamp was in the future). When the aircraft time reference is not GPS synchronized, the FOM is downgraded. Aircraft documentation has been updated to underline the need for a GPS time synchronization. The airline was also informed that they need to synchronize the clock with the GPS (maintenance).
1621-SN	SOPAC	CLOSED AS DUPLICATE	GROUND	Loss of CPDLC - A388	Controller reported that "CPDLC was not working".	Closed as a duplicate of 1540-SN.
1622-SN	SOPAC	ACTIVE	TBA	Loss of ADS-C - A332	ADS-C was "lost" (ADS-C reports not received) between CANDY and CLAMY. Controller reports that after numerous demand contract requests, ADS-C reports were eventually received again.	Airbus investigation in progress.
1623-SN	SOPAC	ACTIVE	TBA	Loss of ADS-C - A332	ADS-C was "lost" (ADS-C reports not received) between CANDY and CLAMY.	Airbus investigation in progress.
1624-SN	SOPAC	ACTIVE	TBA	CPDLC not available - A332	A CPDLC Connection request was uplinked, but a CPDLC connection could not be established.	Airbus investigation in progress.
1625-SN	SOPAC	CLOSED	TBA	CPDLC not received - A332	Aircraft reported that they were "not receiving CPDLC messages".	The ground traces analyses do not show any communication issue. There is always at least one available communication mean. Furthermore, air/ground exchanges do not show any message sent from the ground and not received on board, or sent by the board and not received on ground. As a consequence, the CPDLC messages in question have not been sent to the aircraft; so this issue seems to be linked to an ATC centre application issue or to a communication issue in the ground to ground exchanges. The PR description contained insufficient information to determine if there was a ground station problem. This PR was closed at the request of the originator.
1626-GS	SOPAC	CLOSED AS DUPLICATE	AIR-t	Unable to establish CPDLC - B788	YMMM was unable to establish a CPDLC connection. The flight crew advised that they had no luck with YBBB earlier either.	Reviewing the ARINC log, the airplane was responding on ADS, but apparently ignoring CPDLC connect requests (CR1). Nework acknowledgements were sent (resulting in Message Assurance Success – MAS-S), but no application level (CC1) downlinks. This is a duplicate of PR 1556-GS.
1627-SN	SOPAC	ACTIVE	TBA	Loss of ADS-C - A332	ADS-C was "lost" (ADS-C reports not received) between CLAMY and COBEL.	Airbus investigation in progress.
1628-GS	SOPAC	CLOSED	AIR-t	Downlink not acknowledged by CSP - B788	CPDLC "PROCEED DIRECT TO TIMMI" uplink was sent. Aircraft advised that their response was still displayed as "SENDING", rather than "SENT".	Inmarsat has confirmed that the airplane involved was not authorized on the system. As of September 2014, the AES had been commissioned with Inmarsat.
1629-SN	CANADA	CLOSED	NETWORK	Delayed CPDLC message	Here is a recent issue that occurred with a MD11. The flight went out of data link coverage and received CPDLC messages during the time period it was in Montreal airspace. The Aircraft was still connected to Moncton with CPDLC as it did not receive the transfers to Montreal.	The airplane was on ARINC VHF until the airplane left VHF coverage (~18:22:23z). At 18:39:48z Moncton Domestic uplinked a contact instruction which ARINC internetworked to SITA and SITA attempted to deliver over Iridium. The uplink "failed" and an intercept message (231) was sent back to ARINC. Several other uplinks were also intercepted until ARINC picked up the airplane again on VHF (19:44:18z). The first CPDLC downlink was a WILCO received at 20:26:55z (timestamped 20:26:52z) which was a response to the "failed" contact instruction form Moncton, sent 1 hour 47 minutes earlier. SITA reported that ""There have been Iridium performance degradations observed in May 2014. SITA believes that it was the reason for the May 18, 2014 issue in question. The degradations were the result of increased volume from a very small group of other Iridium partners as a result of their recent network changes. This volume exceeded an Iridium configuration threshold. Iridium and the associated partners have since made configuration changes on Jun 5, 2014 and Jun 8, 2014. Since these changes have been put into place, the performance has returned to normal levels".
1630-SN	NAT	CLOSED	AIR-p	Unable to Logon	Unable to log on to any ATC facility for ADS or CPDLC.	The flight number in the AFN contact message had an incorrect format. The flight number contained the 2-letter airline code instead of the 3 letter code.
1631-MM	NAT	ACTIVE	GROUND	Unable to Logon	Unable to logon to EGGX via CPDLC. EISN and CZQX ok.	Assigned to UK NATS for investigation.
1632-SN	NAT	CLOSED	AIR-p	Unable to Logon	Unable to login to EISN CPDLC.	This looks like a case of a flight crew that maybe needed to sit on their hands. What I see in the log was that Shanwick correctly set up the transfer to Shannon and Shannon (EISN) was correctly established as the inactive connection. If the flight crew had left well enough alone, Shanwick would have transferred the flight to Shannon and I think all would have been fine. For some reason, the flight crew selected ATC COMM off which disconnected both Shanwick (active connection) and Shannon (inactive connection). They logged back on to Shanwick. Again, Shanwick correctly set up the transfer. Shannon responded to the automatic logon message, but did not send a connect request. The flight crew manually disconnected CPDLC again. The flight crew then logged on to Shannon. Shannon responded to the logon, but did not send a connect request to establish the CPDLC connection. Five minutes later, the flight crew logged onto Shannon again. This time a CPDLC connection was successfully established with Shannon. All of this took about 15 minutes from start to finish. 30 minutes later, Shannon terminated CPDLC. I'm not sure what to do with this one. I'm inclined to close it as a pilot procedural problem.
1633-SN	ASIA	OPEN	GROUND	No response to CPDLC MSG and use of Free text	During CPDLC with WIII, we received 2 ATC instructions to climb and maintain FL360 due to traffic. Both messages did not have a Reject or Cancel prompt option. A free text message was sent to reject the clearance as we were unable to climb due to performance. Response was not forthcoming and we prepared the same. By this time deviation requests was made, again with no response, we eventually notified to dispatch to reply to WIII ATC as they could not be reached by HF too. We eventually did an ATC datalink logoff followed by a master datalink reset before normal datalink comms could be resumed.	It appears that Jakarta may have some operational issues. The two climb clearances were sent using free text. This explains why the fight crew could not reject the clearance. I also noticed an incorrectly formatted contact message which would prevent a clean transfer. Note that Jakarta has not registered with the website. I can't assign this PR to them for further investigation until they've registered.
1634-SN	NAT	CLOSED	AIR-t	A332 transmits ADS and CPDLC messages but uplinks fail (error 234)	FANS-1/A communications started at 12:03 and proceeded normally until 13:13, first on VHF, then SATCOM. At 13:36 the aircraft reported (on voice) that they "had a CPDLC disconnect". Logs show no evidence of such a disconnect but subsequent CPDLC uplinks were rejected with error 234. Initially ADS-C uplinks seem to have been unaffected, a contract request at around 14:50 being accepted and responded to. However, a contract request sent at 15:13 received an error (234) response. The return flight of the same airframe on the next day was perfectly normal.	Datalink issues are caused by a satcom instability. No further satcom issue were reported on that aircraft. This is considered as an isolated case.
1635-DN	ASIA	ACTIVE	TBA	Unable to send position report	Unable to send position report with VABF but worked ok with VOMF.	CRA investigation in progress.
1636-SN	NAT	CLOSED	mult	Failure to Transfer	Initially CPDLC would not transfer between agencies and had to manually log on. Starting with Gander could log on but no communication possible despite showing logged on.	There were two issues at play here. The first issue is a repeat of PR-1444-GS which is a known problem that occurs after a non-standard termination by a previous center (or a center on a previous flight). The avionics disconnect both the active and inactive CPDLC connections upon receipt of an END SERVICE message. The second issue is that that the flight crew pro-actively sent a logon to the NDA (CZQX), anticipating that the transfer was going to fail. The timing was such that CZQX received the logon message before the avionics sent the CPDLC disconnect for the failed transfer. The avionics correctly responded to the CR1 from CZQX with a CC1. However, I suspect the intervening DR1 canceled the new connection with CZQX. From the flight deck perspective, it appeared there was still a connection. A subsequent climb request received no response from the ground.
1637-SN	NAT	CLOSED	None	No Position Report	No position reports are being generate.	The Position Report in question was an AOC Pos Report, not a FANS CPDLC report. PR accordingly closed
1638-SN	NAT	CLOSED	AIR-p	No Position Reports	CPDLC not reporting any oceanic points.	It appears that the crew on this flight was new to operating in the NAT. Comms appeared to have been working correctly and ADS-C position reports were being sent. I suspect they may have been puzzled by the automated message that every NAT FIR (and no one else in the world) sends upon assuming control of an airplane, e.g., "THIS IS AN AUTOMATED MESSAGE TO CONFIRM CPDLC CONTACT WITH SHANWICK CENTER."
1639-SN	NAT	ACTIVE	GROUND	Failure to Transfer	Passing 30W CPDLC failed to switch from CZQX to EGGX. We had to manually load EGGX and then CPDLC was ok.	Per log analysis, this appears to be the same problem as described in PR 1659-MM. CPDLC transfer of authority failed because CZQX did not perform AFN address forwarding to EGGX before terminating its CPDLC connection with the aircraft. Assigning to Nav Canada for further investigation.
1640-BC	SOPAC	CLOSED	AIR-p	Unable to issue route clearance via CPDLC	At 1434z, attempted to issue the following route clearance(80): CLEARD Destination Airport: KLAX VESPA AVE FIM Arrival Procedure: ARRIVAL SADDE6 /AA OAKODYA.AT1.XXXXX6298E88C5042A5CC83605A7062448AD8104AD169D0820A0D68A0A3499AB884 At 1436z, the pilot reported: WE REQ DCT FIM VIA CPDLC GOT BACK MSG BUT IT IS AMBIGOUS CAN YOU CONFIRM WHETHER OR NOT WE ARE CLR TO FIM And later clarified: WE REQUESTED DCT FIM WE RECIEVED ONLY QUOTE CLEARED ROUTE CLEARANCE END QUOTE. NO ROUTING The clearance was later issued via ARINC ACM.	The CRA confirmed with the operator that they do train their crews to select LOAD when they see the CLEARED ROUTE CLEARANCE uplink message. This procedure is included their training material and this crew just forgot that piece of the procedure.

CRA number	Region	Status	Type	Title	Description	Findings
1641-SN	NAT	ACTIVE	TBA	GLEX rejects ADS contract then starts sending data at short intervals	The aircraft was asked for the normal two contracts: a) periodic at 17:04 minute intervals including predicted route, air reference and MET. b) event including WCE, vertical range, vertical rate and lateral deviation. The flight rejected the periodic contract (invalid operational mode tag) but commenced transmission of periodic reports at the minimum 64 second interval. Most reports against the periodic contract included only the basic group but every sixth report added the Flight ID and the Earth reference, neither of which had been requested. One of the early messages appeared to have an emergency tag (possibly they all did, our logger isn't 100% accurate when it comes to unusual message formats). Responses to the event contract appeared normal. This situation remained unchanged until the aircraft left BIRD airspace and contracts were terminated at time 12:27.	Aircraft involved was a GLEX. Honeywell investigation in progress.
1642-GS	NAT	CLOSED AS DUPLICATE	AIR-t	Unexplained UM117 uplink Message (3)	At 10:29, EISN sent UM117 sent to CONTACT EISN CTR 135.600. Pilot queried the instruction saying they also have a message to contact LFRR 135.260. A UM117 UM161 CONTACT LFRR CTR 135.260. END SERVICE. had been sent earlier that day @ 04:57 to this aircraft on the Eastbound flight DAL66. This was WILCO'd correctly.	This appears to be a repeat of a problem for which we've received 4 or 5 previous reports, but for which we have been unable to find the cause. At the time the PR was received, the flight was still airborne. Boeing contacted the operator who contacted the flight crew and asked them to record some information. CLOSED AS DUPLICATE of PR 1516-GS.
1643-MM	NAT	CLOSED	AIR-t	ANSP Unable to Receive Reports	CZQX WAS UNABLE TO RECIEVE POS REPORTS. ALSO RECEIVED MANY DOWNLINK ERRORS WITH CZQX. CPDLC WORKED FINE WITH EGGX.	This and similar PRs (e.g., PR 1509-MM) collectively indicate a possible problem with the Iridium SDUs (or possibly SDU-CMU interfaces) on the aircraft operator's 757 fleet. The DLMA advised the aircraft operator accordingly and closed PR on that basis.
1644-SN	SOPAC	CLOSED	AIR-t	Unexpected uplink message received - Request for ACARS logs	At 1419, a free text was received: "PLZ CFRM YOU SENT US A NEW ATC F-PLN VIA CPDLC" No such uplink had been sent by YBBB. We queried the flight crew (by voice) as to whether the uplink could possibly have been sent by AOC. The flight crew patiently explained that "CPDLC was only between ATC and the aircraft"!!!, indicating that they did have knowledge of what they were talking about! Contact was made with flight operations, who stated that they had not sent an uplink to the aircraft at the time in question, but that they would investigate and if they found anything they would contact us.	Around the occurrence timeframe no AOC message logged in the traces. There is no new AOC flight plan sent. However an uplink message "CROSS ATMAP AT OR BEFORE 15:57" sent by YBBB can be considered as a flight plan change. This uplink has been reemited several times on different media. Because this message is duplicated by the network it is displayed twice to the pilot. This is confirmed by the fact that the pilot answers Wilco to both occurrences. The second response was answered by an 'ERROR' message from the ground. This display may have disturbed the pilot who wanted to confirm if the status on the CROSS message. FANS A+B standard available Q1 2015 prevents duplicate messaee delivery.
1645-RP	SOPAC	OPEN	AIR-t	No CPDLC downlinks from B748	A logon was received and a CPDLC Connection established. However, no downlinks could be received from the aircraft. The flight crew stated that they were receiving uplinks. The same sequence of events happened an hour or so earlier.	The data indicates that while the aircraft was established in ATC COMM with WAAF and subsequently with YBBB, no responses to CPDLC uplinks were downlinked. However, all AFN logon and ADS downlinks did work correctly as did all ATC uplinks. At this time, this looks to be an aircraft issue (suspect glareshield buttons on aircraft not responding correctly). Boeing will monitor for any future reports of a similar event.
1646-SN	SOPAC	OPEN	GROUND	Unable to Logon to KZAK	Unable to log-on to CPDLC - KZAK	All logon attempts received FAK4, which typically means the receiving center did not have a flight plan on file for the aircraft. Oakland Center reported the following: "We actually had 2 FPLs and our system will not allow a logon when we have two FPLs. We are developing a plan to add the capability to allow a logon when we have more than 1 FPL but the enhancement is years away". This PR will remain open pending the enhancement.
1647-SN	NAT	CLOSED	AIR-p	ADS Problems	ADS inop in CZQX FIR but work just fine in EGGX. CPDLC works fine. Wind update at W035 would not work at W035 with SatCom but data finally arrived in VHF range at W045.	It appears that ADS was turned off from the flight deck at 10:55:31z. We have had a few reports over the years of the pilot in the right seat inadvertently turning ADS off when resting his foot on the aisle stand. A foot tap when the ATC LOGON/STATUS page is displayed will do it.
1648-SN	NAT	ACTIVE	GROUND	Auto Handoff Failure	No auto handoff from EGGX to EISN.	This problem has the same sequence of events as PR 1616-MM. After EGGX designated EISN as the NDA, EGGX performed AFN address forwarding to EISN, and EISN established a CPDLC connection as the NDA, then EGGX re-designated EISN as the NDA. This caused the aircraft to terminate its CPDLC connection with EISN and prevented transfer of CPDLC authority from EGGX to EISN. Assigned to UK NATS for further investigation.
1649-MM	NAT	CLOSED	AIR-t	Loss of Comms and Missing Boundary Report	On the 9th June the Shanwick system reported aircraft as overdue at its boundary entry point. Analysis suggests aircraft seems to have lost comms around the boundary – it is unclear if this is due to switching between VHF and satcom datalink.	Loss of communications and missing boundary report caused by aircraft's inoperative SATCOM link. Aircraft's SATCOM link was operative for approximately 28 minutes (from 0828Z to 0856Z) prior to departure, but during taxi-out (at 0921Z) aircraft sent 'SATCOM-lost' media advisory via VHF. Last ACARS downlink from aircraft before NAT crossing (CC1 to EGGX at 1119Z) was received by VHF ground station at Shannon and first ACARS downlink from aircraft after NAT crossing (Q0 link test at 1518Z) was received by multiple VHF ground stations in eastern Canada. Aircraft operator advised of occurrence.
1650-GS	SOPAC	CLOSED	AIR-t	ADS-C position reports with improperly encoded next and next+1 waypoints	Over the past 15 days, received several position reports from the following B787s with the next and next+1 waypoints which contained a longitude of 180 encoded as S180W180.	The software containing the fix is in 787 CMF BP2 (or later). This release is installed as a blockpoint with a number of other systems, and entails significant airplane down-time. Operators may therefore have been waiting to combine this with other maintenance actions. One operator's 787 fleet were all at the latest standard by 12 June. Another operator has begun the update process for their airplanes. Oakland Center reported the following, "As of July 8, 2014, it appears that all the referenced aircraft in 1650-GS have been updated. Since then, we have not seen any position reports from B787s with improperly encoded next and next+1 waypoints".
1651-GS	ASIA	ACTIVE	GROUND	LOGON FAILURE	Unable to Logon with VABF for the entire flight, though we tried several times. Answer from ACARs was please RE-LOGON ON ATC COMM. System was working perfect.	There were 16 logon attempts between 2352z and 0049z. All of those received a rejection from VABF (Mumbai) with reason code 4 (flight plan mismatch). On the previous flight, and the following flight, this airplane logged onto Mumbai successfully. There seems to be nothing different in the flight identifier, so I am left assuming the issue was with the filing of the flight plan for this flight.
1652-SN	SOPAC	CLOSED AS DUPLICATE	GROUND	No CPDLC downlinks from A333	A CPDLC connection was establishe, but the flight crew was not receiving uplinks and could not respond to downlinks.	Closed as a duplicate of PR 1540-SN.
1653-SN	SOPAC	CLOSED AS DUPLICATE	mult	No CPDLC downlinks from A333	A CPDLC connection was established, but the flight crew was not receiving uplinks and could not respond to downlinks.	There were several issues at play with this problem. In the end, this was closed as a duplicate of PR-1540-SN.
1654-SN	NOPAC	CLOSED	AIR-p	Non-receipt of uplinked clearance	a. ZAN uplinks "RESUME NORMAL SPEED, MAINTAIN F360" b. flight crew downlinks "WILCO" c. Flight crew reports they did not receive this clearance.	Here's what I found in the SITA log: Here's the uplink: ATC DL Uplink Message AT1 - ANCATYA - .N784AN - CRC is valid 5,,03:57:03 0(116): Resume Normal Speed 1(19) : Maintain [alt] alt(fl): 360 And, here's the wilco: ATC DL Downlink Message AT1 - ANCATYA - .N784AN - CRC is valid 10,5,03:57:54 0(0) : Wilco The number (5) in the uplink message is called the message identification number (MIN). The 5 in the Wilco message means the Wilco is the response to the uplink with MIN=5. Since the flight crew has to take action to send a response, the uplink was at least presented to them. There's no way to tell if they read it properly… Note that the recommended Boeing (and GOLD) procedure is that both crew members are
1655-SN	NAT	CLOSED AS DUPLICATE	AIR-t	No response from B77L when ADS contracts sent. No response on VHF sent messages.	Aircraft logged on normally at 09:49:57 but rejected our CR1 with a DR1, this is consistent with us not having been nominated NDA prior to forwarding. Aircraft logged on again (crew?) at 10:00:14, this time our CC1 was accepted. We requested the standard set of ADS contracts but received no operational response (only a MAS/S). The request was not repeated and the aircraft made no ADS reports. The aircraft failed to respond operationally (WILCO) to a CONTACT instruction at 10:46:11. The FN_CAD instruction issued at 11:06:44 timed out which resulted, at 11:21:48, in the automatic transmission of an instruction to manually disconnect at the boundary. No response (ROGER) was received to this message. At 12:31 All ADS contracts were cancelled (though none existed – this is an automated function), the aircraft responded with a normal disconnect. Fifty minutes later the crew terminated CPDLC It is thought that communications were uni-directional at times but it is not known whether this stemmed from the "B777 error" or some other failure.	This airplane experienced 4 instances of the 777 "ack-and-toss" problem. This problem was first tracked under 923-RS. We're now using (2013) PR-1358-MM as the master PR until BP 17.1 is available. The problem was fixed in BP 16, but there's an FM problem with that load that has caused most operators to give BP 16 a pass.

CRA number	Region	Status	Type	Title	Description	Findings
1656-SN	NAT	OPEN	GROUND	ADS Downlinks Missing FL Data	Shanwick ATC reported these a/c missed their boundary reports and were reported overdue. Investigation shows incomplete boundary reports were sent by the respective a/c. This resulted in the Shanwick system being unable to parse the reports. In each case the downlink ADS report was missing the FL in the PRG.	In both cases, the altitude value in the downlink was -131072. This is actually a valid value for the ADS application to send. Per DO-258A, "When no value is available or the value available to the ADSF is invalid, a default value shall be inserted in the field". For altitude, the default value is -131072. (Refer to DO-258A Table 4.5-4). Predicted altitude is set invalid when the flight management function is recalculating route predictions. If a PRG needs to be sent while predictions are running, the avionics will transmit that default value. I suspect your system receives PRG reports with defaulted altitudes quite often, especially from B744's, which have really old and slow computer processors. One event that will trigger a prediction recalculation is sequencing a flight plan waypoint. Both Boeing and Airbus will delay a PRG report (up to 1 minute for Boeing Aircraft, and 30 seconds (I think) for Airbus) to allow the route prediction calculation to complete. If the calculation has not completed by the time the report needs to be sent, then the missing parameters are set to the default values. So, from the avionics perspective, this is a non-problem. UK NATS provided the following feedback: "This PR is covered by an internal system defect report. At this stage, I am not sure if/when it will be
1657-GS	SOPAC	OPEN	AIR-t	Loss of CPDLC, ADS-C - B788	A CPDLC connection was established at 1620. At 1642 an SSR code was uplinked as well as a request for a CPDLC position report. No CPDLC response was received. ADS-C also failed. Similar symptoms to other PRs submitted concerning this airframe.	Boeing confirmed with Inmarsat that this airplane has not logged on since September 2013. Airline was contacted to take remedial action.
1658-SN	SOPAC	ACTIVE	TBA	Multiple data link issues with C130	Airplane logged on at 0227, but a CPDLC connection was not established until 0238 (probably as a result of a second CR1) CPDLC initially worked, then a number of disconnection/reconnections occurred. ADS-C failed. Address forwarding to NZZO failed. Similar symptoms to those described in PR 1343-SN, which was closed after being advised that the issues were resolved following a software upgrade.	Aircraft operator investigation in progress.
1659-MM	NAT	ACTIVE	GROUND	Failed CPDLC transfer from CZQX to EGGX	NO AUTO TRANSFER. ATC COMM TERMINATED.	Message log analysis confirms flight crew report and shows that CPDLC transfer of authority failed because CZQX did not perform AFN address forwarding to EGGX before terminating its CPDLC connection with the aircraft, which would have triggered EGGX to establish a CPDLC connection with the aircraft as the designated NDA. This PR is assigned to Nav Canada to investigate further.
1660-SN	NAT	ACTIVE	AIR-t	AWE issue - further occurrence spurious lat/longs given in ADS POS	This report seems similar to PR1557-SN ATC narrative: FPL showed route as DOGAL NAT C ALLRY. Clearance was at FL350 on NAT C. At 0941, an automatic position report was received stating DOGAL/0941 F350 5400N02000W/1003 NEXT 5300N03000W. At 0951, an automatic intermediate position report was received stating 5401N01721W/0951 F350 5402N02000W/1424 NEXT 5302N03000W. This perhaps shows where the aircraft opted for a 2nm offset right under SLOP. The estimate of 1424 is inaccurate. At 1004, an automatic position report was received stating 54N020W/1003 350 3717N07916W/1436 NEXT 3703N07927W. [Lat/long of destination KCLT is 3513N08057W] An immediate delivery HF message was sent confirming route 54N020W 53N030W 52N040W but due to HF interference, EIAA were not able to deliver it to or get an answer from the flight. Shortly after this I took a SATCOM call direct from the flight where they verbally confirmed to me their route was as per clearance, i.e. NAT C. At 1018, an automatic intermediate position report was received stating 5349N02303W/1018 F350 5300N03000W/1052 NEXT 5200N04000W. At 1053, an automatic position report was received stating 5300N03000W/1053 F350 5200N04000W/1143 NEXT 5100N05000W.	Per Airbus analysis: ETG was not erroneous but was not available: default data sent, instead of 1424 or 1436. Default or not Available should have been displayed to the controller for the predicted time at NEXT. Predicted values are not available when FMS is re-computing, for example after a flight plan change. Regarding unexpected lat/long additional, Airbus investigation in progress.
1661-SN	SOPAC	CLOSED	GROUND	ADS Congestion	Received ADS Disconnect- reason code Congestion when establishing ADS-C contracts on our development bench NZCH - CHCCBYA. This is an unusual occurrence and aircraft should have had active contracts only with NZZO, YBBN, NFFF so I suspect either Oakland or Fukuoka or had retained contracts, or someone else has their finger in the pie. Can we please check. Connection established later when Brisbane and Nadi disconnected.	At the time Christchurch attempted to establish a connection, the airplane already had 5: AKLDUNZ,OAKODYA, BNECAYA, NANCDYA, AKLCDYA. I looked backward through the log to see if the airplane had acked and tossed a "cancel all and terminate", but found none. It looks like Oakland, Brisbane, and Nadi all left their ADS contracts running.
1662-GS	EUROPE	CLOSED AS DUPLICATE	AIR-t	Erroneous Contact Message (1)	Flight checked in, unexpectedly, on LKS frequency 135.255. The aircraft was in S35 airspace and INCOMM with S35. The pilot said he received a CPDLC message to contact 135.255. S35 said that no CPDLC message had been sent.	Closed as a duplicate of PR 1516-GS
1663-GS	EUROPE	ACTIVE	GROUND	Erroneous Contact Message (2) - B777	Flight left frequency after receiving a CPDLC message to do so from Shannon. AC controller unaware. Aircraft returned to frequency on instruction from Shannon.	At 0310z, the airplane logged on to EGTT. EGTT did NOT attempt to establish a CPDLC connection. At 0311z, EGTT nominated EISN as NDA. This was ignored by the airplane, as there was no CPDLC connection. At 0312z, EGTT began the AFN address forwarding to EISN. At 0312z, EISN established a CDPLC connection with the airplane. Since there was no existing CPDLC connection, EISN was therefore the CDA. At 0314z, EISN sent a CONTACT message to the airplane, which the crew WILCO'ed. This would be the erroneous CONTACT displayed to the crew. The issue therefore appears to be one of an error by EGTT in failing to establish a CPDLC connection. The avionics behaved as intended. Assigned to UK NATS to determine why London failed to establish a CPDLC connection, but then acted as if one had in fact been established.
1664-GS	EUROPE	CLOSED AS DUPLICATE	AIR-t	Erroneous Contact Message (3)	Flight received a 'contact London on' message despite EFD indicating that the aircraft was not connected to CPDLC. The controller did not send a message and neither did London.	Closed as a duplicate of PR 1516-GS
1665-GS	NOPAC	CLOSED	GROUND	Delayed ADS and CPDLC messaging with B787	Starting at 0015z, there were intermittent delays with ADS and CPDLC messages. The ADS position reports sent at 0015z and 0016z were delayed by over 8 minutes. A climb by time clearance sent 0054z was never received by the aircraft. However, some ADS reports and CPDLC messages during this time period were received in timely manner.	Both the delayed ADS messages and the missing climb clearance were the result of poor SATCOM performance. The SATCOM ORT is being replaced, and in future the airplane will be accessing the I4 satellites.
1666-SN	NAT	ACTIVE	TBA	ADS Reports with Future Time	During collection of the GOLD App D stats for Shanwick it was observed that one flight on 30/06/2014 issued seven ADS-C reports, all reporting 66/67 seconds in the future.	Aircraft operator investigation in progress.
1667-MM	SOPAC	OPEN	GROUND	Invalid CPDLC Uplinks	AFTER REQUESTING CANCEL BLOCK GOT MSG INVALID UPLINK AND REQESTED RESEND. INVALID UPLINK AGAIN.1717Z GOOD CPDLC AGAIN.	Message log analysis corroborates flight crew report that NZZO sent two invalid CPDLC uplinks. NZZO confirmed erroneous uplink and have been unable to reproduce in their lab.
1668-MM	NAT	ACTIVE	GROUND	Failed CPDLC transfer from CDQX to CZQX	CDQX FAILED TO TRNSFR TO CZQX AFTER OCEANIC ENTRY BOUNDARY. HAD TO POSN RPT ON H/F AS NO CPDLC RPTS RECEIVED.	Message log analysis corroborates flight crew report. CDQX was CPDLC CDA for eastbound aircraft as far as W039, where flight crew manually terminated CPDLC connection with CDQX and manually performed AFN log on to CZQX (which then established CPDLC connection and ADS-C contracts with the aircraft). No evidence is present in SITA message log for CDQX attempting to designate CZQX as NDA, perform AFN address forwarding to CZQX, or terminate its CPDLC connection with the aircraft. PR assigned to Nav Canada to investigate further.
1669-MM	SOPAC	OPEN	mult	Missing CPDLC uplink response	REQST CLB F360 SENT AT 2243Z. NO RESPONSE. AT 2248Z RECVD MSG CHK AND RESPOND TO OPEN CPDLC MS G. THERE WERE NO OPN MSG.	Message log analysis indicates that SITA sent a MAS failure / NOT LOGGED ON intercept to YBBB for the first climb clearance (the one that the flight crew did not receive), but that indication does not appear to have been communicated to the YBBB controller and/or automation since one (or both) considered the clearance to be open/pending. The CRA/DLMA would note that it has encountered an increasing number of similar PRs. In NAT CNSG/10 WP/08 concerning PRs 1344-MM, 1511-MM, 1517-MM, and 1523-MM, for example, the DLMA posed the question whether ATS units should have the capability (automated and/or manual) to resend failed uplinks.
1670-MM	NAT	CLOSED	GROUND	Failed CPDLC transfer from EISN to EGGX	TRANSFER FAILED. MANUAL LOGON OK.	CPDLC transfer of authority from EISN to EGGX failed because EISN did not perform AFN address forwarding to EGGX, which would have triggered EGGX to establish an NDA CPDLC connection with the aircraft and permitted EGGX to become the CDA when EISN terminated its CDA CPDLC connection with the aircraft. Also, the (uM159) ERROR invalidData + (uM169) "ELEMENT COMBINATION REJECTED - USE VOICE" response from EISN to the single-element (dM9) REQUEST CLIMB TO FL330 request from the flight crew is unexpected and may have contributed to the transfer failure. The following information was received from IAA: " The fault was traced to the EISN System periodically not sending FN_CAD after an uptime period. EISN software upgrade on the 10th June '14 fixed the problem."

CRA number	Region	Status	Type	Title	Description	Findings
1671-GS	NAT	CLOSED AS DUPLICATE	AIR-t	Log-on Failure	CPDLC logon to LPPO and GVSC failed to connect. Multiple attempts. Datalink position reports show "Reporting" for extended periods.	Before the reported problem occurred the airplane had a CPDLC connection with KZWY (New York). KZWY was attempting to forward the airplane to Santa Maria (LPPO), but that wasn't working, and there are messages (including the contact advisory) not getting acked. That accords with the first pilot report. At 9:05 the avionics Comm Function reset and was in a mode where it doesn't respond to a CR1 uplink. This problem is scheduled to be fixed in an upcoming 787 software release (BP3). Closed as a duplicate of PR 1556-GS.
1672-GS	NOPAC	OPEN	AIR-p	Unable to Log-on	Unable to logon to RJJJ via CPDLC	This is a strange one. I see a sequence of: LOGON (AFN contact message) Logon accepted (AFN ACK from ground) CPDLC Connect request (CR1) CPDLC connect confirm (CC1) An ADS contract is also established. Then ADS is disconnected, and the whole process is repeated multiple times. Clearly, for some reason the crew thought CPDLC was NOT connected, when the avionics kept telling the ground it was. No explanation was provided of why the crew believed CPDLC was not connected.
1673-MM	NAT	CLOSED AS DUPLICATE	AIR-t	Failure to Transfer	CPDLC did not auto transfer between EGGX and CZQX CDQX	EGTT sent a concatenated uM161 END SERVICE and uM159 ERROR commandedTermination CPDLC uplink message. As described in PR 1444-GS (and multiple duplicate PRs), this message causes Boeing 757/767 avionics to disconnect from subsequent NDAs instead of transferring authority to them, which explains the reported CPDLC transfer failures from EGGX to CZQX and from CZQX to CDQX, as well as the unreported CPDLC transfer failures (visible in the ACARS message log) from CDQX to CZQM and from CZQM to CZUL. This PR was accordingly closed as a duplicate of PR 1444-GS.
1674-GS	NAT	CLOSED AS DUPLICATE	AIR-t	Downlink Error	Getting downlink errors when requesting alt change.	The downlink shows the airplane was experiencing the known Pegasus (757/767) FMC problem where the FMC inserts a strange free text with the request. In fact, it is shown on the VERIFY REQUEST page, and crews should look at that page, and if there's a free text entry they don't want to send, they should clear it out. This problem is being tracked under FIT PR 1155-GS, and this event PR was CLOSED AS DUPLICATE of that PR.
1675-MM	NAT	ACTIVE	GROUND	Failure to Transfer	No auto CPDLC transfer from CDQX to CZQX.	CDQX sent a concatenated uM161 END SERVICE and uM159 ERROR commandedTermination CPDLC uplink message to the aircraft for no obvious reason, which caused the aircraft to correctly terminate its CPDLC connections with both CDQX as the CDA and CZQX as the NDA. This PR was assigned to Nav Canada to determine why it commanded the aircraft to terminate its CDA and NDA connections (instead of normally transferring CPDLC authority to CZQX as the NDA) after CDQX had designated CZQX as the NDA and performed AFN address forwarding to CZQX and after CZQX had established a CPDLC connection as the NDA.
1676-MM	NOPAC	CLOSED	AIR-p	Failure to Link	CPDLC will not link to RJJJ or KZAK	Flight crew performed multiple AFN log ons using an incorrect flight identifier. The flight crew subsequently performed an AFN log on using the correct flight identifier, which permitted CPDLC and ADS-C connections to be established.
1677-RP	NOPAC	OPEN	GROUND	FANS PROBLEM (ADS-C Datalink Failure)	Passing FIR boundary from KZAK to RJJJ, automatic forwarding appeared to have occurred successfully. However, a short time later RJJJ requested position report. Position report was requested by ATC again at next point. After logoff and on twice, selecting ADS off then arm, ATC advised that ADS-C DATALINK appeared to be failed. CPDLC continued to work as normal. ADS-C appeared to have worked as normal in previous FIR.	The data shows that the aircraft was transferred to RJJJ from KZAK. RJJJ uplinked an ADS periodic contract request at 2239z. The aircraft downlinked both a position report and the ack for this uplink at 2239z. Also at 2239z, an ADS event contract was uplinked. At 2241z an ADS downlink in response to this event contract (with waypoint change information) was tranmistted from the aircraft. Additional ADS downlinks (both periodic and event change) were made at 2304z, 2306z, 2323z, 2332z, 2337z, 2345z, 2353z, 2356z. The PR also states that ATC pos reports were requested twice from the aircraft. The data shows that there were ATC pos reports downlinked at 2322z and 2338z. These were all received by the ground station. Based on the datalink audit data, the aircraft systems look to be working correctly. ADS messages are being transmitted from the aircraft. There is a brief time where the aircraft lost SATCOM connection (and did not have VHF or HF connection either). However once SATCOM was re-established, the messages continue to be transmitted. The messages may have taken a bit longer to deliver due to the fact it was on SATCOM only for certain periods of time.
1678-GS	SOPAC	CLOSED	NETWORK	Loss of CPDLC, ADS-C - B788	Loss of CPDLC and ADS-C. Similar to FIT PR 1626-GS, except this PR appears to involve ADS-C as well as CPDLC.	CRA analysis in progress
1679-MM	SOPAC	CLOSED	AIR-t	Unable to establish CPDLC & ADS-C - B744	Numerous CPDLC Connection Requests were uplinked to an aircraft in response to four received logons, but YBBB was unable to establish a CPDLC connection. It was not possible to establish ADS-C either. Of note was the email subsequently received from the DSP concerning the same tail number: "Since 1200 GMT our systems have detected that you repeatedly send uplinks (FANS messages) to the tail (XXXXXXX)".	ACARS message log analysis revealed that the CMU rejected all FMC (label H1 / sublabel MD) uplinks -- both FANS and AOC -- with Q5 downlinks. This behavior may occur when the FMC cannot accept an uplink from the CMU. The CRA advised the aircraft operator to have its maintenance department investigate apparent problems with aircraft's ARINC 429 wiring between its CMU and FMCs.
1680-MM	SOPAC	OPEN	TBA	Unexplained CPDLC disconnection - B772	Unexplained Disconnect Request received from a B772. The flight crew indicated that the disconnection was 'because we told them to'.	Analysis of the ACARS message log substantiates the PR description. The DSP received a CPDLC DR1 containing dM62 ERROR commandedTermination from the aircraft, which normally indicates that the flight crew manually terminated CPDLC. No instruction from YBBB (or from WAAF for several hours prior) to terminate CPDLC is present in the log, however. The CRA has requested additional ACARS message logs in order to search for an earlier instruction to terminate CPDLC. The CRA found no earlier instruction to terminate CPDLC in the additional ACARS message logs covering the period since the aircraft apparently last cycled avionics power.
1681-MM	NAT	ACTIVE	TBA	Uplink Anomaly	EGTT UPLINKED CPDLC REROUTE TO GMH. UPON PRESSING THE LOAD THE WRONG GMH FIX WAS SELECTED BY THE FMC 3100 MILES BEHIND US.	Message log analysis revealed that EGTT sent uM74 PROCEED DIRECT TO [position] with the Fixname CHOICE incorrectly selected for the "GMH" [position] variable. This selection caused the avionics to search its waypoint and non-directional beacon (NDB) navigation database file for a match and properly choose the "GMH" NDB, which is located in the eastern United States. If EGTT had selected the Navaid CHOICE for the "GMH" [position] variable, then the avionics would have searched its navaid navigation database file for a match and chosen the "GMH" VOR, which is located in Germany and is what EGTT intended. This PR is assigned to NATS to investigate further.
1682-DN	ASIA	ACTIVE	GROUND	ADS-C connection error	In Colombo FIR, after climbing from FL340 to FL360 ADS-C failed to transmit the correct FL. Colombo controller reported that FL340 was still displayed in their system instead of cleared FL360. ADS-C resumed normal operations after an ADS-C reset from the cockpit crew (OFF then ARM). There was no traffic conflict as the aircraft was maintaining the required cleared FL360.	CRA investigation in progress
1683-DN	ASIA	ACTIVE	TBA	ADS-C position indication error	a/c was originally located on deviated route from FPL route. After some time ADS-C was terminated, the symbol changed to FPL symbol with CPDLC log on symbol. Then FPL symbol heading directed to FPL route to correct the deviation. Meanwhile the controller requested a CPDLC position report. With the reception of this position report, the target symbol changed back to ADS-C/CPDLC connected symbol. According to the AFN window, ADS-C was terminated. This symbol was incorrect as it shows ADS-C is connected, which gives controller the wrong information. Thereafter no position report was received and ADS-C/CPDLC connected symbol moved forward but with incorrect heading which directed a/c on wrong path. Also we would like to have more detailed explanations on ADS-C target behavior and method of track prediction for similar cases, e.g.: If ADS-C report not received how does the target move? How does the a/c calculate the predicted heading when loss ADS or CPDLC position reports? Why does the ADS-C symbol label indicate ADS log on label when ADS-C is terminated? If one of the said events (vertical rate, lateral deviation, altitude range, waypoint change) are triggered, whether a/c sends the position report or not?	CRA investigation in progress
1684-MM	NOPAC	OPEN	AIR-t	AFN Address Forwarding and CPDLC Connection Issues	Aircraft did not establish CPDLC link with Anchorage ATOP (PAZN) although auto address forwarding appeared to work correctly from RJJJ. Pilot reports they manually disconnected from RJJJ and the avionics then automatically connected to PAZA (not PAZN). Once noticed, the pilot manually disconnected from PAZA and performed manual logon to PAZN. We do not understand why the automated process failed.	This problem has been reported via two additional PRs (1696-MM and 1753-MM) and is accordingly re-opened. (1696-MM has been closed as a duplicate of this PR.) The primary cause of this PR is that the avionics acknowledged receipt of five consecutive FANS uplinks but apparently did not completely process them.
1685-SN	SOPAC	OPEN	AIR-t	Incorrect Aircraft address included in B777 logons	It appears that the aircraft address (24 bit code) included in the logon for a B777 is incorrect.	This problem has been corrected for in-production 777s which have AIMS-2 avionics and BP17 software. The problem has been corrected for newer in-service 777s with AIMS-2 avionics and retrofit BP17.1 software. No correction is planned for older in-service 777s with AIMS-1 avionics.
1686-GS	EUROPE	CLOSED	GROUND	CPDLC Locked Up	Two write-ups on same aircraft reported "UNABLE TO LOGON (CPDLC) AFTER ATC COMM TERMINATED. RESET CB G-1. AIR CHECKS OK. REPEAT WRITE UP. CPDLC LOCKED UP WHEN IT SWITCHED FROM MAASTRICHT TO LONDON. AS DIRECTED CYCLED C/B G1 OVERHEAD AND IT RESET AND WORKED OK.	The log shows a successful logon to Maastricht on this flight. After that terminated, the next logon (to BIRD) at 1108z failed, with reason code 4 (flight plan mismatch - possibly Reykjavik had not received the FPL yet). Then at 1233z, there was a successful logon to BIRD, and CPDLC messages were exchanged. This was followed by a successful transfer to CZQX at 1403z. The inability to logon appears therefore to have been related to the issue with BIRD, but was resolved during the flight. Maastricht designated EKDK (Copenhagen ACC) as the NDA at 1037z, and made no attempt to transfer the airplane to London. It would seem likely that this was the "CPDLC LOCKED UP" described in the second part of the report, rather than any real lock-up. Clearly they were able to logon to Reykjavik later.
1687-SN	SOPAC	CLOSED	AIR-t	Aircraft reported being 'bombarded with CPDLC messages' - B77L	Aircraft reported being 'bombarded by CPDLC messages'.	Operator reported their "ground system had error set up", which has since been corrected.

CRA number	Region	Status	Type	Title	Description	Findings
1688-MM	NAT	OPEN	TBA	Datalink/FMS Anomaly	AT 0547Z WE WERE TOLD TO CLIMB TO FL330 AT 0617Z LEVEL BY 0620Z AND REPORT LEVEL WE RESPONDED WILCO AND ARMED THE ALTITUDE REPORT. THE DATA LINK SENT LEVEL FL330 IMMEDIATELY 0548Z. ATC ASKED US TO CONFIRM ALTITUDE AT 0553Z+0555Z.. WE SENT FREE TEXT MESSAGE WE WERE AT FL320 0555Z AND 0058Z WE SENT ANOTHER FREE TEXT MESSAGE ATC ACKNOWLEDGED AT 0600.	ACARS message log analysis corroborates flight crew report, showing that WILCO was sent at 05:48:08Z in response to MAINTAIN FL320 / AT 0617Z CLIMB TO AND MAINTAIN FL330 / CLIMB TO REACH FL330 BY 0620Z / REPORT LEVEL FL330 and that LEVEL FL330 was erroneously sent at 05:48:23Z (15 seconds later). The analysis also showed that the aircraft sent two ADS-C reports to KZWY at 05:55:27Z and 05:55:54Z indicating that aircraft was actually still at FL320. Boeing is not aware of any reason for the CPDLC application in the FMS to prematurely or otherwise incorrectly send an armed LEVEL [altitude] report.
1689-GS	SOPAC	CLOSED AS DUPLICATE	AIR-t	Loss of datalink	Sometime at or after the transition from VHF to SATCOM, the crew received a DATALINK LOST EICAS message and AOC/ATC comm was unavailable. After a period they attempted a downlink request which failed, so they carried out a datalink system re-start which restored datalink for the remainder of the flight.	CRA investigation in progress
1690-SN	SOPAC	OPEN	GROUND	No CPDLC End Service by NFFF - numerous	Over a relatively short period of time, a number of aircraft were not disconnected by NFFF.	The following explanation was received from AFL, "The problem is because CPDLC dialogue was left open much earlier during the phase of the aircrafts flight in our airspace … Instructions to close CPDLC dialogue have been issued to the operational floor to ensure the problem does not recur".
1691-SN	SOPAC	CLOSED	AIR-t	CPDLC problem with B772	Pilot requested an "OFFSET". The aircraft was queried (free text uplink) as to whether they really wanted an OFFSET, and subsequently requested a weather deviation. The free text uplink was left unanswered, and no response to the weather deviation clearance was received. The weather deviation clearance was re-uplinked several times – no response. An expected ADS-C report was not received. At this stage it looked as if some form of data link outage was being experienced, until the ADS-C problem corrected itself. Then a free text downlink was received:- "DUE TO MESSAGE WE ARE NOT ABLE TO CLEAR WE WILL ACCEPT YOUR MSG CFM REQUESTING AN OFFSET BUT WE WILL NOT OFSFET WE DO NOT WANT AN OFFSET WE STILL REQUIRE 20 RIGHT WEATHER DEVIATION" CPDLC seemed OK after that, and responses were received to earlier messages.	It is suspected that a known avionics issue was the cause of this problem. The avionics issue was fixed in 777 AIMS-2 block point 17.
1692-SN	SOPAC	ACTIVE	TBA	Please - someone tell me why this RC didnt work...	We are having no end of problems uplinking loadable route clearances to different aircraft types. The following clearance is an example: CLEARED [2905.5S 15650.5E IFFEY SHARK N774 SY], with destination airport YSSY The first point "2905.5S 15650.5E" is a lat/long, so should not be too controversial. The second point "IFFEY" has not caused problems in the past. There are no known duplicates in our part of the world The third point "SHARK" is a known duplicate, but it is followed by an ATS route, which (I understood) should uniquely identify the correct SHARK. The last point "SY" is a known duplicate but it is preceded by an ATS route, which (I understood) should uniquely identify the correct SY. The clearance is a route replacement, so the destination airport is required (YSSY) At 0717 in response to an uplink query, the flight crew downlinked (free text) "WILCO. COULDN'T AUTO LOAD CLEARENCE"	Airbus investigation in progress.
1693-MM	NAT	OPEN	AIR-t	B752 Responds late to ADS-C but sends CC1 at 5 min intervals for 5 hours.	Log on established 11:27:00. Periodic contract request sent and also a CPDLC CR1. Aircraft responds to CR1 with CC1 but fails to respond to ADS request. Continues to send CC1 at 5 minute intervals until 16:42 (more than 5 hours later) then sends a DR1. Five minutes after DR1, the ACPs for contracts 1 and 2 are received, at time 16:57:04 (an ADS CACT had been sent by BIRD at time 12:20:57).	The operator has identified an issue with the CMU-FMC interface on a portion of their 757 fleet.
1694-GS	NAT	CLOSED	GROUND	CPDLC transfer failure CZEG > BIRD	Logon BIRD 06:40. CR1 sent and CC1 received. "Greeting message" (a CPDLC message automatically transmitted when we should have become CDA) sent on boundary at 07:05. Aircraft responds with "not CDA". A minute later BIRD received a CPDLC disconnect request indicating open uplinks (obviously not the case since no connection had been established). This message contained an MRN reference which did not match any MIN used by BIRD so our system responded with an UM159 [unrecognized MRN]. Our hypothesis is that the End Service message from CZEG contained the UM161+UM159 "poison pill" resulting in the B767 closing both the CDA and NDA connections – and using a MIN/MRN relevant only to the upstream connection. Subsequent attempts to establish CPDLC connectivity failed.	The following was obtained from an analysis of the logs, and communicated to the originator: At 07:05:01, CZEG sent CONTACT BICC CENTER ON 127.850MHZ. The flight crew WILCO'ed that at 07:05:22.. This was delivered to CZEG at 07:05:33, and CZEG immediately sent the poison pill uplink: /AA YEGE2YA.AT1.D-ABULA89C58A849F3804899 ATC DL Uplink Message AT1 - YEGE2YA - .D-ABUL - CRC is valid 17,,07:05:34 0(161): End Service 1(159): Error [error] errorinfo(): commandedTermination The avionics then sent a disconnect request (DR1) to CZEG, and an identical one to BIRD, both having the same time-stamp and message reference number, and differing only in the address to which they were directed. This is the one sent to BIRD: /BA YEGE2YA.DR1.D-ABUL7FA271653E18FF06 ATC DL Downlink Message DR1 - YEGE2YA - .D-ABUL - CRC is valid 63,17,07:05:37 0(62) : Error [errorinformation] errorinfo(): endServiceWithPendingMsgs The question then is why CZEG sent this kind of uplink, when it should have been sending a normal termination in any case. Nav Canada noted that "Edmonton is on an older version of CAATS still and perhaps this is the reason the 161/159 was sent".
1695-GS	NAT	ACTIVE	GROUND	Reverse order of NDA nomination and FN_CAD	BIRD received a log on at position 6338N06219W/07:25:59 just within the CDQX GOTA airspace. BIRD sent CR1 at 07:26:00. Aircraft responded with DR1 CPDLC Disconnect Request, DM64 [NDA CDQX]. Our hypothesis is that Montreal were transferring the flight without first nominating us NDA (instead having nominated CDQX being NDA). Seems like the ED-100-prescribed order of NDA nomination and FN-CAD had been reversed. Alternatively CDQX had set themselves up as both CDA and NDA. Aircraft had to manually log on after BIRD boundary.	The message logs show: 7:21:43 CZUL sends end-service to effect transfer to CDQX 7:24:35 CDQX sends NDA (CZQX) 7:24:39 CDQX begins AFN transfer to CZQX 7:25:12 CZQX sends CPDLC connect request (CR1) 7:25:12 CZQX begins AFN transfer to BIRD 7:25:24 Airplane sends CPDLC connect confirm (CC1) to CZQX 7:25:52 CZQX sends NDA (BIRD) 7:25:56 Airplane sends "not current data authority" for NDA to CZQX 7:26:05 BIRD sends CR1 7:26:15 Airplane sends DR1/dm64 to BIRD 7:26:35 CDQX sends "welcome" message The problem was that CZQX began the process to transfer the airplane to BIRD before it had become the CDA (and, in fact, before the preceding center, CDQX, had even sent its welcome message. Assigned to Nav Canada for further investigation.
1696-MM	NAT	CLOSED AS DUPLICATE	AIR-t	Aircraft not able to connect to ADS/CPDLC	A/C was not able to connect to ADS/CPDLC. After sending the logon they received a message "please re-logon" or similar.	Boeing has determined that this PR is actually a duplicate of PR 1021-MM and advised the aircraft operator accordingly, specifically that RC CMU-900 core s/w p/n 832-9548-012 fixes this "peripheral lockup" issue.
1697-MM	NAT	CLOSED AS DUPLICATE	AIR-t	Aircraft not able to connect to ADS/CPDLC	A/C was not able to connect to ADS/CPDLC. After sending the logon they received a message "please re-logon" or similar.	Boeing has determined that this PR is actually a duplicate of PR 1021-MM and advised the aircraft operator accordingly, specifically that RC CMU-900 core s/w p/n 832-9548-012 fixes this "peripheral lockup" issue.
1698-RP	SOPAC	CLOSED	None	Loss of ADS-C for C130	A number of losses of ADS-C were experienced with a C130.	Permission was not recieved to order audit logs. No data analysis could be conducted.
1699-SN	NAT	CLOSED AS DUPLICATE	AIR-t	Invalid fixname in DM48	A corrupted downlink message was received from a B777. The corrupted message was a DM48 with an invalid fixname.	This is a known issue with the 777. This problem is being tracked under master PR 1094-SN. The problem is targeted to be corrected in 777 Block Point 17A, scheduled for 3Q15.
1700-MM	NOPAC	CLOSED	AIR-t	Delayed ADS-C and CPDLC messaging	We received an ADS position report at the Oakland Boundary at 0757z after which there were no ADS-C position reports received until 0931z and attempts to contact the aircraft via CPDLC failed. Subsequent ADS-C position reports were all sent over HFDL and there were substantial delays some of which were over 20 minutes. Additionally, starting at 1225z, some of the ADS-C position reports were missing the predicted route group.	SATCOM did not function for this airplane during this flight, which accounts for the communications problems. More specifically, failed messages occurred from about 0759Z when the airplane exited land-based VHF coverage to about 0931Z when HFDL began functioning, delayed HFDL messages occurred from about 0931Z to about 0957Z as the aircraft worked to empty its message queue, and minimally-delayed HFDL messages occurred from about 0957Z to about 1121Z. Regarding the ADS-C reports after 1223Z that were reported as missing the predicted route group, the associated periodic contract request (contract request 5, received by ARINC at 1158Z) contained a modulus of zero for the predicted route group, as well as for the flight identification, earth reference, meteorological, air reference, and aircraft intent groups; in other words, the aircraft behaved correctly when it did not send those groups. SATCOM functioned for this airplane on multiple subsequent transpacific flights.
1701-GS	NAT	OPEN	AIR-t	Downlink contains header only	Downlink from connected aircraft seems to be header only. Several occurrences for this reg.	The message at 0654z had the same MIN and timestamp as the WILCO at 0642z, but an MRN of 0 (instead of 2), no content and no CRC. And it was issued just a few seconds after a CMF Master Switch. This seems to be an airplane avionics problem, and will be investigated by the supplier (Honeywell).
1702-GS	NOPAC	CLOSED AS DUPLICATE	AIR-t	ADS-C position reports with improperly encoded next and next+1 waypoints	Received multiple position reports from this aircraft with the next and next+1 waypoints which contained a longitude of 180E encoded as S180W180.	Closed as a duplicate of PR 1083-GS.
1703-SN	NOPAC	OPEN	TBA	Bad next fix and altitude data in PRR	Received continuous bad next fix, next fix estimate and altitude data in the PRR of this flights ADS position reports.	Gulfstream confirmed there may be multiple avionics issues involved in this PR.
1704-SN	SOPAC	ACTIVE	TBA	No Load function available for route clearance uplink - A332	Flight crew advised that there was no LOAD function available upon receipt of a CPDLC route clearance uplink.	Airbus investigation in progress

CRA number	Region	Status	Type	Title	Description	Findings
1705-RP	NAT	ACTIVE	TBA	CPDLC Anomalies	CPDLC ONLY WORKED FOR A SHORT TIME AFTER LOGGING ON MANUALLY WITH CZQM. WOULD NOT TRANSFER FM ACTIVE LOGON TO NEXT CTR EVEN WITH DATALINK READY MSG DISPLAYED. NOT ONE POS REPORT WAS RECD BY ANY STATION. 1/2 WAY THRU FLT THE CPDLC WAS FROZEN IN THE LOGON SENDING MODE EVEN THO THE DATALINK READY MSG WAS DISPLAYED. SOMETHING IS SERIOUSLY WRONG WITH THIS CPDLC.	CRA investigation in progress
1706-SN	ASIA	CLOSED	None	Unable to log on to WSJC - (1)	LOGON to RJJJ completed and could use until GURAG. Before 10 minutes from TENON ETA, LOGON to WSJC implemented but it was rejected. After that, we attempted to RE-LOGON five times, but it was rejected and LOGON couldn't implement. "RE-LOGON TO ATC COMM" was displayed on FMC SCRATCH PAD. "REJECTED" was displayed under LOGON at 1L LSK.	PR was received months too late to investigate.
1707-SN	ASIA	CLOSED	None	Unable to log on to WSJC - (2)	Before 20 minutes from TEGID, we attempted to CPDLC LOG ON to WSJC five times at intervals. The results of that were "REJECT". We attempted to do similarly inside of WSJC, but the result was same.	PR was received months too late to investigate.
1708-SN	ASIA	CLOSED	None	Unable to log on to WSJC - (3)	LOGON to WSJC was completed normally. But "SENDING" was stayed on displaying, when we attempted to send POS REPORT at LUSMO. After that, "UNABLE TO SEND MESSAGE" was stayed on displaying every 10 minutes.	PR was received months too late to investigate.
1709-SN	ASIA	CLOSED	None	Unable to log on to WSJC - (4)	At ground of Singapore, LOG ON to WSJC was implemented but CONNECTING situation was continued and LOGGED ON couldn't be completed. After takeoff, we attempted to send again but it was unsuccessful. After implementation of DATALINK Reset, LOG ON was implemented but it was unsuccessful. LOG ON to VVTS was turned LOGGED ON. In this period, we sent POSITION REPORT with HF.	PR was received months too late to investigate.
1710-SN	ASIA	CLOSED	None	Unable to communicate with WSJC (1)	LOG ON to WSJC was completed, but POSITION REPORT wasn't downlinked automatically. We presume communication of ADS and CPDLC isn't work well	PR was received months too late to investigate.
1711-SN	ASIA	CLOSED	None	No transfer from WSJC to VVTS (1)	LOG ON to VVTS from WSJC was unsuccessful. VVTS wasn't displayed on NEXT CENTER and aircraft approached FIR boundary, so we reported ATC this situation. POSITION REPORT with ADS was completed successfully. We attempted to LOG ON to VVTS twice manually, but LOG ON was unsuccessful. (Comment) We asked VVTS "Is CPDLC on progress?" on VOICE. VVTS answered "ON PROGRESS".	PR was received months too late to investigate.
1712-SN	ASIA	CLOSED	None	Unable to log on to WSJC - (5)	After using CPDLC normally inside of RJJJ, we attempted to LOGON to WSJC contacting MNL HF. EICAS MSG "FMC MSG" and CDU Scratchpad MSG "RE LOGON TO ATC COMM" were displayed and LOGON was rejected. After 10 minutes, we attempted to do the same thing twice and the results were same, LOGON was unsuccessful.	PR was received months too late to investigate.
1713-SN	ASIA	CLOSED	None	No transfer from WSJC to VVTS (2)	When entering from WSJC to VVTS, AUTO TRANSFER wasn't implemented. LOG ON to WSJC was implemented manually. (Original PR describes "SGN" but CRASA-JAPAN presumes "VVTS". Because "SGN" isn't FIR.)	PR was received months too late to investigate.
1714-SN	ASIA	CLOSED	None	CPDLC Pos Report not received by WSCJ (1)	When we implement CPDLC with Sigapore control center, Singapore RADIO report us CPDLC POSITION REPORT wasn't sent. The field of POSITION REPORT on CDU was displayed "SENT". After that, we requested altitude change with CPDLC but there was no response. We communicated with HF. LOGON to WSJC and WX DEVIATION REQUEST part of the route were implemented normally with CPDLC.	PR was received months too late to investigate.
1715-SN	ASIA	CLOSED	None	Unable to log on to WSJC - (6)	LOGON to WSJC was implemented normally but "RE-LOGON TO ATC COMM" was displayed on SCRATCH PAD and it was turned REJECTED.	PR was received months too late to investigate.
1716-SN	NOPAC	CLOSED	None	180E received in CPDLC Pos report instead of 180W	Position Report in KZAK. If we don't change "180E" to "180W" on ATC FLT PLAN and send, KZAK send message which indicate Position Report with "180W".	PR was received months too late to investigate.
1717-SN	ASIA	CLOSED	None	Unable to log on to WSJC - (7)	We attempted to implement LOGON to WSJC but it was REJECTED. CDU MSG "RE-LOGON TO ATC COMM" was displayed. We tried CCB Reset but the situation didn't change. Logon was implemented normally in RJJJ and subsequent communication was normal. (Original PR describes "WJJJ" but CRASA-JAPAN presumes "RJJJ".)	PR was received months too late to investigate.
1718-SN	ASIA	CLOSED	None	No transfer from WSJC to VVTS (3)	At AKMON, ATC was transferred from Singapore to Ho-Chi-Minh. Sometime after that ACT CTR was remained WSJC. After implemantation of Logoff manually, Logon to VVTS and ACCEPTED displayed but ACT CTR wasn't displayed. (Original PR describes "ATC CTR" but CRASA-JAPAN presumes "ACT CTR".)	PR was received months too late to investigate.
1719-SN	ASIA	CLOSED	None	CPDLC Pos Report not received by WSCJ (2)	LOGON to WSJC with CPDLC was succeeded and sent POS REPORT but ATC reported it wasn't arrived. We checked "SENT" displayed on board. ADS was armed but it wasn't ACT. When WX DEVIATION REQUEST with CPDLC was implemented, it changed Open Status but we didn't receive any response.	PR was received months too late to investigate.
1720-SN	NOPAC	CLOSED	None	No transfer from GDXB to PAZA	ATC wasn't transferred from GDXB to PAZA automatically with CPDLC. After entering PAZA airspace, it was remained LOGON to GDXB. So we implemented LOG OFF manually and RE-LOGON to PAZA. After that, NORMAL.	PR was received too late to investigate.
1721-SN	ASIA	CLOSED	None	Unable to log on to WSJC - (8)	LOGON Failure to WSJC We changed from INDIAN (Auto tuned) to PACIFIC manually but it wasn't improved.	PR was received too late to investigate.
1722-GS	ASIA	OPEN	GROUND	Unable to communicate with WSJC (2)	LOGON to WSJC was implemented on ground. At LUSMO, we downlinked Position Report (SENT 0443Z). We downlinked request messege "WHEN CAN WE EXPECT" (SENT 0500Z). At 0515Z, we asked on voice whether these messages (0443Z, 0500Z) were received. They responsed we didn't received those messages. Position Downlink with ADS-C wasn't displayed. It was normal operation in VVTS (NEXT CTR).	It was too late to obtain ARINC/AVICOM logs. The SITA logs cover only SATCOM, and do not show the logon or the position report at 0443z. However, they do show the position report at 0500z being delivered to SINCXYA, together with an ADS report at 0448z, a climb request at 0515z (which never received a response), and the disconnect request at 0526z. The logon to VVTS at 0527z proceeded normally. It seems therefore that there was a problem at WSJC in processing/receiving messages from SITA. CAA of Singapore confirmed there was a problem with their system and notified the CRA that the fix for this will be incorporated in an update to their ATM system. This remains OPEN until conformation is received that the update has been made.
1723-GS	ASIA	CLOSED	GROUND	CPDLC Pos Report not received by WSCJ (3)	Position was sent from aircraft but it wasn't received on ground. We checked "SENT" displayed. (Comment) In WSJC, SELCAL check couldn't be implemented. In RPHI, SELCAL check could be implemented.	The SITA log shows the successful logon to WSJC at 0628z, with CPDLC and ADS connections being established by 0629z. At 0654z, WSJC sent REQUEST POSITION REPORT. At 0655z, the position report was sent and delivered to SINCXYA. This PR was forwarded to WSJC and then to Thales. Their investigation showed that the cause of this particular event was an issue in the system they provided. This has now been fixed.
1724-GS	ASIA	CLOSED AS DUPLICATE	GROUND	CPDLC Pos Report not received by WSCJ (4)	Position was sent from aircraft but it wasn't received on ground. We checked "SENT" displayed. (Comment) In WSJC, SELCAL check couldn't be implemented. In RPHI, SELCAL check could be implemented.	Closed as a duplicate of PR 1723-GS.
1725-GS	ASIA	OPEN	GROUND	Unable to communicate with WSJC (3)	LOGON to WSJC was implemented on ground. Request with CPDLC wasn't sent and there wasn't response. ADS wasn't worked. So RE-LOGON was implemented but it was unsuccessful. After Data Link Restart, LOGON was succeeded. After that, NORMAL.	CAA of Singapore confirmed there was a problem with their system and notified the CRA that the fix for this will be incorporated in an update to their ATM system. This remains OPEN until conformation is received that the update has been made. See PR 1722-GS.
1726-RP	NOPAC	ACTIVE	TBA	Unable to connect CPDLC via SATCOM	Unable to connect CPDLC via SATCOM.	CRA investigation in progress
1727-SN	ASIA	CLOSED	None	Unable to log on to WSJC - (8)	Before LUSMO, we attempted to implement LOGON to WSJC. "SENT" displayed but LOGON was unsuccessful. (occurred twice)	PR was received too late to investigate.
1728-MM	ASIA	CLOSED	None	No transfer from WSJC to VVTS (3)	ATC wasn't transferred from WSJC to VVTS automatically, so LOGOFF was implemented manually. After that, LOGON to VVTS was implemented.	The CRA attempted to investigate this PR, but there is an apparent mismatch between the aircraft registration and flight identifier contained in the submitted PR. The ACARS message logs for the noted aircraft registration indicate that it was operating with a different flight number at the date and time contained in the submitted PR. Since ACARS message logs are stored for only three months it is too late now to determine the correct aircraft registration and request its ACARS message logs.
1729-MM	NOPAC	OPEN	GROUND	No transfer from KZAK to RJJJ	Normally, ATC was transferred from KZAK to RJJJ before OMLET automatically but "ATC TERMINATED" message was displayed and LOGOFF. So LOGON to RJJJ was implemented again. After that, Normal Operation.	The FAA reported that this problem appears to be the result of a known Ocean21 issue in which the FN_CAD and NDA are occasionally sent in the wrong order.
1730-MM	SOPAC	ACTIVE	GROUND	Failed CPDLC transfer from YBBB to NZZO	NO AUTO CHANGE YBBB- NZZO	The CPDLC transfer failed because NZZO did not establish a CPDLC connection as the NDA before YBBB terminated its CPDLC connection as the CDA, even though YBBB performed AFN address forwarding to NZZO. This PR is assigned to ACNZ to investigate further.
1731-MM	NAT	ACTIVE	GROUND	Failed CPDLC transfer from CZEG to CZQX	AUTOMATIC TRANSFER FROM CZEG TO CZQX DID NOT OCCUR AS EXPECTED LOGGED OFF CZEG AND LOGGED ON TO CZQX	CZEG did not perform the necessary actions to transfer CPDLC authority to CZQX, namely designating CZQX as the NDA and performing AFN address forwarding to CZQX. Additionally, when the flight crew queried CZEG about the situation via a CPDLC free-text message, CZEG responded with a concatenated uM162 SERVICE UNAVAILABLE and uM169 MESSAGE NOT SUPPORTED BY THIS FACILITY uplink message, which appears to have set up a repeating loop of those uplink messages based on the flight crew's required dM3 ROGER responses. This PR is assigned to Nav Canada to investigate these two issues from their perspective.
1732-MM	NAT	OPEN	TBA	CPDLC Connection Failure	ATC COMM TERMINATED. MANUAL LOGON UNSUCCESSFUL. ATC ADVISE THAT AFTER TERMINATION A MANUAL LOGON IS NOT POSSIBLE. Also: "I was on the flight deck at the time and we definitely did not initiate the termination at 1603. We just received the ATC COMM TERMINATED message, and then pretty much straight away tried a manual logon. There was no response to that, and ATC advised by voice that once disconnected (for whatever reason) they are unable to process any future connection request in that airspace."	The flight crew reported that the CPDLC connection was terminated with no flight crew action, but the message log analysis revealed that the DSP received a CPDLC DR1 with dM62 ERROR commandedTermination, which normally indicates manual termination of the CPDLC connection by the flight crew. This PR should be briefed at future NAT CNSG, IPACG FIT, and ISPACG FIT meetings in order to encourage the participants to report any recurrences of this issue.

CRA number	Region	Status	Type	Title	Description	Findings
1733-GS	SOPAC	CLOSED	AIR-t	ADS-C report not received, failed Address forwarding - B789	At 1630, a warning message was displayed that an expected ADS-C report had not been received. This occurred shortly after the aircraft would have transitioned from VHF data link to SATCOM. At 1652 a warning message was displayed that Address forwarding to NZZO had failed. At 1657 – 5 minutes prior to the FIR boundary, and very shortly after the aircraft was disconnected – a subsequent logon was received. It is not known if this was due to a flight crew error, or an avionics initiated logon.	The airplane was encountering a known problem with SATCOM up until just before 1630z. There was a system master switch at 1627z (probably initiated by the flight crew), after which comm via SATCOM operated normally. That explains why the ADS report was not sent. The AFN contact advisory at 1652z appears to have been delivered but not responded to, as were several earlier ones at 1640z, 1643z, 1646z and 1649z. A slightly later one at 1655z was successful. It's hard to be sure exactly what the airplane saw, as with MTSAt message delivery, the SITA ground logs don't contain the air/ground messages. The only difference seems to be that when the one at 1655z was received, CMF had just downlinked a DR1 for the active connection. The logon at around 1657 was a manual logon, initiated by the crew. At that time, the forwarding to Auckland had not completed, and the crew would have seen no connection existing at that time. There is a known issue with being unable to respond to AFN messages in some cases after a master switch occurred (as happened at 1627z). This is fixed in BP2.5, a Service Bulletin for which has now been released.
1734-SN	SOPAC	OPEN	mult	CR1 failed because we were CDA - B77W	YBBB's attempts to establish a CPDLC connection were rejected by the avionics because YBBB was the Current Data Authority.	Problem started with failure of NFFF to send NDA=YBBB prior to initiating AFN Contact Advisory. During the next hour both centers bombarded the airplane with uplinks, including: - AFN Contact Advisories (i.e., alternating attempts to transfer aircraft) - Numerous CPDLC CR1s – 7 from NANCDYA, 12 from BNECAYA - Numerous ADS-C contract requests In the end, a CPDLC connection was established with YBBB. Avionics treated subsequent CR1 attempts from YBBB as attempts to establish the inactive connection (avionics were confused at this point). Confirmed in lab test that avionics respond correctly to "normal" receipt of duplicate CR1 (reply with CC1). Honeywell engineers are attempting to duplicate condition under which the avionics will treat CR1 from the active connection as an attempt to establish an inactive connection.
1735-SN	SOPAC	ACTIVE	NETWORK	ARINC Direct customer issue logging on to NTTT CPDLC	Customer attempted to logon to NTTT multiple times. No response from the ATC. We'd like to know what went wrong.	This problem was likely the result of the airplane not being correctly configured in SITA's system.
1736-SN	SOPAC	OPEN	AIR-p	CPDLC position report contained incorrect 'DESCENDING' message element - GLEX	A CPDLC position report received contained an incorrect "DESCENDING to 441".	Honeywell believes this to be a crew training issue.
1737-DK	SOPAC	CLOSED	AIR-p	Unable to send WILCO - C17	The pilot advised unable to send a WILCO response to a clearance.	An examination of the ATC messages between the aircraft and Brisbane indicated that there was nothing amiss with the messages themselves. The C-17 design is such that the ACCEPT prompt doesn't appear unless the flight crew first loads the uplink into the Provisional flight plan for review. Once the ATC UPLINK page is redisplayed after viewing the loaded uplink, the ACCEPT prompt is enabled. It is believed that the flight crew never loaded the uplink, thus the ACCEPT prompt never appeared. PR attributed to operator error.
1738-SN	SOPAC	CLOSED	None	Unable to establish Active CPDLC connection - GLF5	Ground system indicated that a CPDLC connection had been established, but the avionics showed no CPDLC connection.	Closed without investigation. CRA did not receive response from operator with authorization to request logs.
1739-SN	SOPAC	OPEN	AIR-t	Error messages when loading route clearances - MD11	Problems have been observed when loading uplink elements 77 and 79 into the MD-11 FMC.	Problem has been duplicated in the Boeing lab. Loading UM77 messages on flights that include Course to an Altitude (CA) leg as the missed approach final leg will cause this anomaly on the MD-11 model. Many approaches in Australia have this leg type for the final missed approach leg. Problem can also occur with UM79.
1740-RP	NOPAC	ACTIVE	TBA	FANS PROBLEM REPORT	DATALINK LOST EICAS MSG FOR RPROX 1 1/2 HRS SATVOICE LOST EICAS MSG FOR ENTIRE FLT	CRA investigation in progress
1741-DK	SOPAC	CLOSED	AIR-p	Incorrect acft clock setting - caused a number of data link issues - C17	A number of data link anomalies were observed which appeared to result from an incorrect clock setting.	An examination of the ATC messages between the aircraft and Brisbane indicated that at first there was about a 10 minute difference between the airplane's time and the ARINC message timestamp. At approximately 0308z the flight crew sent a CPDLC freetext message saying "we reset acft clock." After that, the data link system started working much better as the ARINC and aircraft timestamps were synchronized. The avionics software on the C-17 allows the flight crew to override the GPS time. We submit that the flight crew, for an unspecified reason, overrode the GPS time with a manual time entry that was off by about 10 minutes. As noted above, when they subsequently reset the aircraft clock again, all worked well. An avionics block upgrade exists that addresses this scenario such that a manual aircraft time entry will automatically revert back to GPS time if GPS time is valid.
1742-MM	ASIA	CLOSED	GROUND	No response to RQ	Logged on to Mumbai and using CPDLC, the crew made 3 requests for climb, and a single request for a weather deviation. Mumbai Centre did not respond to the request, but later free texted the flight to relay ATC information to another aircraft. The crew added that while the Mumbai HF was operational, the operator had referred the crew to continue with CPDLC.	ACARS message log analysis corroborates PR description. Flight crew sent REQUEST CLIMB TO FL350 at 0012Z, WHEN CAN WE EXPECT CLIMB TO FL350 at 0028Z, REQUEST CLIMB TO FL350 DUE TO AIRCRAFT PERFORMANCE at 0117Z, and REQUEST WEATHER DEVIATION UP TO 20NM RIGHT OF ROUTE DUE TO WEATHER at 0125Z without any operational response from VABF, while in meantime VABF sent RELAY FOR ARAIBIA 414 TAKE EST LOTAV AND FL at 0057Z. PR assigned to BOBASMA (Airports Authority of India) to investigate further. BOBASMA indicated that "Since more than 30 days had elapsed since the date of the PR occurrence, data is not available for investigation."
1743-AG	SOPAC	CLOSED	AIR-t	Datalink problems with B752	Starting on 2014-09-14, we began to experience intermittent datalink issues with this airframe. The most recent occurrence of this issue happened on 2014-09-29. While the aircraft was in VHF coverage, it logged on and sent 6 ADS position reports with little delay. Between 0236z - 0315z, we received 5 ADS reports over Inmarsat (XXP), after which no ADS reports were received until 0607z when the aircraft was in VHF coverage near Maui. From 0339z - 0607z, we were unable to send any uplinks and the following message was received: "UP INTERCEPT NO STATION TO 231". This aircraft flew at least 8 times in September before the 14th and didn't experience these issues.	Oakland Center provided the following information, "This issue continued to occur through Oct-19 at which point the airline was contacted directly. They replaced the SATCOM antennae and so far we haven't observed any recent issues with this airframe".
1744-RP	NAT	CLOSED AS DUPLICATE	AIR-t	B747 no CC1 response when CR1 sent.	Log on BIRD 14:51. Log on failed since aircraft wasn´t activated in BIRD FDPS until 14:54. Another log on from aircraft 15:15. Reykjavik sent a CR1 but aircraft didn´t repspond with a CC1. Pilot tried to log on 8 more times and each time BIRD FDPS sent a CR1. Never was a CC1 received from aircraft.	This is a repeat of a 747-400 problem we've encountered over the years, not-so-fondly referred to as "Sulky ATC". When the problem occurs, the FMC ignores all uplinks to one function, e.g., FMC will ignore all CPDLC uplinks, while correctly processing AFN and ADS-C uplinks. Closed as a duplicate of PR-688 (sulky behavior).
1745-SN	SOPAC	CLOSED	NETWORK	Avionics failed to show pilot CPDLC session was active	Customer advised that aircraft was able to get a successful logon from OAK ATC but it never showed as Primary. Also was able to establish ADS-C. Message center shows AFN disconnects from the aircraft and ADS messages. We need to figure out why the avionics didn't show the session as primary. Okay at 1721z, the connection and contracts were just fine. The avionics responded to the contract request and they were passing ADS messages. I can tell they didn't think they had a connection because they tried to log on additional times.	This problem was the result of the airplane not being correctly configured in SITA's system.
1746-RP	ASIA	CLOSED	None	ADS Emergency indication	ADS Emergency indication received. Pilot confirmed as wrong indication and all operations normal.	PR was logged beyond the 90 day limit to order audit logs. No data analysis could be conducted.
1747-RP	ASIA	CLOSED	AIR-p	UNABLE TO CONNNECT TO ADS	Unable to connect ADS.	Data indicates that the ADS application was turned off on the aircraft. Because of this, no ADS connection was established upon uplinking an ADS contract.
1748-RP	ASIA	CLOSED	GROUND	ADS Emergency indication	ADS Emergency indication received and pilot reported all operations normal.	On the date reported, for the tail number reported, the datalink audits did not show any ADS traffic either uplink or downlink. PR was assigned to BOBASMA-India for further investigation. BOBASMA indicated that "Since more than 30 days had elapsed since the date of the PR occurrence, data is not available for investigation."
1749-RP	ASIA	OPEN	GROUND	ADS Emergency indication	ADS Emergency indication received and pilot reported all operations normal.	Per Airbus analysis, there was one emergency report sent (likely due to pilot error) then the flight crew put ADS in normal mode. The ATC automation apparently did not update accordingly.
1750-RP	ASIA	ACTIVE	TBA	NO ADS/CPDLC CONNECTION	When advised to logon on VOMF,error message and Time Delay message received.	CRA investigation in progress
1751-RP	ASIA	CLOSED AS DUPLICATE	GROUND	ADS Emergency indication	ADS Emergency indication received, but as per aircraft all operations normal.	Closed as dup of 1749-RP
1752-RP	ASIA	ACTIVE	TBA	UNABLE TO CONNECT ADS/CPDLC	Unable to connect ADS/CPDLC connection. Receiving Error messages.	CRA investigation in progress
1753-MM	NOPAC	CLOSED AS DUPLICATE	TBA	No response to multiple Uplinks including two climb clearances	We received a MAS for each of the following uplinks, however we received no response from the pilot who later stated that they did not receive either climb clearance. 1643:06 - CLIMB TO AND MAINTAIN F370, REPORT LEVEL F370 Received MAS at 1643:31 1645:18 - CONFIRM YOU RECEIVED CLEARANCE FOR HIGHER Received MAS at 1645:39 1652:25 - NO I GAVE CLEARANCE TO CLIMB TO F370 ADVISE IF YOU RECEIVED IT Received MAS at 1652:47 1653:52 - CLIMB TO AND MAINTAIN F370, REPORT LEVEL F370 Received MAS at 1654:13 1656:17 - ARE YOU RECEIVING CLEARANCES Received MAS at 1656:47	Another confirmed B744 ack-n-toss – Closed 1753 as a duplicate of 1684

CRA number	Region	Status	Type	Title	Description	Findings
1754-SN	NAT	OPEN	GROUND	Aircraft Unable to LOGON	Aircraft advised via HF that it had attempted to LOGON to KZWY many times without success. I showed no LOGON attempts received in Ocean21. Pilot also advised that it was having similar problems logging onto Santa Maria. I checked Ocean21 offline data and found the LOGON attempts. They had failed syntax checking and so they were rejected at the Ocean21 External Communications Server level (which is why I could not find them as they were coming in live).	Log analysis revealed that the downlink messages contained the SMI FM3 which means the message originated from the Center FMC. The FAA has confirmed that ATOP does not support that SMI. This PR will remain open until this issue is resolved.
1755-RP	SOPAC	ACTIVE	AIR-t	Loaded route did not match ATC uplink	The crew requested a Tailored Arrival and were subsequently cleared for the Pacific 2 TA. The uplinked displayed correctly, however when LOAD FMC was selected this loaded part of an old route, KLAX-NZAA. Photos were sent to the CRA.	Boeing investigation in progress. So far they have been unable to reproduce the reported behavior in the Boeing lab.
1756-GS	SOPAC	CLOSED	NETWORK	Datalink lost	ATC DATALINK LOST from 0304 to 0400. Crew carried out three comm re-starts without restoring the link. ATC Datalink returned to normal with no further crew action.	Per SITA, "We cutover to a new software release as the result of our planned early Oct 16, 2014 maintenance action. A software bug was ultimately identified in that release and was corrected later Oct 16. Steps towards taking corrective action were immediately taken after detecting the problem. Not all ULs were affected. ULs that were not successful over the first SITA media attempted resulted in the 248 error due to the software bug. When there were multiple messages in queue for a given aircraft such that by the time a given message was next in line to be attempted, the 241 error occurred if the message was deemed too old by that point in time due to the software bug".
1757-MM	NOPAC	CLOSED AS DUPLICATE	AIR-t	KZAK unable to send climb clearance	KZAK WERE UNABLE TO SEND CLIMB CLRNCE HF SELCAL USED	By all appearances, this PR is a recurrence of the 777 "ack-'n'-toss" issue, meaning that the ACARS network avionics (DCMF) acknowledged receipt of the END SERVICE but the CPDLC application avionics (FDCF) did not process it, which explains why no CPDLC disconnect request (DR1) from the aircraft is present in the ACARS message log and why from KZAK's perspective there was no CPDLC connection but from the aircraft's perspective there was. This PR is closed as a duplicate of PR 1358-MM.
1758-SN	NAT	ACTIVE	TBA	Unauthorised Climb due to Misunderstanding CPDLC Msg	The following is the narrative from Shanwick ATC: At time 1300 I received a message indicating an altitude deviation of 300ft, showing F333. I immediately issued a demand contract and sent out a message via HF radio to confirm the flight level. At time 1303 another automatic conformance warning message was received indicating that the aircraft was at F350. I immediately protected the profile F330 to F350 in SAATS which,luckily for everyone,was conflict free. At time 1305 I sent via HF radio "where did you get your climb clearance from" At time 1307 the reply came in "we got it on CPDLC and we acknowledged it". At time 1308 I sent " maintain F350. Suggest you check and confirm it came from eggx". The new Flight Level F350 was coordinated with Reykjavik control. At Time 1310 he replied " Roger maintain F350 OK we will try and do that" At time 1316 a FANS request was received "Request climb to (F350)". At time 1326 the aircraft sent "There is some confusion over a climb clearance that we received. We received a clearance from EGGX by CPDLC to climb to F350, we acknowledged the clearance. We followed procedure, and we had no indication at this side that the acknowledgement was not received by EGGX. What is the current status with this situation?" The flight	Airbus investigation in progress.
1759-MM	ASIA	CLOSED	GROUND	Unable to logon CPDLC with VABF	Unable to logon CPDLC with VABF. Previous logon to VYYF no issues.	ACARS message log analysis corroborates PR description. Flight crew sent six AFN contact messages to VABF between 2159Z and 2221Z, but each corresponding AFN acknowledgement message from VABF was negative. More specifically, each AFN acknowledgment message contained reason code 4, which indicates "Could not match ID/position to flight plan" per ARINC 622. This PR is accordingly assigned to BOBASMA (Airports Authority of India) to investigate the apparent failed correlation between the filed flight plan and the AFN contact messages. BOBASMA indicated that "Since more than 30 days had elapsed since the date of the PR occurrence, data is not available for investigation."
1760-GS	SOPAC	OPEN	AIR-t	B789 issues with satcom	Aircraft logged on OK on departure NZAA using AKL7 VGS. CPDLC and ADS-C established using VGS AKL7. Transition to SATCOM had issues received a number of Up Intercept - Aircraft not logged on and then first and only ADS-C report via SATCOM received at 1946:39 which was sent at 1929:32.	The problem was the result of known B787 issue with loss of SATCOM. The problem has been duplicated in the Boeing lab and is expected to be fixed in Blockpoint 3.
1761-SN	SOPAC	OPEN	AIR-t	Loss of data link - A388	Loss of CPDLC, ADS-C.	The airplane appeared to have been having some major issues with its satcom link. It was unclear whether the avionics were the problem or some other component of the A-G pathway. The satcom link transitioned between POR1 and IOR2 4 times. As a result 3 uplinks from YBBB (CONFIRM ADS-C ARMED and 2 pos report requests) were delayed several minutes in the network and were finally uplinked to the airplane after the flight crew had disconnected CPDLC. Once the airplane achieved a stable satcom connection, there were several messages in the satcom queue and the time required to transmit all those messages temporarily caused uplink delays.
1762-GS	SOPAC	CLOSED	AIR-t	Loss of data link, lengthy delays - B788	Lengthy delays (or non-receipt of) in responses to CPDLC uplinks. Non-receipt (or very delayed receipt) of ADS-C reports.	The WILCO response for the route uplink was issued at 18:14:16. However due to a known issue with the avionics software, for which a fix is incorporated in the Blockpoint 2.5 release, the message remained in the queue to be sent for over 10 minutes. The Service Bulletin for the BP2.5 software was released on 1/23/2015.
1763-RP	NOPAC	OPEN	AIR-t	FANS PROBLEM REPORT	Reception of messages were possible, but it was not possible to perform the reply to it. It became possible to send and receive normal after re-logging on. While it was possible to send a request	CRA investigation in progress
1764-DN	NAT	ACTIVE	TBA	Unable to log onto CPDLC	FMC MESSAGE EICAS UNABLE TO SEND MSG DISPLAYED ON FMC. UNABLE TO LOG ONTO CPDLC	CRA investigation in progress
1765-DN	NAT	ACTIVE	TBA	Unable to log onto CPDLC	AFTER TRYING TO LOG ONTO EDDY CPDLC GOT STUCK IN THE SEND MODE. UNABLE TO LOG ONTO CPDLC. WE CAN NOT TYPE IN ANY OTHER OCA SINCE IT IS STUCK IN SEND.	CRA investigation in progress
1766-DN	NAT	ACTIVE	TBA	CPDLC has frozen up	CPDLC HAS FROZEN UP CANNOT LOG ON TO CZQX	CRA investigation in progress
1767-AG	CANADA	CLOSED AS DUPLICATE	AIR-t	FANS PROBLEM REPORT	UNABLE TO REPLY TO ANY CPDLC MESSAGE. UNABLE TO ACCEPT VIA CDU OR LEFT AND RIGHT GARESHIELD PANEL DATA LINK SWITCHES. LOG-OFF AND RE-LOGON TWICE BUT NO CHANGE. AOS-WPR WAS FUNCITONING NORMALLY AND CONFIRMED BY ATC. C/B CMU AC WAS RECYCLED AND STILL UNABLE TO REPLY TO ANY CPDLC MESSAGE. UNABLE TO ACCEPT OR REJECT CPDLC MESSAGE AND MESSAGE REMAINS ON PRIMARY EICAS MESSAGE BLOCK UNTIL DELETED ON CDU ATC LOG PAGE. "INVALID ATC UPLINK" MESSAGE APPEARES ON CDU SCRATCHPAD WHEN ATTEMPTING TO REPLY TO MESSAGE BY OTHER CDU LSK OR GLARESHIELD ACPT(Accept)/CANC(Cancel)/RJCT(Reject) SWITCHES.	CRA investigation in progress
1768-SN	NAT	CLOSED	None	Duplicate or second uM123 in cockpit	Pilot claims to have received second uM123 demanding new SSR code. Pilot changes SSR code resulting in incorrect FPL/track coupling at ATC air situation display. Ground system logs indicate that only one uM123 was addressed to this reg but that two WILCO messages were received referencing the uM123. Is it possible to check (in CSP or aircraft logs) if the aircraft received the same message twice?	From what I can see in the SITA log, this looks like a classic case of the uplink having been delivered to the airplane twice - the first time on VHF and a second time on SATCOM. This can happen if transmission is attempted when the airplane is at the edge of VHF coverage. An uplink successfully arrives at the airplane, but the network does not "hear" the acknowledgement. The message gets rerouted to Satcom and delivered to the airplane a second time. This is a normal (and sometimes annoying) characteristic of the overall system.
1769-MM	ASIA	CLOSED AS DUPLICATE	AIR-t	Potential Ack-and-Toss Event	Flight was not permitted on L888 due to its inability to log into CPDLC. Review of the CPDLC messages shows the FMC is immediately responding with a disconnect (DR1) to every Connect Request (CR1) attempt. Crew tried logons to both ZWWW and ZLLL with no success. Crew ended up flying the northern route and after about 5 minutes on new route, ATC accepted the CPDLC logon request.	This PR is closed as a duplicate of PR 1684-MM due to essentially identical B744 behavior. Of the first 12 FANS uplinks from ZWWW and ZLLL to this flight, the first, fifth, and eighth uplinks were acknowledged by the avionics as having been received but were apparently not transferred from the CMU to the
1770-MM	NAT	OPEN	NETWORK	Unexpected Clearance #1	Received an UNABLE response for a Clearance that was not sent by the controller. The Clearance that the pilot reported receiving is identical to an Uplink that had been sent to the aircraft 5 days earlier: 12-05-2014 17:37:10 UNABLE, NOT CONSISTENT. RESEND 12-05-2014 17:41:49 WHAT MESSAGE DID YOU RECEIVE 12-05-2014 17:44:15 MESSAGE RECEIVED. CLEARED TO DEVIATE UP TO EITHER SIDE 10NM.REJOIN ROUTE BY0422Z. This clearance is identical to the following Uplink sent on 2014-11-30: 11-30-2014 03:42:08 CLEARED TO DEVIATE UP TO L or R 010 NM OF ROUTE, REJOIN ROUTE BY 0422, REPORT BACK ON ROUTE	The CRA has confirmed that the message in question was retransmitted by the network. The CSP has identified the source of the problem and does not expect a recurrence. (Also refer to PR 1771-GS).
1771-GS	NAT	CLOSED AS DUPLICATE	NETWORK	Unexpected Clearance #2	Received an UNABLE response for a Clearance that was not sent by the controller. The Clearance that the pilot reported receiving is identical to an Uplink that had been sent to the aircraft 12 days earlier: 12-05-2014 17:40:12 UNABLE, NOT CONSISTENT. RESEND 12-05-2014 17:42:34 MAINTAIN F370, WHEN DID YOU GET A DESCENT CLEARANCE 12-05-2014 17:45:44 WE GOT A DESCEND MSG AT 1736Z TO DESCEND FL360 A T 0200Z... This clearance is identical to the following Uplink sent on 2014-11-23: 11-23-2014 01:34:06 DUE TO TRAFFIC, DESCEND TO REACH F360 BY 0200, REPORT LEVEL F360	CLOSED AS DUPLICATE of PR 1770-MM.
1772-GS	NOPAC	OPEN	GROUND	CPDLC connection with no crew action	while operating in Guam domestic airspace the crew received an uplink 'ATC COMM ESTABLISHED WITH RJJJ". As this was inappropriate, the connection was terminated and at the correct position a logon to KZAK was completed. The subsequent transfer from KZAK to RJJJ was normal.	Per the FAA, this is a known Ocean21 issue. This situation only occurs for Guam overflights which have a short Oakland flight segment between the Guam and Fukuoka boundaries.
1773-AG	SOPAC	ACTIVE	TBA	B772 VHF-SATCOM transition issue	Aircraft is transitioning from VHF APW1 to SATCOM XXP. All messages sent after 0546 are received at 0602:30 APW1 05:46:03 06:02:30 987 XXP 05:50:54 06:02:30 696 XXP 05:53:25 06:02:30 545 XXP 05:56:24 06:02:30 366 XXP 05:57:34 06:02:31 297 Normal latency before 0546 and after 0602.	CRA investigation in progress
1774-DN	NAT	CLOSED	None	Unable to Send	LOGON PROMPT 1R FROZEN IN SENDING MODE AND FREQUENT UNABLE TO SEND MESSAGES RETURNED. TRIED CYCLING ADS OFF AND BACK ON TO NO AVAIL	PR was received to late to procure logs.
1775-DN	NAT	CLOSED	None	Unable to Send	NABLE TOO LOGON WITH GANDER-CZQX MESSAGE RECEIVED - UNABLE TO SEND	PR was received to late to procure logs.

CRA number	Region	Status	Type	Title	Description	Findings
1776-DN	NAT	CLOSED	None	Unable to Send	ACARS WORKED FOR ATIS AND TAKEOFF DATA BUT WE WERE UNABLE TO GET ENRTE WINDS OR LOG ON TO CPDLC WE GOT SCRATCH PAD MSG.. UNABLE TO SEND MSG.....	PR was received to late to procure logs.
1777-DN	OUT OF REGION	CLOSED	None	Unable to Send	UNABLE TO SEND POSIT REPORTS	Flight was Newark to Sao Paolo and outside of FIT/DLMA area of responsibility.
1778-DN	NAT	ACTIVE	TBA	Unable to Send	CPDLC FROZEN DURING LOGON. KEEPS SAYING UNABLE TO SEND MESSAGE.	CRA investigation in progress
1779-DN	NAT	ACTIVE	TBA	Unable to Send	CPDLC INOP KEEP GETTING UNABLE TO SEND MSG	CRA investigation in progress
1780-DN	NAT	CLOSED	None	Unable to Send	CPDLC NOT WORKING/UNABLE TO SEND MESSAGE CONTINUE TO SHOW IN FMC SCRATCH PAD.	PR was received to late to procure logs.
1781-DN	NAT	CLOSED	None	Unable to Send	CPDLC WILL NOT LOGON. ALSO WINDS WONT LOAD GETTING MSG REPORT	PR was received to late to procure logs.
1782-DN	NAT	CLOSED	None	Unable to Send	FMC MESSAGE EICAS UNABLE TO SEND MSG DISPLAYED ON FMC. UNABLE TO LOG ONTO CPDLC	This is a duplicate report. Problem already documented in PR 1764
1783-DN	OUT OF REGION	CLOSED	None	Resend	NO WINDS WILL UPLINK SAYS RESEND MESSAGE	Flight was US Domestic
1784-DN	OUT OF REGION	CLOSED	None	Resend	UNABLE TO UPLINK WINDS GET RESEND MSG. MSG ALREADY RESET ONCE	Flight was US Domestic
1785-DN	OUT OF REGION	CLOSED	None	Resend	UNABLE TO UPLINK ENROUTE OR DESCENT WINDS BOTH PREFLIGHT AND IN FLIGHT. RESEND REQUEST IS DSPLAD	Flight was US Domestic
1786-DN	OUT OF REGION	CLOSED	None	Resend	SORRY THE CORRECT FORM OF THE ERROR RETURNED IS QUOTE RESEND MESSAGE. MANUAL ENTRY OF WINDS WORKING FINE	Flight was US Domestic
1787-DN	OUT OF REGION	CLOSED	None	Resend	WE KEEP GETTING A RESEND MSG WHEN THE WINDS DO NOT LOAD. PLEASE DO NOT SEND THE WIND PAGE-I HAVE IT IN MY I PAD AND WE HAVE MANUALLY LOADED THE WINDS. ADDITIONALLY-THE F/O SAYS THIS SAME CONDITION HAPPENED ON THE SAME FLT NUMBER ON 13 NOV 2014	Flight was US Domestic
1788-DN	OUT OF REGION	CLOSED	None	Resend	HAVE NOT BEEN ABLE TO UPLINK WINDS. RESEND MESSAGE AFTER SEVERAL MINUTES. NOT SURE IF IT IS A MX ISSUE OR JUST ISSUE WITH OUR FLIGHT TO BE REMEDIED WITH NEW INTIALIZATION.	Flight was US Domestic
1789-DN	OUT OF REGION	CLOSED	None	Resend	NO CRZ/DES WINDS WILL UPLINK. RESEND MESSAGE APPEARS IN THE SCRATCHPD	Flight was US Domestic
1790-DN	OUT OF REGION	CLOSED	None	Resend	NO DATA LINK FOR WINDS RE-QUEST. GET A RESEND MESSAGE ALERT.	Flight was US Domestic
1791-DN	OUT OF REGION	CLOSED	None	Resend	ROUTE WINDS WOULD NOT LOAD. RCVD A -RESEND MESSAGE- MSG 3X. SWAPPED NAV DB TO CLR EVERYTHING OUT AND RESTARTED ACARS/FMC LOAD PROCESS WITH SAME RESULT. ENDED UP MANUALLY ENTERING WINDS.	Flight was US Domestic
1792-DN	OUT OF REGION	CLOSED	None	Resend	AFTER SENDING ENRTE WIND RQST... FOLLOWING MSG APPEARS IN FMC SCRATCH PAD... RESEND MSG. NO ENRTE/FCST WIND UPLNK WAS EVER RECD	Flight was US Domestic
1793-DN	SOPAC	CLOSED	None	Unable to Send	COULD NOT GET ANY WIND DATA...UNABLE TO SEND	PR was received to late to procure logs.
1794-DN	OUT OF REGION	CLOSED	None	Unable to Send	UNABLE TO UPLOAD WINDS TRIED NUMEROUS TIMES KEEP GETTING UNABLE TO SEND MESSAGE	Flight was US Domestic
1795-GS	SOPAC	CLOSED	None	Unable to Send	UNABLE TO GET WIND DATA ON GND LAX OR ANYTIME INFLT SO NO CO POSN RPTS EITHER. CANT CLEAR FMC MSG - UNABLE TO SEND MSG	This relates to sending messages from the airplane's Flight Management System (FMS) to the airline ground system. As such it is NOT an ATC Datalink issue.
1796-AG	NAT	ACTIVE	TBA	Failure to Transfer	CPDLC WOULD NOT TXFR AUTOMATICALLY FM ONE FIR TO ANOTHER INCL EISN EGGX/CZQX/CDQX/CZQM. EACH FIR BOUNDARY REQD US TO MANUALLY LOG OFF THE OLD FIR AND THEN MANUALLY LOG ONTO THE NEW FIR CALLSIGN.	CRA investigation in progress
1797-AG	NAT	OPEN	TBA	Failure to Transfer	ADS CONTRACT FROM EGGX DID NOT AUTO SWITCH TO CYQX AT 30W	CRA investigation in progress
1798-GS	SOPAC	OPEN	AIR-t	Failure to Report	AFTER 2 MIN STILL NO REPORT SENT VIA CPDLC FOR LEVEL AT ALT WHILE ARMED.	This is a known issue, and results from determining that the airplane is level by using a vertical speed signal that is not suitably filtered. The system has been modified to use an appropriately filtered signal, and this fix will be available in the Blockpoint 3 software release at the end of 2015/early 2016. This PR is being left OPEN until the software is released.
1799-RP	NOPAC	OPEN	GROUND	Route Clearances Not Loading Properly	Several flights reported receiving only "Cleared Route" when controller issued route clearance via the drop-down window opened by right-clicking on the displayed Aircraft Position Symbol (APS). Route clearances issued through the Clearance Window did load properly in the cockpit FMS with all route information. Problem may lie with aircraft avionics when we use a 6 character arrival procedure.	The clearance uplinked for this event was an element 80, with HAMND as the enroute waypoint and NEELL3 as the arrival. The NEELL3 arrival in the Navigation Database is a runway dependant arrival and will not load unless a runway is selected. Since a runway was not included in the uplink, the FMC was correctly unable to load the clearance. This PR has been discussed and coordinated with Anchorage ATC center.
1800-DN	NAT	ACTIVE	TBA	Unable to Log On	FMC UNABLE TO LOG ON TO OCEANIC CPDLC.-UNABLE TO SEND MSG- MSG KEEPS DISPLAYING ON FMC.	CRA investigation in progress
1801-SN	SOPAC	CLOSED AS DUPLICATE	AIR-t	No CPDLC downlinks - MD11	The problem started at 0337, when it became apparent that NFFF had not terminated their CPDLC connection with the airplane. (In response to a CPDLC uplink at 0337, "NOT CURRENT DATA AUTHORITY" was received in response). NFFF was requested to send an End Service message (and they said they would), however it became apparent that they either had not sent an End Service, or else it was not successful. At 0341 NFFF was contacted again, and they stated that they would "terminate" the connection. Following this, however, no responses at all were received in response to CPDLC uplinks sent at 0342 and 0345 (i.e. no Position Report, or "NOT CURRENT DATA AUTHORITY" downlink) The aircraft was contacted on HF and instructed to disconnect CPDLC and to logon to YBBB. It appears that they did this out of sequence – the logon was received first… At 0350, another CR1 was uplinked, but a CPDLC connection was not established until 0350.	Closed as a duplicate of 1198-MM. This problem is getting ever increasing attention as similar issues have occurred with B763s and B744s. It has been observed that sometimes the CMU on the aircraft will acknowledge receipt of an uplink, but the uplink is not transferred to the FMC.
1802-MM	NOPAC	CLOSED AS DUPLICATE	AIR-t	Communication issue using CPDLC	In summary, while in Cruise at flight level 380 VMC conditions and under the control of Oakland oceanic we requested a climb to FL400 via CPDLC. The time was 0117z. At 0123Z we received an uplink clearing us to climb and maintain FL400 with the standard request to report at FL 400. The system generated a standard Wilco response and then was armed to report when level at FL 400. That report was sent at 0125Z. Approximately 20 minutes later at 0143Z we received the following ATC uplink: BE ADVISED SOLAR FLARE ACTIVITY HAS NO EFFECT ON CPDLC OPERATIONS/YOU REQUESTED HIGHER AND WILCOED IMMEDIATELY. WE ARE SHOWING NO PROBLEMS WITH CPDLC AND WE WILL BE RESEARCHING WHY YOU ARE NOT RESPONDING BACK VIA CPDLC OR HF. it took a few minutes to digest the content and intent of this uplink and decide on appropriate action. Add 0149Z I asked the first officer to send a message asking if Oakland had received 0125Z downlink level at FL 400. They did not respond to our inquiry and instead of 0157Z sent another uplink: DESCEND TO AND MAINTAIN FL 380/REPORT LEVEL FL 380/IMMEDIATELY. in consideration of the previous uplink and this one where both the words were quite strong, we acknowledged the descent via CPDLC and to send it with an armed report which sent level FL 380 @0200Z. I then sent a free texted 0203Z stating: WE ARE AT	Based on the fact that the airplane has CMU-900 core s/w p/n 832-9548-007 and after reviewing the MTSAT message log provided by JCAB, Boeing has determined that this PR is a duplicate of PR 1021-MM and advised the aircraft operator accordingly, specifically that CMU-900 core s/w p/n 832-9548-012 fixes the "peripheral lockup" issue.
1803-GS	SOPAC	ACTIVE	AIR-t	Intermittent then failed CPDLC & ADS-C - B789	Flight logged on to YBBB at approx 2030. I believe that CPDLC/ADS-C initially worked then subsequently failed. Another logon was received at 2132. There was no response to the CPDLC Connection request or the attempt to establish ADS-C. However, it appears that NFFF subsequently established CPDLC and ADS-C OK at approx 2200.	The SITA log shows the following: 2038z Logged on to Brisbane and established CPDLC 2038z Sent position report 2039z Last ADS report 2055z Free text uplink "CONFIRM ADS ARMED" (no response) 2056z End-service (no response) 2121z RESTART 2132z Logon to Brisbane (timed at 2057z, and no response to CPDLC connect request, but possibly that's expected, as it would have timed out 25 minutes earlier) 2132z Repeat of the 2038z position report 2132z Disconnect request to Brisbane (response to 2056z end-service?) 2132z ADS report to Brisbane that is 49 minutes old. Clearly, this is an avionics problem that caused messages to be held and not transmitted prior to the restart at 2121z, and after the restart (resulting in a master switch for CMF), and another 10-minute wait, old messages, including one previously sent, were then transmitted. This will be investigated by Honeywell.
1804-MM	ASIA	ACTIVE	GROUND	Unable to contact VECF on CPDLC	Unable to contact VECF on CPDLC. No problem contacting VYYF, so no isue with our equipment.	ACARS message log analysis confirms that flight crew sent three AFN contact messages (at 1505Z, 1516Z, and 1535Z) to VECF (Kolkata) with no response from VECF. Subsequent AFN log on attempt to VYYF (Yangon) was successful. PR assigned to BOBASMA to investigate further.
1805-MM	ASIA	ACTIVE	GROUND	Unable to logon to Yangon CPDLC.	Unable to logon to Yangon CPDLC. No satisfactory answer was received from Yangon when questioned. Also unable to logon to Calcutta VECF Later CPDLC worked with VABF.	Aircraft operator confirmed that aircraft registration and flight identifier contained in filed flight plan matched and that there was no aircraft change. PR assigned to DCA Myanmar to investigate further.
1806-MM	ASIA	ACTIVE	GROUND	Nil CPDLC contact with CCU	Unable to contact CCU through CPDLC. Another flight reported the same. No reports since these ones that day.	There were two flights included in this PR. For the first flight, ACARS message log analysis confirms that flight crew sent three AFN contact messages (at 0307Z, 0315Z, and 0326Z) to VECF (Kolkata) with no response from VECF. For the second flight, ACARS message analysis indicates that AFN log on attempt to VECF at 1037Z was successful but VECF did not attempt to establish a CPDLC connection (by sending a CPDLC connect request [CR1]). PR assigned to BOBASMA to investigate further.
1807-SN	ASIA	CLOSED	AIR-t	UNABLE TO EXCHANGE ADS/CPDLC MESSAGES	Unable to exchange ADS/CPDLC messages.	The CRA contacted the operator and confirmed the airplane was equipped with an Inmarsat satcom system. There was no record of maintenance on the satcom system after the problem flight. It is assumed the aircraft had an intermittent failure of the satcom system.

CRA number	Region	Status	Type	Title	Description	Findings
1808-SN	ASIA	CLOSED AS DUPLICATE	AIR-t	ADS Emergency indication	Received EMG report at 19:28:08 , 19:32:48 , 19:56:56 ,20:24:39.Pilot reported all ops normal.	I can confirm that the airplane started reporting ADS emergency starting at 19:28. The airplane was also experiencing some comm delays and possibly the elusive "ack-n-toss" condition. It's difficult to discern if the latter occurred as ATC uplinked several periodic and waypoint change event contract requests. Each new contract request replaces the previous contract of the same type. When this occurs, the FMC replaces the previous contract with the new contract. So the FMC may simply have been unable to send each report before receiving a replacement contract request. Based on a review of the logs for this event, I suspect that this is the result of an issue we've seen a few times over the last several years. The 747-400 has a foot rest for the first officer on the side of the aisle stand, near to the MCDU (the primary interface to the flight management computer). When the FO has the ATC LOGON/STATUS page displayed on the MCDU, it is possible for him to inadvertently activate ADS in emergency mode with his foot. When we developed the new FMC for the 747-8 (retrofittable to the B744) we purposely placed the ADS emergency prompt where the FO couldn't get to it with his foot.
1809-GS	ASIA	CLOSED	AIR-p	ADS Emergency indication	Received emergency report at 15:36:07.Pilot reported all ops normal.	The airplane logged on to VOMF at 1442z. VOMF was unable to establish CPDLC due to a known defect (a variant of PR 1556-GS), which will be fixed in 787 Blockpoint 3. VOMF established ADS periodic (~27 minutes) and waypoint change event contracts. Only one report was actually sent, because the crew appears to have terminated ADS at 1458z. AT 1536z, VOMF repeated the periodic contract request. The response from the airplane was a rejection (NAK), because of an improper mode, and a default emergency report was included. It is possible that when the crew terminated ADS, they inadvertently set it to EMERGENCY mode at the same time, as the selector buttons are close together. After the crew turned turned OFF, they would have had to select it back to ARM (or the later request would have received "application not available"). Using the tabber device, ADS ARM is one click counter-clockwise from ADS OFF, and ADS EMERGENCY is one click clockwise. It is not unlikely that they could have turned it the wrong way first.
2015 PRs						
1810-MM	ASIA	CLOSED AS DUPLICATE	AIR-t	FANS PROBLEM REPORT	1.WE CANNOT LOGON TO VVTS (ONLY LOGON ACCEPTED) 2.THEN WE CAN LOGON TO WSJC	This PR is closed as a duplicate of PR 1684-MM due to essentially identical B744 behavior, namely evident problems transferring FANS uplink messages from the CMU to the FMC. During the approximate two-minute process of the flight crew attempting to perform an AFN log to VVTS (Ho Chi Minh) and VVTS attempting to establish CPDLC and ADS-C connections with the aircraft, at least four out of seven FANS (AFN, CPDLC, and ADS-C) uplinks were acknowledged as having been received via ACARS by the aircraft's CMU but the uplinks were evidently not successfully transferred to the FANS applications hosted in the FMC.
1811-MM	NAT	ACTIVE	TBA	MAS/F Error 231 received on 8 uplink messages	Normal log on at 16:20. ADS Periodic and Event Contracts ACK-ed. First two periodic reports received after log on, at a 18 minute interval and then nothing more until 2nd log on. ADS-C waypoint reports at 10W, 20W and 30W not received. First CPDLC uplink message after log on sent at 17:44 and no response came from aircraft. MAS/F (error 231) received on two subsequent uplink messages. A new log on at 18:25 and again the log on process correct. Six MAS/F (231) then received on corresponding six uplinks. Crew stated at 19:27 via voice: „NEG CPDLC WE ARE HAVING PROBLEM WITH THE DATALINK". Same behavior observed on another 777 on date 14-12-31 Is this the "777 error" or some other failure?	CRA investigation in progress
1812-MM	NAT	ACTIVE	TBA	No Datalink	NOTHING IS UPLINKING TO AIRPLANE IN CRUISE FLT. WE ARE GETTING NO MESSAGES FROM DISPATCH. NO WEATHER UPLINKS. NO ATIS UPLINKS. AND NO ADS POSITION RPTS	CRA investigation in progress
1813-AG	SOPAC	ACTIVE	TBA	Could Not Log On	COULD NOT LOG ONTO KZAK UNTIL WELL PAST OUR 1ST REPORTING POINT. KEPT GETTING ERROR MSG ASKING US TO ATTEMPT ANOTHER LOG ON. ONCE WE DID GET LOGGED ONTO CPDLC IT WORKED NORMALLY.	CRA investigation in progress
1814-GS	NOPAC	ACTIVE	AIR-t	Unable to Log On	AFTER TAKEOFF FROM NRT UNABLE TO LOG ON CPDLC OR GET ATIS/ HOWGOZIT/ RESET AND RESTRT DATALNK ALL OKAY NOW	The report was sent from the airplane at 1023z, and the RESTART to which they refer must be the one at 0944z (visible in the logs by all the MSNs restarting from x00A). That was the only RESTART in the log. Just prior to this (9:43:28) and AFN logon time-stamped at 9:33:46 (i.e. almost 10 minutes old) was delivered on AVICOM VHF. There was no significant activity on SATCOM or HFDL during this time. It is clearly an avionics issue, and is under investigation by the avionics supplier (Honeywell).
1815-GS	NOPAC	OPEN	AIR-t	Unable to Log On	UNABLE TO LOG ON TO KZAK	This is one of two PRs both relating to the same flight. PR 1815-GS addresses being unable to logon to Oakland. PR 1816-GS covers receiving "HF DATA LINK IS NOT AVAILABLE FOR ATC COMM IN FUKUOKA FIR" messages. The root cause of both of these problems is the same. The airplane did not have a SATCOM Link during the flight. The CRA proposes to leave these as OPEN, and indicate they are the known (but for which a cause and fix has so-far not been established) problem. This will be CLOSEd when a fix has been determined and introduced.
1816-GS	NOPAC	CLOSED AS DUPLICATE	AIR-t	HF Datalink	HF DATALINK MSG NOT AVAILABLE IN RJJJ OR KZAK	Closed as a duplicate of PR-1815.
1817-AG	CANADA	ACTIVE	TBA	CZQZ Log On Problems	WE HAD A GOOD LOGON WITH EGGX AND CZQX FOR CPDLC /ADS. EGGX RECEIVED AUTO POSITION REPORTS BUT CZQX DID'T RECEIVE ANY. WE RE-LOGGED ON WITH CZQX WITH NO LUCK. NOTE- I HAVE HAD THIS HAPPEN WITH CZQX A COUPLE OF OTHER TIMES.	CRA investigation in progress
1818-SN	OUT OF REGION	CLOSED	None	Unable To Send	UNABLE TO UPLOAD WINDS. FMC STAYS IN SENDING. THEN UNABLE TO SEND MSG DISPLAYS.	PR closed as it is not a FANS PR
1819-RP	NAT	ACTIVE	TBA	Unable To Log On to CPDLC	UNABLE TO LOGIN TO CPDLC	CRA investigation in progress
1820-RP	SOPAC	ACTIVE	TBA	Not Sending Reports	AC NOT SENDING CO POSITION REPRTS	CRA investigation in progress
1821-RP	NAT	ACTIVE	TBA	Unable to Log ON	FMC UNABLE TO LOG ON TO OCEANIC CPDLC.-UNABLE TO SEND MSG- MSG KEEPS DISPLAYING ON FMC.	CRA investigation in progress
1822-GS	NOPAC	CLOSED	None	Intermittent Failures	DATA LINK SYSTEM INTERMITTENTLY FAILS TO XMIT. SEEMS TO RECIEVE MSGS OK. TRIED RESET AND RESTART. NO HELP.	Closed as this was not a FANS PR.
1823-SN	NAT	ACTIVE	TBA	An old Uplink message received or retrieved by a B763	At 10:28, four minutes prior to BIRD opening the CPDLC connection by means of the WELCOME message, the crew reported by voice that they had received the CPDLC message "UM19 MAINTAIN [F350]" and asked if they should climb to that level (which contradicted their oceanic clearance). After Reykjavik denied having sent any such message the crew eventually indicated that it was an old uplink from CZQX time stamped 15 hours earlier on the eastbound leg. It was not clear from the dialogue with the crew whether the message had been retrieved from on-board storage or had been received after a 15 hour delay in the "cloud".	The message that was redisplayed was received during the previous flight (same day). While there were some clues that Boeing hoped would help them duplicate the problem in their lab, they have so far been unsuccessful in their attempts. Due to Isavia's quick filing of this PR, the CRA were able to pass a request to the operator involved to contact the flight crew (flight still in progress) and request some photos and additional info from the flight deck. This event is the subject of a report by the Isavia Safety Occurrence Group.
1824-GS	SOPAC	CLOSED AS DUPLICATE	AIR-t	Unable to establish CPDLC - B788	A logon was received from an aircraft and a CPDLC Connection Request was uplinked but no CC.1 was received. A number of similar PRs have been submitted against this operator.	This is a repeat of the problem described in FIT PR 1556-GS. There are multiple logons, CPDLC connect requests and ADS-C contract requests. All received the correct response, except the CPDLC connect requests, which received no response at all. This issue is partially addressed in 787 Blockpoint 2.5, and completely resolved in Blockpoint 3 (end 2015). Closed as a duplicate of PR 1556-GS.

CRA number	Region	Status	Type	Title	Description	Findings
1825-SN	SOPAC	ACTIVE	AIR-t	Spurious CPDLC messages - B772	Flight crew reported sending 2 "spurious" CPDLC messages. Spurious ARMED LEVEL reports SENT appeared on centre EICAS screen with no crew input or other interventions. An ATC COMM TERMINATED message was also displayed. ATC messages log reviewed and no record of these in history. ATC confirmed no receipt of armed FL350 report received.	Boeing and Honeywell investigation in progress. Honeywell reported that they were able to reproduce a similar result in the lab.
1826-GS	ASIA	CLOSED	AIR-p	ADS Emergency indication	ATC received ADS emergency reports at 06:28:27, 06:33:27,06:38:30. Pilot reported all ops normal.	The flight crew attempted a logon to VOMF at 0504z. VOMF acknowledged the logon, but did not attempt to establish ADS or CPDLC connections. The crew attempted further logons at 0505z and 0618z, with the same result. Finally, the logon at 0625z resulted in VOMG initiating CPDLC and ADS connections. CPDLC established normally, but the ADS response was a NAK indicating improper mode, and a default periodic emergency contract was established. At 0627z, the crew terminated the CPDLC connection. It's not clear why, but it could have been the result of the controller asking about ADS emergency. The only other report of B787 airplanes sending ADS emergency reports was PR 1809-GS, which occurred a few days previously, with the same operator and ATC Center. In that case also, the crew had to make multiple logons to get ATC Datalink working. We therefore believe this is a crew training issue.
1827-SN	SOPAC	ACTIVE	AIR-t	No WILCO to uplink	Aircraft requested F400 at 0133:58 Aircraft cleared to F400 at 0135:33 Aircraft reported level at F400 at 0137:31 No WILCO response to uplink clearance received. Crew advised this was sent. Airways traces show that MA was received on the uplink(534S) but do not show any operational response other than level report at F400 .	CRA analysis confirmed no wilco in the SITA log. There was one Message Sequence Number (MSN) missing (J36A) between the level request and level report and wondered if the WILCO may have been sent on HF. I confirmed there was no WILCO in the ARINC log, either. SITA confirmed the WILCO was not received at the GES. Assigned to Airbus for investigation.
1828-MM	NOPAC	ACTIVE	TBA	Multiple clearances not received	1511:08 - Sent "CLIMB TO AND MAINTAIN F370" 1511:16 - MAS received 1515:26 - Pilot reported that no clearance was received 1515:51 - Resent "CLIMB TO AND MAINTAIN F370" 1516:03 - MAS received 1518:37 - Received "REQUEST CLIMB TO F370" 1520:55 - Sent "CLIMB TO AND MAINTAIN BLOCK F370 TO F390" 1521:05 - MAS Received 1525:59 - Pilot reports "NO CLEARANCE RCVD".	CRA investigation in progress.
1829-GS	NAT	OPEN	AIR-t	OCL Anomoly with BODO	When trying to get our oceanic clearance the BODO controller asked us to get our clearance via ACARS. On the oceanic clearance page there is prompt at 5L for BODO. Unfortunately the controller said the logon for the oceanic clearance is ENOB. The CPDLC logon is also ENOB, not BODO. There isn't a way to just type in ENOB. I believe this is an error in the data base.	This was an issue with the Rockwell-Collins CMU (Communication Management Unit) installed on many airplane types. The CMU allows crews to select from a list of centers when sending an OCL request, and then inserts a predefined identifier as the supplementary address in the downlink request. Unfortunately, the identifier used for Bodo Oceanic (which should be ENOB) was really the identifier for Bodo ATCC (ENBD) - the domestic center. OCL requests were therefore only delivered to the operator, not to Bodo Oceanic Center. The 4-character identifier is converted by the datalink service providers (ARINC and SITA) to the appropriate 7-character address. The DSPs were therefore contacted, and have agreed to convert the address ENBD, when used in OCL request messages (SMI RCL, label B1) to the address for Bodo OCL requests (BDOOCYA), in the interim, until the CMU can be changed. This change was effective 21 Jan 2015 for SITA and 23 Jan 2015 for ARINC. This PR will be left OPEN until confirmation of successful OCL message exchanges.
1830-SN	NAT	ACTIVE	TBA	Unsuccessful message delivery with 'Error 234'	Normal Log on with CC1 at 11:33:12 A clearance was sent at 12:43:04; [UM20] CLIMB TO AND MAINTAIN F330. Two seconds later (12:43:06) MAS/F was received from SITA with error code 234. SITA's inability to deliver this message is perplexing since the aircraft had downlinked a message through a SITA satellite connection only two minutes earlier. In addition the aircraft would appear to have been within range of a VHF RGS that it had used only 15 minutes earlier. Another puzzling aspect of the communications with this flight was its use of SATCOM (and the AOW satellite at that, before switching to AOE) in an area where VHF was available and used by the aircraft for many messages both before and after. This failure to deliver the climb clearance resulted in ATCO instructing crew to terminate CPDLC connection (12:46:52) and not log on to BIRD again for the remainder of that flight. Aircraft continued transmitting ADS-C messages.	CRA investigation in progress.
1831-GS	EUROPE	ACTIVE	TBA	OCL Anomaly	Requested an oceanic clearance over France. It can back with a goofy time. We had requested 1035. Came back cleared with a time of 0956. Almost didn't catch it.	The message log shows an OCL request at 0905z, with a time at BEDRA at 1035z. The clearance issued at 0916z was to cross BEDRA at 0956z. The second request was at 0934z (again for crossing BEDRA at 1035z). This time, the clearance (issues at 0936z) had the same time. This PR has been referred to UK NATS for an explanation.
1832-SN	SOPAC	ACTIVE	AIR-p	DARP reroute without ATC clearance	FMC Waypoint Report received at 0020:21 not at a scheduled waypoint which indicates FMS route has been modified. The next+1 position in the report is flagged as out of conformance by our ground system which indicates the aircraft is turning onto a new route at the next position in 23 minutes time. When queried the crew confirm the ensuing waypoint as correct and advise they have been re-routed by company using DARP. When a re-route request was made by the controller the crew downlinked the assigned route showing the new route being flown. Controller used this to modify the route held on the ground.	The "DARP" occurred while the airplane was under Santiago control. There is no indication that ATC was contacted via datalink to approve the reroute. Assigned to the operator to consult with the flight crew involved.
1833-GS	NAT	CLOSED AS DUPLICATE	AIR-t	Position Report Anomaly	ABLE TO LOGON TO CPDLC BUT POSITION REPORTS SHOWED THEY SENT BUT NEVER RECEIVED BY ATC.	CLOSED AS DUPLICATE of PR 1760-GS.
1834-GS	NAT	CLOSED	None	FMC Position Reports not Sending	AUTO FMC POS REP NOT SENDING.	PR CLOSED as it was not a FANS PR
1835-SN	OUT OF REGION	CLOSED	None	DLOP MESSAGE - RECEIVED 280344Z DDL M73A	COULD NOT GET ENROUTE LEG WINDS OR FCST DES WINDS TO DATA LINK TO FMC. DID NOT WORK AT GATE OR ENRTE. KEPT GETTING RESEND MESS AGE RESPONSE.	PR closed as it was not a FANS PR and also did not occur in the CRA's region of responsibility.
1836-GS	NAT	ACTIVE	TBA	CPDLC Rejected	CPDLC REJECTED BY EGGX SUSPECT CALL SIGN ISSUE SAME AS OCN CLRNC REFUSAL	CRA investigation in progress.
1837-GS	NAT	ACTIVE	TBA	OCL Reject	WHEN REQUESTING OCN CLRNC WITH EGGX VIA ACARS THEY REPORTED BACK - UNABLE DUE TO CALLSIGN ALREADY IN USE. OBTAINED CLRNC VIA HF VOICE PROCEDURES.	CRA investigation in progress.
1838-MM	NAT	ACTIVE	TBA	Unable to Logon	UNABLE TO LOGON TO CPDLC	CRA investigation in progress.
1839-SN	OUT OF REGION	CLOSED	None	Resend Message	RESEND MESSAGE BOTH ON GROUND AND IN FLIGHT WHEN REQUESTING WINDS. MANUALLY INSERTED WINDS	PR closed as it was not a FANS PR and also did not occur in the CRA's region of responsibility.
1840-GS	NAT	ACTIVE	TBA	Lost CPDLC	AFTER 030W WITH CZQX LOST CPDLC AND ADS. UNABLE TO RESET OR RESTART	CRA investigation in progress.
1841-SN	NAT	ACTIVE	TBA	Unable to Logon	UNABLE TO LOGON TO KEWR FOR DCL OR TO CZQM. GET RE-LOGON TO ATC COMM MESSAGE FROM BOTH.	CRA investigation in progress.
1842-GS	NAT	ACTIVE	TBA	CPDLC Rejected	UNABLE TO OBTAIN OCEANIC CLNX VIA ACARS. MESSAGE REJECTED CALLSIGN ALREADY IN USE RECURRING PROBLEM WITH THIS FLIGHT	CRA investigation in progress.
1843-GS	NAT	OPEN	NETWORK	CPA media assymetry, Iridium down, HF up	This flight, as well as a large number of other flights by similar B77W aircraft from this operator, showed a strange behaviour when it comes to the selection by ARINC of a suitable communications medium. Instead of using the medium on which a downlink message has just been received (Iridium), the CSP tried on numerous occasions to deliver messages via HF. In some cases this worked, on other occasions a MAS/F was returned. The time period specified covers the entire period the flight was in contact with BIRD.	ARINC reviewed the logs of the problem flights and noted a media mismatch between Avionics (downlinks) and the uplink preferences. The ARINC default for uplinks is VHF, SATCOM (Inmarsat), HFDL, Iridium. ARINC has changed the uplink preferences for this operator to SATCOM (Inmarsat), Iridium, HFDL.
1844-AG	NAT	ACTIVE	AIR-t	A GLF6 claims receiving a truncated UL message.	At 04:21:24 the following concatenated free-text message was uplinked: [UM169] IDENTIFICATION TERMINATED [UM169] CONTACT ICELAND RADIO 127.850. Pilot called shortly afterwards and reported that the only text shown on board was: "IDENTIFICATION TERMINATED CONTACT ICELAND RADIO 12". (Last 5 characters missing). The full frequency was then sent via voice. Assuming that a single blank is inserted between two free text messages (which may or may not be the case) the concatenated string as presented is exactly 50 characters in length. Whether that is significant is unknown.	CRA investigation in progress.
1845-SN	NAT	ACTIVE	TBA	A Downlink AT1 message received from a B744 prior to becoming CDA.	Logon 09:39:48 followed by CR1 and CC1. At 09:43:57, while the aircraft still had more than 200 NM to go before entering BIRD airspace, the following CPDLC message was received from aircraft: [DM9] REQUEST CLIMB TO F390 [DM66] DUE TO AIRCRAFT PERFORMANCE While we have often experienced a delay in the issuance of END SERVICE by our esteemed colleagues south of 63°30'N it is very unusual for that message to be premature. We therefore suspect that the crew may have manually broken the connection with Gander and logged on to BIRD. For most aircraft types we could have determined the cause (premature END SERVICE or manual logon) from the setting of the Active Flag but this was a B744 – a type that has the flag permanently set to the value 1. Will that B744 behaviour ever be fixed? It is important that the cause be determined because if the crew manually overrode the automatic behaviour of the automation then there is presumably a reason – either ignorance of airspace organisation or mistrust of the ATSU's systems.	CRA investigation in progress.

CRA number	Region	Status	Type	Title	Description	Findings
1846-RP	NAT	ACTIVE	TBA	Reykjavik fails to become CDA when expected.	This aircraft came from Edmonton Area (CZEG) Normal log on time 23:45:32 (feb 2nd) followed by CR1 and CC1. ADS-C contracts sent and acknowledged. Welcome message sent on the boundary (00:15:09) and again 5 minutes later (00:20:27). Both attempts were unsuccessful and response received was "[DM63] NOT CURRENT DATA AUTHORITY". No further attempts made after that. Aircraft stayed in BIRD area for 45 minutes and then re-entered CZEG area. This is a common occurrence under similar circumstances i.e. the baton not passed in cases of re-entry to CZEG.	CRA investigation in progress.
1847-RP	NAT	ACTIVE	TBA	B744 shows strange ADS-C behaviour.	Aircraft logged on correctly and acknowledged both periodic contract 1 and event contract 2. Included with the acknowledgement was the first and only periodic report sent from the aircraft. No further ADS-C reports were received for the remainder of the flight through Reykjavik area. The CPDLC connection worked fine all the way.	CRA investigation in progress.
1848-SN	SOPAC	CLOSED	TBA	Unable to establish CPDLC with A388	This is the same fault as has been described previously, but contains additional information that may assist in isolating the problem. Flight crew logged on to YBBB at 0448. A CPDLC Connection was established at 0448 without any problems. At 0449 a CPDLC "REQUEST POSITION REPORT" was uplinked. Subsequent discussions with the flight crew revealed that they did not receive that uplink. Discussions with flight crew indicated that in the cockpit:- 1. Initially there was a CPDLC connection with YBBB "Active ATC with YBBB" 2. As soon as the connection was established, the flight crew attempted to send a CPDLC position report. As they were about to send it, an error message was generated "No FMS data", and the connection dropped out (without any further error message). This would explain why they didn't receive the uplink.	Airbus investigation in progress.
1849-RP	SOPAC	ACTIVE	TBA	Unable to establish CPDLC or ADSC with B744	Airplane was logged on to YBBB, CPDLC connection established, however no CPDLC or ADS-C downlinks could be received. At one stage the flight crew reported that a CPDLC position report was still showing as "SENDING". Eventually resolved itself some 30 minutes later.	CRA investigation in progress.
1850-GS	SOPAC	OPEN	AIR-t	B788 unable to load CPDLC route clearance(s)	Flight crew reported that they were unable to load several CPDLC route clearances (that appear valid).	This seems to be the first in-service report of an issue we noted recently in the Boeing lab. Unlike other models, the 787 (and 747-8) treat Non-Directional Beacons (NDB) as navaids, rather than as fixnames. So, an uplink which references an NDB as a fixname will not be loadable, as the NDB in question will not be found in the database. In this case, the uplink was: 4,,08:34:39 0(79) : Cleared To [pos] Via [routeclr] pos(fix): WOL route info(): 1 (pub): HOOKS S34 21.0 E151 8.0 WOL would have been the Wollongong NDB. There is an open problem report for this (actually two, one for the Communication Management Function, which hosts the CPDLC application, and one for the Flight Management Function, which loads the uplinks and creates the route downlinks).
1851-SN	SOPAC	CLOSED	AIR-p	Request - did A333 logon to YBBB or get Address Forwarded by WAAF	Aircraft was taxiing at WADD (in WAAF airspace), southbound to YPPH via YBBB FIR). At 1059 a logon was received. ADS contracts were automatically established, resulting in a misleading ADS-C position symbol being displayed. It is not clear if this logon was caused by a manual logon by the flight crew (which should not occur), or Address Forwarding by WAAF. Could an analysis of the ACARS traces determine which of the two occurred, so that appropriate corrective action can be attempted?	Log analysis confirmed the flight crew manually logged on. Per closed per originator's recommendation. Originator to follow up with operator.
1852-MM	ASIA	ACTIVE	GROUND	Unable to contact VECF on CPDLC	MABUR 0831Z FL320 EST URKOK 0854Z DOGEM 0908Z NO CONTACT HF CPDLC OR SATCOM	Assigned to BOBASMA for further investigation.
1853-GS	NAT	ACTIVE	AIR-t	CPLDC error in response to frequency uplink	At 1418Z flight crew requested a higher level. Since ADS-B separation was being applied, there was a requirement to get him on frequency for DCPC. We attempted to uplink a frequency twice (1420x 1423z) but got an error in both cases seemingly rejected by the aircraft.	Airbus investigation in progress.
1854-SN	NAT	ACTIVE	TBA	unrecognized Msg Reference Number after STANDBY	Avionics responded with "unrecognized Msg Reference Number" TAG=62. This seems to be caused by the STANDBY message the preceded the response to the clearance.	CRA investigation in progress.
1855-GS	SOPAC	ACTIVE	TBA	CPDLC route request from B788 commenced at an ATS route	Flight crew requested an amended route via CPDLC. The first element in the route clearance field was an ATS route (airway). Many ATS Units would not support this – i.e. they would expect a position prior to (and following) the ATS route. The [routeclearance] in the requested clearance was "G326 TAVEV TAM [2548.2S14953.8E] V327 HAWKE [2628.8S15155.7E] Y491 SMOKA Y177 BN [2722.0S15308.4E]", where the bracketed lat/longs are optional lat/longs.	CRA investigation in progress.
1856-SN	NAT	OPEN	AIR-t	B757 sends DR1+DM64 with empty CDA	Crew unable to establish CPDLC connection, aircraft repeatedly responded to CR1 with DR1 + DM64 with empty CDA. The flight was operating in non-FANS airspace when the first two logons were made but had entered BIRD airspace when the last two were made. Each logon succeeded but when Reykjavik attempted to establish a CPDLC connection each CR1 was rejected with the DR1 + DM64 [icaofacilitydesignation] response where the DM64 data field was empty (or filled with blanks).	This problem was originally reported as PR 813 in 2010. Per the PR 813 notes, "This problem is not currently slated to be corrected as the condition only occurs when a CR1 is received after an AFN contact (i.e., logon) message has been sent and before the AFN ack has been received". The CRA are reviewing the comm logs to confirm the scenario is the same as the PR 813 scenario.
1857-SN	SOPAC	ACTIVE	TBA	20 minutes to transition from I4 AME1 to MTSAT	Aircraft (B772) departs NCRG and established data-link on AME1 Inmarsat I4 SATCOM. At 0100 last message is transmitted on the I4. Aircraft transitions to MTSAT SATCOM. The first downlink message via MTSAT has a latency of over 24 minutes. A similar event involving a B789 was also reported.	CRA investigation in progress.

"Status" Definitions

RAISED - the PR has been filed by the originator but has not yet been processed by the CRA
ACTIVE - CRA has processed the PR and allocated a CRA # and someone to investigate it. During this phase the PR is under investigation
OPEN - The investigation is complete however some form of correction is required before it can be closed
CLOSED AS DUPLICATE - Closed because problem is already covered under another PR
CLOSED – Corrective action has been implemented or non-problem

"Type" Definitions

AIR – procedural – Problem due to flight crew action
AIR – technical – Problem due to avionics fault
GROUND – Problem due to issue at ATSU
NETWORK – Problem at GES or in network
mult - Problems occurred in more than one area
None - Problem was a non-problem
TBA – To be Assigned – problem type not yet determined