Problem Report Briefing

FANS Interoperability Team Meeting (FIT/21)
Papeete, French Polynesia, 4-5 March 2014
Suzie Ness – FIT CRA

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Agenda

- Introduction
- PR Status Definitions
- PR Type Definitions
- Problem Report Metrics
- Updates on Pre-FIT/21 PRs
- Specific New PRs for Discussion
- All South Pacific PRs received since FIT/20

Introduction

- PRs filed via ISPACG-CRA, NAT DLMA Problem Reporting website: http://www.ispacg-cra.com/
  - Website hosted by Airways Corporation of New Zealand Limited
- Now used for:
  - CRA for South Pacific (ISPACG FIT)
  - CRA for North, Central, East Pacific (IPACG FIT)
  - DLMA for North Atlantic (NAT CNSG)
  - FIT-Asia for South China Sea, Bay of Bengal, Indian Ocean
- Continue to get new entities registered with website

Introduction

- **273** PRs received since FIT/20 (Feb 9, 2013 – Feb 11, 2014)
  - **44** PRs received in 2014 as of 20 Feb 2014
- De-identified PR file available on ISPACG/28 website
  - Contains all PRs received 1 Jan 2012 to date
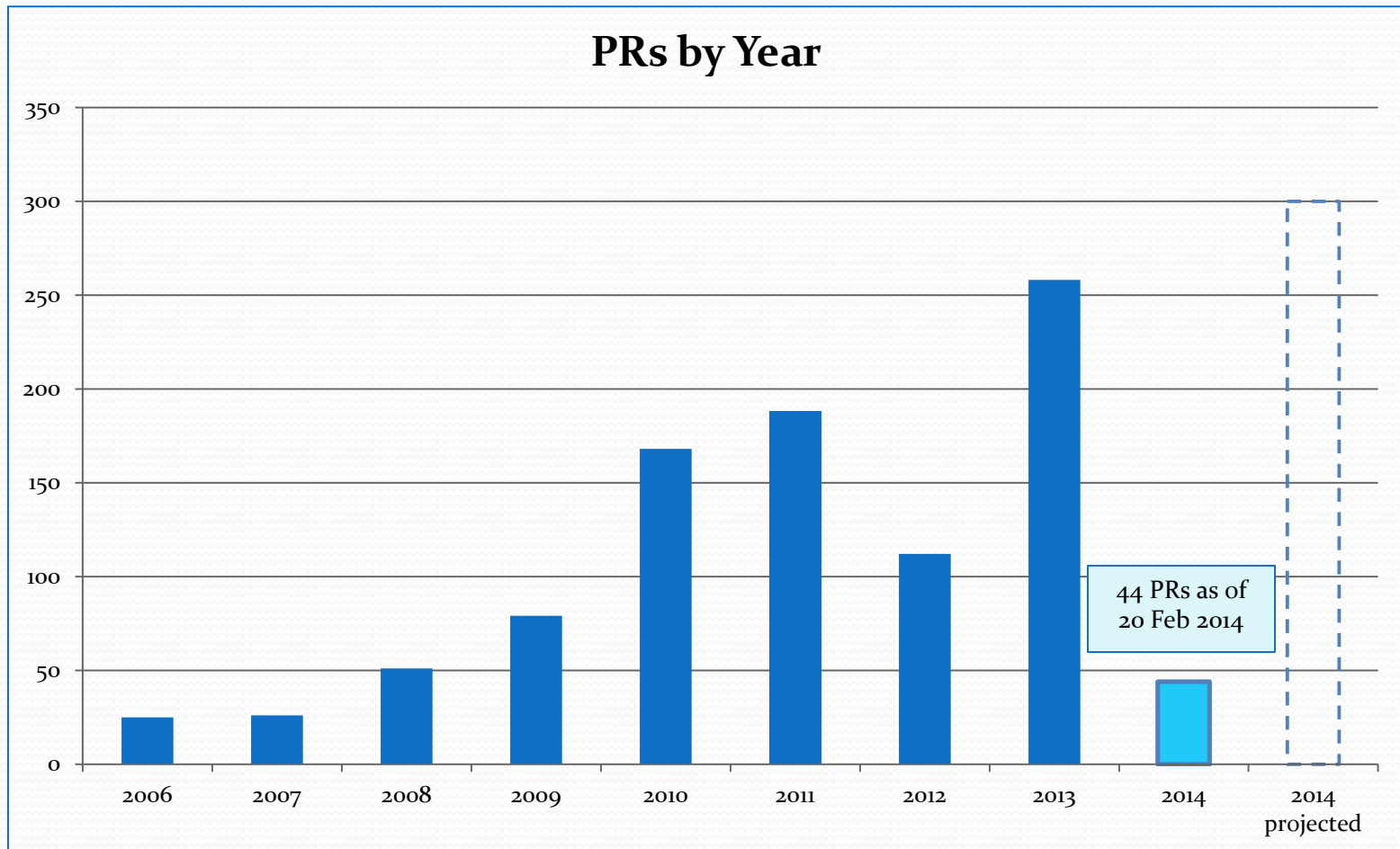
PR Status Definitions

- **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 PR is a non-problem

PR Type Definitions

- Website choices: **AIR, GROUND, NETWORK, TBA**
- CRA tracking breaks out as:
    - **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
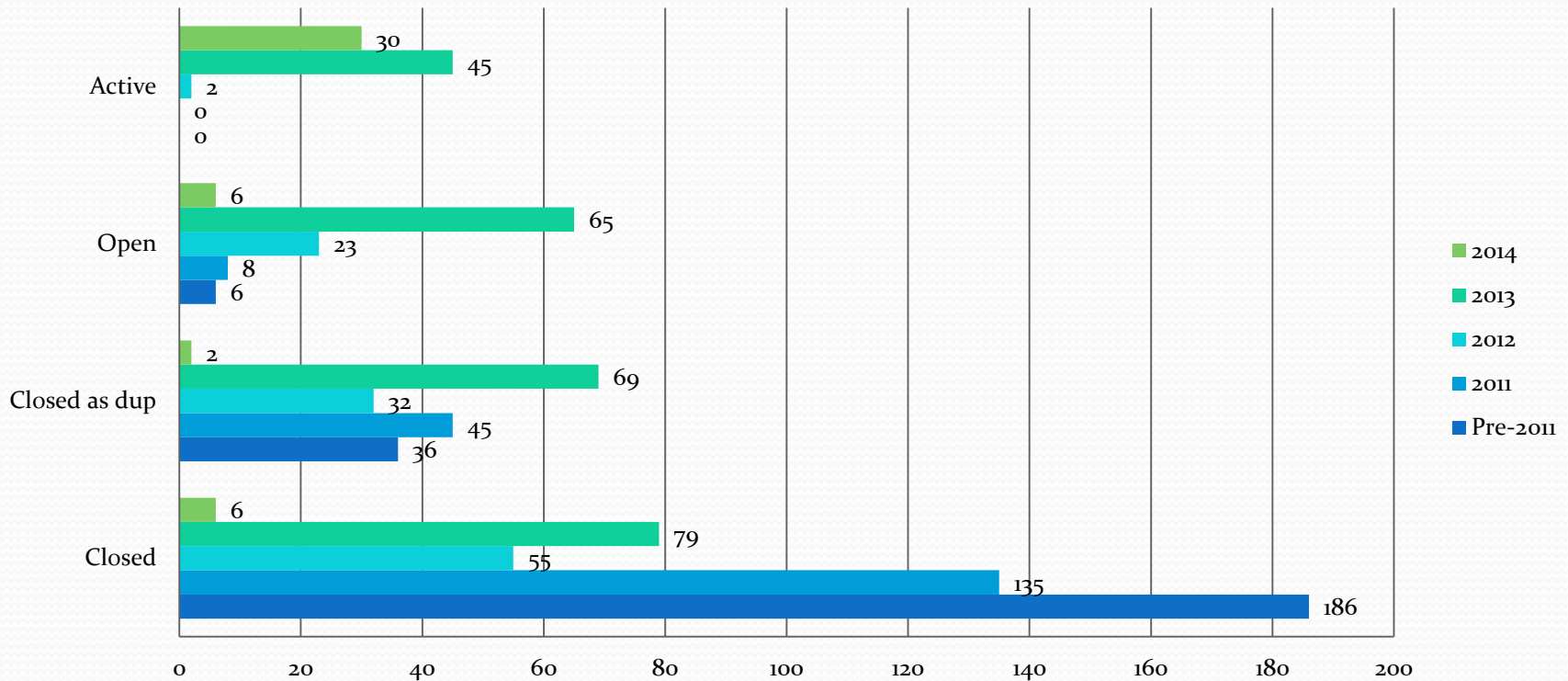
Problem Report Metrics
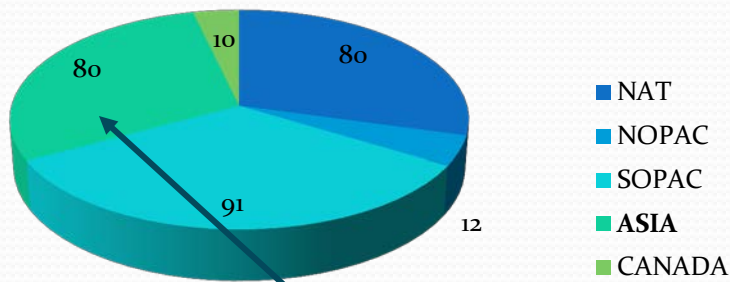## Growth in Number of PRs per Year

PRs by Year

44 PRs as of 20 Feb 2014

2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2014 projected

Problem Report Metrics

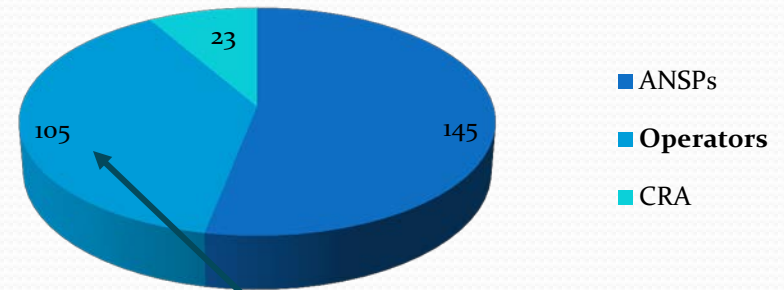**Status Breakdown - All PRs**
Jan 1, 2009 - February 20, 2014

Problem Report Metrics
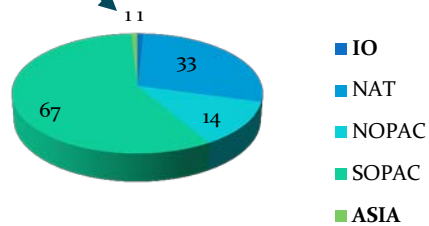

All Problem Reports by Region
Feb 9, 2013 - Feb 11, 2014

All Problem Reports by Agency Type
Feb 9, 2013 - Feb 11, 2014

All Problem Reports by Region
Feb 10, 2012 – Feb 8, 2013

All Problem Reports by Reporting Agency Type
Feb 10, 2012 – Feb 8, 2013
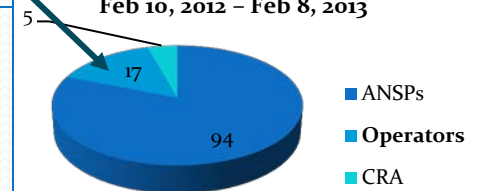
Updates on Pre-FIT/21 PRs

PR 1030-GS - No optional latitude longitude and airway to airway join in route requests

Region: SOPAC   Status: CLOSED   Type: AIR-t

- Issue was that route requests/reports from some airplanes did not include:
  - Fixes between airways
  - Optional lat/long for waypoints with duplicates
- Main concern was 777, but 787 was similar
- **Both issues fixed in 777 AIMS-2 BPV 17**; retrofit Service Bulletin released in December, 2013
- **Both issues fixed in 787 BP 2**; retrofit Service Bulletin released in December, 2013

PR 1083-GS - B787 unable to encode waypoint position in ADS-C predicted route

Region: SOPAC   Status: CLOSED   Type: AIR-t

- B787 was encoding fixes on 180° longitude as the default value (S180E180) for the predicted route group
- Default data indicates "data not available"
- **Fixed in 787 BP 2**

PR 1087-GS - B763 logs on and ACKs but does not respond to messages

Region: NAT   Status: CLOSED   Type: NETWORK

- B763 logged on and CPDLC established but after that no downlinks were received
- After the logon, all uplinks were delivered by SITA on SATCOM, but airplane was tuned to ARINC VHF frequency and all downlinks were discarded.
- ARINC has now modified their system to not ack ATC downlinks from non-customer airplanes
  - **Downlinks will now be retried on SATCOM**

PR 1112-GS - SATCOM Uplinks Not Delivered, but Downlinks Are

Region: SOPAC   Status: CLOSED   Type: AIR-t

- Subject of FIT/19 Working Paper
- 4 new reports since FIT/20: 1241-SN, 1246-SN, 1314-SN, 1336-GS
- **SITA fielded FANS UL routing algorithm enhancement which does not rely entirely on media advisories**
  - **Update completed 29 Jan 2014**

PR 1128-SN - Incorrect lat/long uplinked in route clearance

Region: SOPAC   Status: OPEN   Type: AIR-t

- Route clearance uplinked to B763 contained lat/long: 32N180E
- Pilot reported receiving 32N179E
- Behavior is result of a "fix" to correct a software reset that occurred with flight plan entry of longitude of E or W 180
- Fix was to change 180 to 179.9998 to prevent the variable from blowing up; longitude displayed in the flight plan as 179
- 777 and 787 **had** the same behavior
- Software fix allows for entry and display of E/W 180
  - **Fixed in 777 AIMS-2 BPV 17**
  - **Fixed in 787 BP 2**
  - 757/767 fix candidate for next software blockpoint

PR 1145-SN - B777 unable to send CPDLC messages after Data Authority Transfer

Region: SOPAC   Status: OPEN   Type: AIR-t

- Problem occurs if a downlink is sent and the End Service uplink is initiated during a media transition or period of No Comm
- Fix targeted to Block Point 17A, 4Q15

PR 1160-GS - Ocean21 Treats Optional Lat/Long as Separate Waypoint

Region: NOPAC   Status: OPEN   Type: GROUND

- DARP request included optional lat/long on a fix
- ATC clearance included both the waypoint requested and a lat/long at that fix
  - So the following airway was not loadable (entry fix has to be a named waypoint)
- Fix is planned to be implemented in Ocean21 software release T20 in February/March, 2014
  - Will be CLOSED on confirmation of update

PR 1165-DN - Report of Large Data and Clearance Not Displayed by A/C Resulting in Failure of Climb Clearance

Region: NAT   Status: CLOSED   Type: AIR-t

- Aircraft requested climb to FL350 via CPDLC
- Controller sent clearance 'CLIMB TO REACH [F310] BY [50N/20W]/ REPORT LEVEL [F310]/ [......UNABLE YOUR REQUESTED LEVEL......]
- Aircraft WILCO'd this message but failed to comply with the clearance
- Uplink was too long to display in ATC message block on EICAS display; "LARGE ATC UPLINK" displayed in this situation
- ACCEPT and REJECT options were also (erroneously) displayed on message block and flight crew responded without reviewing the clearance
- Erroneous display of ACCEPT and REJECT options **fixed in 747-8 BP 3**; retrofit Service Bulletin released in December, 2013

Updates on Pre-FIT/21 PRs – Airbus

- Refer to Airbus Working Paper

Specific New PRs for Discussion

New PRs

All Problem Reports by Problem Type
Feb 9, 2013 - Feb 11, 2014

Legend:
- AIR-t
- AIR-p
- Ground
- Network
- Mult
- None
- TBA

Values: 82, 42, 2, 38, 15, 11, 16
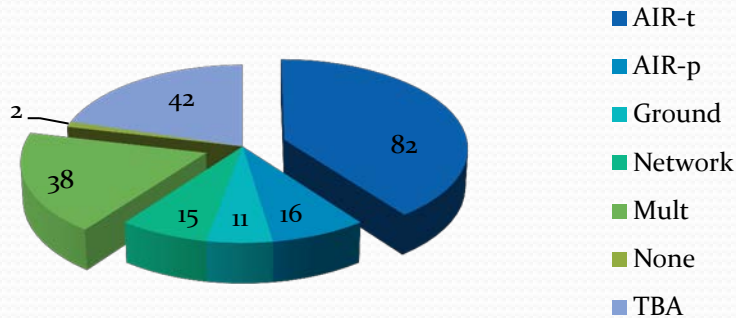
All "AIR-Technical" Problem Reports by Model Feb 9, 2013 - Feb 11, 2014

Legend:
- A330
- A340
- A380
- B744
- B748
- B757
- B767
- B777
- B787
- C130
- GLEX
- GLF5
- MD11

Values: 25, 8, 1, 5, 12, 9, 4, 16, 5, 3, 2, 1, 2
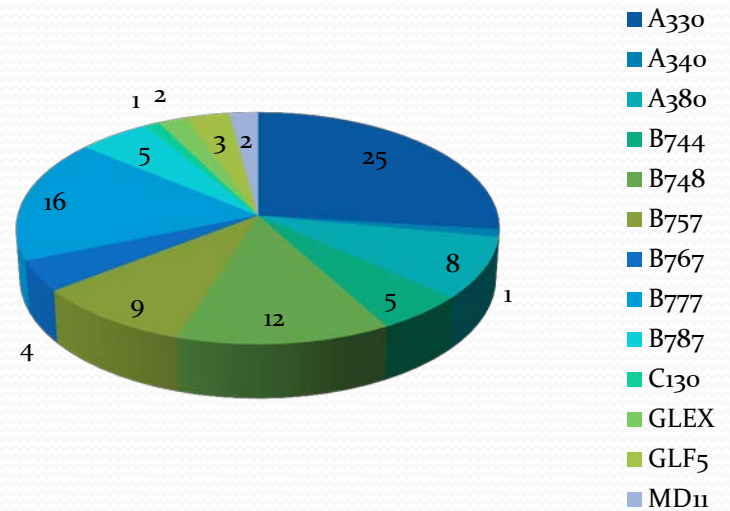
PR 1247-SN - ADS is reporting ensuing waypoint as invalid

Region: SOPAC   Status: CLOSED   Type: None

- KC-135 sent ADS report with NEXT+1 waypoint as default data (aka "invalid")
- At that point, the NEXT waypoint was the last before the arrival
- Conclusion is that there really was NO NEXT+1 waypoint
- Similar to PR 1178-MM (2012)
- **CLOSED as a non-problem**

PR 1259-RP - Aircraft Returns DR1 to CR1 After Successful AFN Logon

Region: NOPAC   Status: OPEN   Type: AIR-t

- B748 returned DR1 (instead of CC1) as a response to CR1 on transfer from RJJJ to PAZN (4 attempts)
- Manual logon then worked OK
- Messages all appear OK, and in the proper order
- Unable to reproduce at Boeing or Honeywell
  - Will monitor for new occurrence

PR 1262-RP - Multiple AFN Logon Downlinks

Region: NAT   Status: CLOSED   Type: AIR-t

- B748 sent a continuous stream of logons to EGGX
- Airplane asked to turn ATC Comm OFF, and use voice
- Also reported in PRs- 1354-RP, 1386-RP, 1391-RP, 1404-SN, and 1487-SN
- **Fixed in 747-8 BP 3**

PR 1278-MM - Delayed Uplink Display

Region: SOPAC   Status: OPEN   Type: AIR-t

- B772 sent REQUEST CLIMB TO FL390
  - Controller sent UNABLE DUE TO TRAFFIC
- 40+ min later, controller sent CLIMB TO AND MAINTAIN FL390
- Clearance apparently not displayed until 14 minutes after receipt
- Message log corroborates delay
- Also reported in PR 1407-MM
- Unable to reproduce at Boeing or Honeywell
  - Will monitor for new occurrence

PR 1313-MM - Not Current Data Authority – MD-11

Region: SOPAC   Status: CLOSED AS DUP   Type: AIR-t

- After "transfer" from NFFF to YBBB, YBBB did not have a CPDLC connection
- End service sent from NFFF, but no DR1 from airplane
  - End-service was acked by airplane
  - Uplink from YBBB received NOT CURRENT DATA AUTHORITY
- Duplicate of PR 1198-MM
- CMU installed via [non-Boeing] STC, so Boeing Long Beach has no means to further troubleshoot PR
  - Will monitor for new occurrence

PR 1315-SN - Subsequent logon - A332

Region: SOPAC   Status: OPEN   Type: GROUND

- A logon had already been received from an aircraft and CPDLC established
- 3 minutes prior to the FIR boundary an additional logon was received
- PR noted that this had become a common occurrence for flights inbound from NZZO
- Per CRA review, NZZO re-initiated address forwarding after sending End Service message
- OCS software issue identified

PR 1332-DN - ADS REPORT AT WRONG LEVEL - B748

Region: NAT   Status: CLOSED AS DUP   Type: AIR-t

- B748 cleared at FL340 and reported 30W at FL340
  - Then sent ADS report indicating FL336
  - Demand report then indicated FL340
  - Crew maintained they had been at FL340 since 30W
- Also reported in PRs 1182-SN (2012), 1366-RP (2013), and 1385-DN (2013)
  - All 4 PRs reported from the NAT
- Believed to be caused by air data system providing erroneous output
- Under investigation by Boeing and Honeywell (ADIRU and FMC)

PR 1341-SN - Incorrect Wind Data from GLEX Aircraft

Region: SOPAC   Status: OPEN   Type: AIR-t

- Wind direction on Bombardier airplanes is in error by 180°
  - Problem reported earlier on GLF5
  - Previously found and fixed on B777
- Fixed on Gulfstream
- Per avionics supplier, found and deferred on Bombardier
- Now scheduled for inclusion in upcoming NZ6.1 update planned for several airplane types

PR 1343-SN - Multiple Data Link Issues with C130

Region: SOPAC   Status: ACTIVE   Type: AIR-t

- Address forwarding was unsuccessful
- It appears that an ADS-C WCE report was not received
- It appears that there were a number of CPDLC connection issues too
- Under investigation by operator/manufacturer

PR 1353-SN - C5 Improperly Encodes 26N180E Waypoint in Predicted Route

Region: SOPAC   Status: ACTIVE   Type: AIR-t

- Filed route was DOGIF 25N170W 26N180E 27N170E 29N160E 32N150E FERAR FRANK SUNNS OTR16 PQE RJTY
- Every ADS-C position report with 26N180E in the predicted route encoded it as S180W180
- Under investigation by operator

PR 1360-RP - B748 Active Flag behavior

Region: NAT   Status: OPEN   Type: AIR-t

- B748 airplanes are being transferred from EGGX to BIRD, but the resulting logon to BIRD has the active flag set to "0", when it should be "1"
- Confirmed that this is an FMC issue

PR 1363-GS - Incorrect Times in the Predicted Route Group - B788

Region: NOPAC   Status: OPEN   Type: AIR-t

- Over a 45-minute period, a B788 sent ADS reports (waypoint change, periodic and demand) with TTG to same next waypoint between about 15 min and 4 hr
  - Good reports gave ETA ~2330z
  - Bad reports all gave ETA the following day
- Under investigation by avionics supplier
  - So far unable to replicate in the lab
- **Please report any additional occurrences**

PR 1376-SN - KC135 - incorrect encoding of block level request

Region: SOPAC   Status: ACTIVE   Type: TBA

- At 0028 a downlink request was received: "REQUEST BLOCK 003 TO 003. AT PILOTS DISCRETION" + free text
- At about the same time a request was received via HF for "Block 380 to 390"
- The block level being requested was clarified and requested again by free text
- At 0108 the flight crew was queried concerning the earlier request
- The response was "ROGER. AVIONICS PROBLEM MSG FORMAT CORRECT WHEN SENT"
- Under investigation by operator and avionics supplier

PR 1380-SN - 400 WILCOs downlinked in an hour

Region: SOPAC   Status: CLOSED AS DUP   Type: AIR-t

- Starting at 2317z and ending at 0014z Oakland received 400 WILCOs
- Controller attempted to log the aircraft off of CPDLC at 2320z, but the WILCOs continued
- Also reported in PR 1215-SN (2012)
- B748 had a similar problem (PR 1262-RP - Multiple AFN Logon Downlinks), but analysis revealed no clues for B777 investigation
- Boeing and Honeywell investigation continues

PR 1381-SN - Pacific 2 TA loading with SAMUL

Region: SOPAC   Status: OPEN   Type: GROUND

- A flight crew reported an extra fix present in the FMF flight plan after loading the PACIFIC 2 Tailored Arrival
- The approach procedure name in the uplink was encoded incorrectly, but matched a custom procedure name in the operator's NDB
- Procedure was loaded into FMF flight plan
  - Loaded procedure was not the procedure intended by the controller
  - ATC automation truncated RNV28R**Z** to RNV28R
- DO-258A, section 4.6.7.10, provides guidance for encoding procedure names containing more than 6 characters
- FAA will correct procedure encoding per DO-258A guidance

PR 1387-MM - No CPDLC downlinks received

Region: SOPAC   Status: ACTIVE   Type: AIR-t

- CPDLC connection was established with GLF5, but no CPDLC downlinks were received
- Per CRA analysis of message log, it appeared that aircraft avionics improperly processed and/or stored ATS facility addresses and designators
- Assigned to Gulfstream for further investigation

PR 1405-GS - Messages not delivered on SATCOM

Region: NAT   Status: OPEN   Type: AIR-t

- B788 flight crew reported difficulties in connecting with Gander
- Problem has been replicated in the lab
- Involves loss of Cat B VHF link sometimes hanging up the determination of VHF NO COMM
- Scheduled for correction in future software release

PR 1413-SN - Unable to connect to CPDLC

Region: ASIA   Status: CLOSED   Type: AIR-t

- B747-8 unable to connect to CPDLC
- DSP log contained no FMC downlinks
- Problem due to known issue with CMU installed on the 747-8
- Service Bulletin for installation of corrected software released in January, 2014

PR 1416-MM - Address forwarding failure - A332

Region: SOPAC   Status: OPEN   Type: GROUND

- Controller received indication that address forwarding for an aircraft had failed
- Per CRA analysis, the address forwarding procedure worked correctly, but the NDA message was sent after address forwarding was initiated
- Air Services has identified a software problem in their ground automation

PR 1428-SN - GLF4 rejects vertical rate contract in renewal message

Region: NAT   Status: ACTIVE   Type: TBA

- Initial periodic and event (WCE, level range, vertical rate, and lateral deviation) contract requests accepted
- After subsequent level change, aircraft was given new event contract specifying new floor and ceiling levels
  - Contract Request also included other events per initial event contract request
- Aircraft responded with NAK, indicating Vertical Rate contract element was specified twice (it wasn't)
- Aircraft continued to make position reports but did not make expected reports in response to the level range contracts
- For unrelated reasons, aircraft disconnected and logged on again, the sequence above was duplicated
- Assigned to Gulfstream for further investigation

PR 1444-GS - EGGX CPDLC TERMINATED JUST PRIOR TO 30W

Region: NAT   Status: OPEN   Type: AIR-t

- A non-standard termination by a previous center (including from a previous flight) prevents successful transfer thereafter

- Also reported in PRS 1440-GS, 1467-MM, 1477-MM

- While investigating PR 1477-MM, discovered contradictory guidance in GOLD regarding use of concatenated end-service (um161) and ERROR (um159)

> - Section F.22 correctly states that "When a FANS uplink containing a concatenated end-service (um161) and ERROR (um159), the flight crew will be presented with a display indicating a DOWNLINK ERROR. While this construct is recommended in DO-258/ED-100, Section 4.6.2.2.2, it was not included in DO-219, which is the basis of FANS designs. ATC should therefore avoid using this type of concatenated message." …
> - … but the FANS-1/A column on page 2-18 states that a "CPDLC message containing UM 161 END SERVICE and UM 159 ERROR (commanded termination)." should be used for abort requests from an ATS unit.

- Fix candidate for next 757/767 software block point

- Recommend GOLD discrepancy be corrected

PR 1480-SN - Unexpected latdev report - MD11

Region: SOPAC   Status: OPEN   Type: AIR-t

- Aircraft had been issued an amended route clearance
- Shortly afterwards, a lateral deviation event report was received, the timing of which would appear to be coincident with the loading of the route clearance
- LDE report did not appear to place the aircraft "off track"
- Problem has been reproduced in the Boeing lab and is under investigation by Honeywell

PR 1481-SN - No NCDA received from GL5

Region: SOPAC   Status: OPEN   Type: None

- Logon was received from aircraft and CPDLC and ADS-C were established
- After aircraft crossed FIR boundary; request for CPDLC position report was uplinked; no response was received
- Previous center was contacted and it was determined they still had active connection
- PR originator asked why no "NOT CURRENT DATA AUTHORITY" was received in response to request for a CPDLC position report
- CRA analysis revealed that aircraft did send a Not Current Data Authority message
  - Downlink included message reference number, which ground automation would not have expected (no response expected for a pos report request)
  - Ground automation responded with an error uplink ("unrecognizedMsgReferenceNumber")
- **DO-258 provides no guidance as to whether an MRN should or should not be included with the NOT CURRENT DATA AUTHORITY message**
- Gulfstream discussing with Honeywell

1490-SN Numerous downlinks received from B77W

Region: NOPAC   Status: ACTIVE   Type: GROUND

- Oakland and Anchorage attempted to transfer airplane between themselves 24 times over a period of approx 90 minutes
- As a result, FDCF cycled through all MINs
- After FDCF cycled back to MIN=0, Airplane sent 53 climb requests (all with MIN=0) followed by 937 AFN Complete messages
- Boeing and Honeywell hoping this provides a clue to what causes avionics to repeat downlinks (Also see PR 1380-SN)

1511- MM Failed CPDLC Uplink Delivery

Region: NAT   Status: CLOSED   Type: NETWORK

- CPDLC uplink delivery failed
  - Uplinks occasionally fail to be delivered, due to various reasons
- MAS-F with "AIRCRAFT NOT LOGGED ON 234" was returned to originator
- Few (no?) ground stations notify controller of failed uplink delivery
  - Controller becomes aware of failed uplink delivery when no pilot response received
- Failed uplinks were contributing factor in PRs 1256-SN (2013), 1344-MM (2013), 1372-SN (2013), 1496-MM (2014)
- Questions for ATSUs:
  - Are controllers notified when uplinks are not delivered?
  - If yes, can they resend the uplink?
  - If no, should they be able to resend the uplink?

1512- GS Loss of data link - B788 (multiple aircraft)

Region: SOPAC   Status: ACTIVE   Type: mult

- Problem has occurred with multiple operators; many occurrences with one operator
- Two causes identified:
    1. Aircraft not logged on to an Inmarsat satellite
        - Also see PR 1484-GS
        - Cause 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

New Airbus PRs

- Refer to Airbus Working Paper

South Pacific PRs

CRA number	Status	Type	Title	Comments
2013 PRs				
1241-SN	CLOSED AS DUPLICATE	NETWORK	Data link failure - A332	Closed as a duplicate of 1112.
1242-MM	OPEN	AIR-t	Unable to establish reliable CPDLC - A333	Per Airbus' investigation, "Fans Aircraft System (CLR 4) issue systematically occurred after CPDLC multi elements message sending. This CPDLC message contains a position report (DL48) and a CLIMBING TO F380 (DL29) elements. Following two consecutive Fans Aircraft System resets, on board FANS applications stopped and did not restart which lead to the unavailability of FANS application until the end of the flight. As no internal traces are recorded by this product and all lab tests performed did not allow reproducing this anomaly, no root cause can be identified."
1243-SN	OPEN	AIR-t	CPDLC problems + multiple position reports - GLF5	Gulfstream response. This issue was advised to Gulfstream promptly and we requested the FMS logs from the operator. These were provided promptly, but had already been overwritten for the period in question by succeeding legs. The aircraft maintenance data showed no relevant system issues. This aircraft has Cert Foxtrot software, which has some but not all fixes implemented related to VHF to Satcom transitions.
1244-MM	CLOSED	AIR-p	B744 delayed CPDLC performance	Message log analysis supports PR description and indicates that delays did not occur in network but rather in airplane (but whether with avionics or flight crew could not be definitively determined). More specifically, all uplinks and downlinks in question were transmitted via SATCOM with no material delays, but flight crew responses were received as indicated in the PR description with sequential MINs (meaning that the flight crew sent them in the order that YBBB received them). Given the flight crew's report via HF voice of a "data link failure" and subsequent timely datalink operation, the delays can reasonably be attributed to a transient avionics issue. (Indications that the flight crew may have received include DATALINK SYS [indicating a general datalink failure] and SATCOM DATA [indicating a SATCOM-specific datalink failure].) This PR is accordingly closed.

South Pacific PRs

CRA number	Status	Type	Title	Comments
1245-RP	OPEN	AIR-t	Near simultaneous Waypoint Change Event reports - B772	Honeywell investigation in progress.
1246-SN	CLOSED AS DUPLICATE	NETWORK	Uplinks being bit-bucketed - B772	Closed as a duplicate of 1112.
1247-SN	CLOSED	None	ADS is reporting ensuing waypoint as invalid	Per CRA and USAF AMC review, the data for the enusing waypoint were not invalid. There was no ensuing waypoint in the flight plan. Consequently the avionics set the ensuing waypoint data to the default parameters, as required, to indicate to the ground automation that there was no ensuing waypoint. Some ground automation has not been programmed to correctly interpret default parameters.
1249-SN	OPEN	AIR-t	Erroneous TTG in ADS-C Report - A332	Per Airbus investigation, pilot modification of the TO waypoint induced a constrained geometry and created a loop. This loop explains the 15 minutes difference in the time prediction compared to the direct distance to the TO waypoint.
1250-SN	OPEN	mult	Unable to receive CPDLC downlinks - A388	The FANS system on the aircraft reset with the result that CPDLC disconnected without sending a disconnect to the ground. The flight crew attempted several times to logon but the ground did not respond with a connect confirm. The issue was corrected after the ground system re-initialized the connection.
1251-SN	OPEN	AIR-t	Grossly erroneous ADS-C report - A333	For approximately 1 day, two airplanes were operating under the same registration number. One airplane was in Brisbane's airspace and the other was in the Northern Hemisphere. The CPDLC connection was established with the correct airplane (the one in Brisbane's airspace). The ADS contracts were established with the airplane in the Northern Hemisphere. Hence, the Grossly erroneous ADS-C report. Airbus are investigating why one airplane had an incorrect registration number.

South Pacific PRs

CRA number	Status	Type	Title	Comments
1252-SN	CLOSED	AIR-t	Unable to receive CPDLC downlinks - A388	The airplane's SATCOM had an issue from 26th of Jan 2013 to 18th of March 2013.
1255-SN	CLOSED	None	Delayed CPDLC downlink - B777	It is probable that the airplane had a brief SATCOM hiccup, not long enough to cause a disconnect. No further issues were observed.
1256-SN	CLOSED	AIR-t	CPDLC problems - B77W	This was a case of unfortunate timing. The airplane lost satcom for about 5 minutes as indicated by satcom logoff and logon messages in the log. NZZO happened to send the END SERVICE message during that window, so the message never reached the airplane. As a result, the airplane maintained the connection with NZZO. A subsequent Position Report request from YBBB was also intercepted.
1265-SN	CLOSED	AIR-t	Microwave needed in cockpit - CPDLC menu was frozen	Airbus were unable to get logs to investigate this event.
1266-SN	CLOSED AS DUPLICATE	AIR-t	Unable to establish CPDLC or ADS-C	Closed as duplicate of PR 1239
1267-SN	OPEN	mult	ADS-C kept failing - B777	Two issues were identified which contributed to the reported problem. The first issue is that the ATC ground automation occasionally discards valid ADS reports. This has been documented in a software fault report. The second issue is that the avionics appear to have unexpectedly terminated the ADS connection. Boeing and Honeywell have not been able to duplicate this problem in the lab. The CRA will leave this PR OPEN.
1278-MM	OPEN	AIR-t	Delayed Uplink Display	Boeing & Honeywell investigation in progress. At NAT CNSG/9, a secondary concern with the apparent lack of controller reaction to the 14-minute absence of any flight crew response to the climb clearance was noted.

South Pacific PRs

CRA number	Status	Type	Title	Comments
1287-SN	CLOSED	AIR-t	Unable to establish ADS-C - A332	Operator did not respond to Airbus request for comm logs so Airbus were unable to investigate.
1313-MM	CLOSED AS DUPLICATE	AIR-t	Not Current Data Authority - MD11	closed as a duplicate of PR-1198-MM
1314-SN	CLOSED AS DUPLICATE	NETWORK	Loss of CPDLC and ADS-C - A332	Closed as a duplicate of 1112.
1315-SN	OPEN	GROUND	Subsequent logon - A332	Airways New Zealand investigation in progress. After sending the End Service message, NZZO re-initiated address forwarding.
1316-GS	CLOSED	NETWORK	Numerous widespread losses of CPDLC and ADS-C	Inmarsat reported that SED have recently investigated and fixed a problem in the Classic Aero GES where the log off indication for an AES is sometimes sent on the Data 2 terrestrial traffic links for the incorrect Ocean Region. A fix for this problem was fielded in Hawaii (AMER and APAC I4 satellites) on the 9th May 2013 and in Perth (POR and IOR I3 satellites) the 14th May 2013. SITA have advised Inmarsat that this log off problem can potentially lead the affected aircraft to go NO COMM, which also has an adverse impact on the success rate indicators. Airservices has confirmed that the problem has been corrected.
1317-SN	OPEN	AIR-t	Address forwarding failed - A333	Operator had HFDL enabled on their aircraft but no contract for HFDL with ARINC. Consequently, when downlinks were routed to HFDL, there was no contract to deliver them. The operator has since disabled HFDL on their aircraft.
1318-SN	CLOSED	None	FMC Anomaly	Boeing investigation in progress.

South Pacific PRs

CRA number	Status	Type	Title	Comments
1320-SN	CLOSED AS DUPLICATE	NETWORK	Numerous widespread losses of CPDLC and ADS-C (May 2)	Closed as a duplicate of 1316-GS
1321-SN	CLOSED AS DUPLICATE	NETWORK	Loss of CPDLC and ADS-C - A332	Closed as a duplicate of 1316-GS
1322-SN	CLOSED AS DUPLICATE	NETWORK	Numerous widespread losses of CPDLC and ADS-C	Closed as a duplicate of 1316-GS
1323-SN	CLOSED AS DUPLICATE	NETWORK	Numerous widespread losses of CPDLC and ADS-C (May 2,3)	Closed as a duplicate of 1316-GS
1325-RP	CLOSED	AIR-p	Restricted Climb did not display correctly in FMS	Per Boeing lab test with the uplink message sent in this PR event, the uplink was displayed correctly on the flight deck and no anomalies in the message delivery were observed. The FAA are coordinating with the operator involved.
1329-SN	CLOSED AS DUPLICATE	AIR-t	Address forwarding from NFFF failed - A333	Closed as a duplicate of PR 1317.
1330-SN	CLOSED AS DUPLICATE	mult	Loss of CPDLC and ADS-C - A332	closed as a duplicate of PR 1236.
1331-SN	CLOSED AS DUPLICATE	AIR-t	Poor ADS-C latency observed from A332	Closed as a duplicate of PR 1317.
1333-SN	CLOSED AS DUPLICATE	AIR-t	Address forwarding failed - A332	Closed as a duplicate of PR 1317.
1334-SN	OPEN	AIR-t	Temporary loss of CPDLC and ADS-C - B744	CRA analysis confirmed there appeared to be a problem with the airplane's satcom system. The operator has been notified.

South Pacific PRs

CRA number	Status	Type	Title	Comments
1335-SN	CLOSED	AIR-t	Update following numerous widespread losses of CPDLC and ADS-C (May 20)	Airbus confirmed airplane had an ORT problem which has been corrected.
1339-SN	CLOSED	GROUND	Approach procedure partial load	The new procedure had not been published yet and was not available in the airplane's navigation database. Hence, the uplinked clearance would not load.
1341-SN	OPEN	AIR-t	Incorrect wind data from GLEX aircraft	This is a known issue on Bombardier GEX. The fix for this issue planned for upcoming subsequent NZ 6.1 FMS builds, targeted for several aircraft types within the next year.
1342-SN	CLOSED AS DUPLICATE	AIR-t	Missing CPDLC downlink from A332	Closed as a duplicate of PR 1317.
1343-SN	ACTIVE	AIR-t	Multiple data link issues with C130	Airplane appeared to be having difficulty managing queued downlink messages. CRA requested that RNZAF ask their avionics supplier to investigate.
1345-SN	CLOSED	AIR-t	CPDLC connection problems with B77W	The operator reported that the airplane was having satcom problems. Issues were corrected by loading a new ORT.
1346-SN	CLOSED AS DUPLICATE	AIR-t	CPDLC uplink not delivered to A332	Closed as a duplicate of PR 1317.
1353-SN	ACTIVE	TBA	C5 improperly encodes 26N180E waypoint in predicted route	USAF AMC investigation in progress.
1355-SN	CLOSED	NETWORK	Delayed ADS-C reports MTSAT	The message delays were the result of a brief service interruption due to emergency maintenance undertaken by SITA.
1356-GS	OPEN	AIR-t	Speed Level Constraints on Approach transition fix not loaded	Honeywell investigation in progress
1359-SN	CLOSED	NETWORK	Logons not being received from C17s	SITA confirmed the configuration change required to correct this problem has occurred.

South Pacific PRs

CRA number	Status	Type	Title	Comments
1367-SN	OPEN	AIR-t	CPDLC position reports missing next fix time	This problem is related to PRs 1094, 1132, 1171, and 1186. The same scenario results in a number of different permutations of incorrect position reports. This problem has been duplicated in the Boeing lab.
1369-SN	CLOSED AS DUPLICATE	AIR-t	Non receipt of WILCO - A332	Closed as duplicate of PR 1317
1370-SN	OPEN	AIR-p	Incorrect next and next+1 position in WPC report approaching SALAG	Per CRA analysis, it appeard that the pilot was checking fuel and time to an alternate position and did not realize ADS would report that activity to ATC.
1371-SN	CLOSED	AIR-p	GLF5 not responding to CPDLC uplinks	Gulfstream contacted the operator and received a response. This appears to be a one-off failure by the crew to ensure that the Open Climb Clearance uplink was fully responded to. It is possible that they intended to send the downlink accepting the climb clearance but did not press the key properly and they did not confirm in the log that Accept downlink was sent. The crew, at the time, thought the downlink was sent as intended, which in turn created confusion when they where queried about the Open message.
1372-SN	CLOSED	mult	Non receipt of CPDLC uplink - B777	The message was intercepted at the network (aircraft not logged on). It would appear that the airplane lost its satcom connection for a brief period.
1376-SN	ACTIVE	TBA	KC135 - incorrect encoding of block level request	USAF AMC investigation in progress.
1378-SN	OPEN	AIR-t	Non receipt of WILCO - A332 (2)	Pilot sent the Wilco answer but this message was not received on ground. Communication was not available to send the Wilco. Without an ack after 6 min the "sending failed" should have been displayed on DCDU.
1380-SN	CLOSED AS DUPLICATE	AIR-t	400 WILCOs downlinked in an hour	Closed as duplicate of PR 1215-SN.

South Pacific PRs

CRA number	Status	Type	Title	Comments
1381-SN	OPEN	GROUND	Pacific 2 TA loading with SAMUL	The approach procedure name in the uplink was encoded incorrectly, but matched a procedure name in the operator's NDB. The FMC loaded the procedure into the flight plan. However, the loaded procedure was not the procedure intended by the controller. This PR has been assigned to the FAA for further investigation.
1384-GS	CLOSED	AIR-p	CPDLC WILL NOT, 787	The flight crew was using wrong center identifier for the logon
1387-MM	ACTIVE	AIR-t	No CPDLC downlinks received	Gulfstream investigation in progress.
1395-SN	ACTIVE	TBA	Address forwarding from NFFF failed	Airbus investigation in progress.
1396-SN	OPEN	AIR-t	Unable to load UM80	Airbus investigation in progress.
1398-SN	ACTIVE	TBA	Unable to load UM80	Airbus investigation in progress. Possible duplicate of PR 1396-SN.
1399-SN	CLOSED AS DUPLICATE	AIR-t	Unable to load UM83	closed as a duplicate of PR-1396
1400-SN	OPEN	GROUND	No CPDLC downlinks	SITA confirmed that the operator involved was not configured in their system. That has since been corrected.

South Pacific PRs

CRA number	Status	Type	Title	Comments
1403-SN	CLOSED	AIR-p	No CPDLC downlinks - A332	The message was sent via ARINC but ARINC filtered this message because the operator had no contract with ARINC. The operator has a "standing order" in the A/C acceptance log advising the crews NOT to use HF data, only voice. However, this produces an ECAM advisory "HF voice only" which some crews consider as a fault and they switch HF "voice only" to off, therefore activating HFDL. Airbus sent two memo's to the operator's Op's & Engineering departments advising of this situation, but have been informed by the Fleet captain that "as they have many contract crews it's understandable that some of them de-select voice only to remove the ECAM message". The operator is negotiating an HF data contract with ARINC. Should be ready within 2 months.
1409-SN	ACTIVE	TBA	Unable to load route clearance	Airbus investigation in progress.
1410-SN	OPEN	mult	CPDLC Uplink not delivered to A332	This is the same issue as occurred with PR 1372-SN. For whatever reason, the network was unable to deliver the uplink to the airplane. The network dutifully sent a MAS-F back to Air Services. Air Services has been requested to investigate why controller is not notified when network is unable to deliver an uplink.
1415-SN	CLOSED AS DUPLICATE	AIR-t	No CPDLC downlinks received - A388	Closed as duplicate of PR 1250.

South Pacific PRs

CRA number	Status	Type	Title	Comments
1416-MM	OPEN	GROUND	Address forwarding failure - A332	No address forwarding problems found during PR investigation; address forwarding as well as transfer of authority occurred correctly (as evidenced by subsequent CPDLC exchanges between NFFF and aircraft). The CRA also pointed out to AsA that it should have designated the NDA before performing address forwarding. A problem report has been written against Air Services' ground automation.
1417-MM	CLOSED	AIR-t	Intermittent ADS-C, CPDLC - B744	Problem was caused by transient Iridium avionics issues. CRA recommended to aircraft operator that they monitor aircraft for similar problems.
1418-SN	CLOSED	NETWORK	Performance Deterioration Inmarsat I4 APK/XXA	Inmarsat reported the following: "We have investigated further and a frequency plan was misread by the GES due to a format error in the file, resulting in the use of high speed channels being restricted. This happened on 12th August at 14:46. It was corrected on 20th November at 11:20 UTC".
1419-SN	CLOSED	AIR-t	CPDLC_ADS-C failure - GLEX	CRA analysis confirmed the airplane's satcom system failed early in the flight and did not recover.
1447-GS	CLOSED	AIR-t	LOGON TO KZAK CPDLC WAS SUCCESSFUL. AFTER LOGON, NO REPORTS SENT	Airplane was on HF following prolonged period (several days) without a functioning Iridium system.
1462-SN	ACTIVE	TBA	Erroneous ADS-C estimate - A388	Airbus investigation in progress.

South Pacific PRs

CRA number	Status	Type	Title	Comments
1463-SN	CLOSED AS DUPLICATE	AIR-t	Unable to establish CPDLC - A388	Closed as duplicate of PR 1250
1472-SN	CLOSED AS DUPLICATE	AIR-t	Unable to establish CPDLC - A388	Closed as duplicate of PR 1250.
1473-SN	CLOSED AS DUPLICATE	AIR-t	Unable to establish CPDLC - A388 (2)	Closed as duplicate of PR 1250.
1474-SN	OPEN	AIR-t	No response to CPDLC uplinks - B772	The airplane did not have satcom. The operator has been contacted to confirm that the satcom system has been repaired.
1475-SN	CLOSED AS DUPLICATE	AIR-t	Unable to establish CPDLC - A388 (3)	Closed as duplicate of PR 1250.

South Pacific PRs

CRA number	Status	Type	Title	Comments
2014 PRs				
1478-SN	OPEN	AIR-p	Loss of ADS-C - B772	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.
1480-SN	OPEN	AIR-t	Unexpected latdev report - MD11	The problem has been reproduced in the Boeing lab and will be a candidate for a future software update.
1481-SN	OPEN	None	No NCDA received from GL5	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'.
1483-GS	OPEN	AIR-t	Loss of CPDLC - B788 (1)	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	CLOSED	AIR-t	Loss of CPDLC - B788 (2)	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.

South Pacific PRs

CRA number	Status	Type	Title	Comments
1485-MM	CLOSED	TBA	Failed CPDLC transfer from NFFF to NZZO	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	ACTIVE	TBA	Erroneous ADS-C estimate - A332	Airbus investigation in progress.
1488-SN	CLOSED	AIR-t	Loss of CPDLC, ADS-C - B763	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	ACTIVE	TBA	Failed CPDLC transfer from YBBB to NFFF	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).
1491-SN	ACTIVE	TBA	Incorrect CPDLC route request received - C17	Boeing analysis in progress.

South Pacific PRs

CRA number	Status	Type	Title	Comments
1492-SN	OPEN	AIR-t	Loss of CPDLC and ADS-C - A332	Per Airbus analysis, the airplane's satcom system failed and recovered after being reset.
1496-MM	CLOSED	NETWORK	Failed CPDLC transfer from KZAK to NZZO	CPDLC transfer failed because KZAK did not send END SERVICE message before aircraft entered NZZO airspace at S05. 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.
1504-GS	ACTIVE	TBA	B787 - no response to ADS contract request in VHF coverage	CRA analysis in progress.
1506-SN	ACTIVE	TBA	CPDLC disconnection during position report out of SYD	Airbus investigation in progress.
1512-GS	ACTIVE	mult	Loss of data link - B788 (multiple aircraft)	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)

Questions?