11TH MEETING OF THE FANS INTEROPERABILITY TEAM (FIT/11)

Nadi, Fiji, 24-26 February 2004

Meeting Report

Introductions and agenda review

The FIT Chairman welcomed participants and introduced the proposed agenda. The agenda was accepted as presented.

The FIT recognized one of their members on attaining legal drinking age yet again.

Review any outstanding action items from FIT 10

The action items from FIT-10 were reviewed. Details are contained in Attachment A.

Around the room

Participating organizations (ATSUs, airlines, DSPs, and Airframe manufacturers) updated the group on developments over the last year in their respective areas.

Antoine Martin of DGAC gave a brief presentation on Tahiti's short term roadmap. They are performing a study on renewing the ground system, with a decision at the end of this month or early next month on whether to move to a new system or upgrade the existing one. With the change to VIVO4 at the end of '04/early '05, they will cease requiring CPDLC position reports. On the AIDC implementation, implementation of ABI is delayed (due to system provider change). They will allow UPRs from other airspace in mid-05. On ADS separation minima, the safety case on 50nm/RNP10 lateral should be completed by mid 04, with autumn 04 for implementation. Reducing longitudinal separation requires a VIVO change. Rerouting within Tahiti should be available around 06/07. The version of AIDC they are implementing will be version 2

Adam Watkin of Airservices Australia reported steady progress (up to 60% equipage in trans-Tasman traffic). A significant issue is the so-called "KAKES black hole", which is under investigation. They are seeing more 777 traffic (and are awaiting the fix on PR287 to be fielded). They are seeing several new FANS operators (including Air Pacific, Air Caledonie, Air Canada and Emirates), and have been working with USAF. ADS-B trials are continuing North of Brisbane. They have experienced position report problems similar to those reported by Oakland Center. Airservices is interested in FMC WPR.

Airports Fiji Ltd. updated the group on developments in Nadi FIR. RNP 10 was implemented in August of last year between FL290 and FL410. AIDC tests were conducted with Brisbane Center in mid '02. They will be coordinating/evaluating data before they continue. Tests with Auckland Center are scheduled in 2 weeks. Brad Cornell of the CRA pointed out the need to resolve this soon. They reported sometimes having to request the first position report. They also reported new FANS operators, including Fedex. They are discussing possible UPRs for Air Pacific, but need to sort out issues with flight plans that are created in Auckland for the operator. They don't foresee problems with UPRs to/from adjacent sectors. Concerning the problem with ADS connections (master/slave issue on ground, PR440) there is a PCR open with equipment manufacturer. Brad Cornell of the CRA recommended solving the Performance Monitoring issue outside the meting, as the Eurocat System

can provide it. Karen Stephenson of SITA noted that they could send the CRA a duplicate of the report they provide to AFL each month.

Paul Radford of Airways Corporation of New Zealand noted that there were not many FANS issues remaining. Cross-boundary transfers is the biggest. They have limited AIDC with Oakland, full AIDC with Brisbane, and limited AIDC with Tahiti. They don't expect problems with Nadi. The majority of transfer failures come from the NDA being sent when the center isn't the active center.

Dave Maynard of the FAA noted that CPDLC represents 35% of traffic (depending on the region and time of day, varying between <5% to 50% in NOPAC to >90% in SOPAC). On the overdue position reports, they get around 25 daily (50/50 split between CPDLC and HF voice), and have identified no further technical causes since the 777 issue. HF voice reports come back within 3 minutes, and CPDLC ones in 1 minute or less when they request them.

He also gave a briefing on the first successful trial of a UPR (User Preferred Route) off a DARP (Dynamic Airborne Route Planning) route. The test took place late last week on an ANZ flight between Oakland and Aukland. It was noted that there are some limitations on UPRs due to Nadi's inability to accomodate UPRs that start in their airspace, which is an issue for flights originating in Auckland. Apparently a UPR that passes through their airspace is less of an issue. AIDC will be one of the requirements, and currently they can't interface with Nadi or Tahiti.

Hawaiian Airlines will start HNL-SYD soon, and want a UPR route (for a 767-300), raising issues of using FANS without full FANS training. Gene Cameron of UAL noted that Air Canada also wants that. On the TCAS-based procedure for in-trail climbs, the procedure is still valid, and some airlines are interested in restarting this.

He provided an update on ATOP (Ocean 21). The end of June will see initial daily use (sector 3, 8am-12 noon daily). ATOP requires an 8 week course for each controller, and there are 52 controllers to train (so it will take 6-18 months to accomplish). There are 2 control rooms to allow reversion from Ocean 21 to ODAPS. Technician training occurs at the end of this month. There will be no airline procedure changes at this time.

Yoshiki Imawaka of JCAB briefed the meeting on events in Tokyo Center. ADS/CPDLC has been primary since 1997. ADS is used as reference information. They are discussing 50 mile longitudinal separation using ADS with FAA. This needs ATOP and modifications to JCAB's ODP. The ODP modifications will occur sometime this year. They also need MTSAT (same AMSS as INMARSAT). MTSAT will be delivered to Japan mid-March 04. The H2A launch is awaiting results from the failure analysis of the last launch, so it may be end 04/early 05. In response to a question from Ian Varcoe of Air New Zealand on when they would turn off CPDLC position reports, he indicated that it might be late this year. Logon to MTSAT would be voluntary. Air navigation charges in Tokyo FIR would cover the datalink charges for messages delivered by MTSAT. There were questions on AOC messages delivered over MTSAT. The meeting requested a briefing paper on the subject. The CRA was tasked with writing a white paper for JCAB outlining the issues. It would be presented at IPACG as well.

Neil Jonasson of IATA noted that we are getting towards ICAO concept of regional AIDC. Implemention should follow the ICAO standard (not necessarily all messages). APANPIRG should be informed of what capabilities are implemented.

Allan Storm of USAF thanked Airservices Australia for their support on theKC135 round the world trip. C5/C17 GATM are in progress. He noted that there are some military-specific free text messages

(for refueling, MARSA, etc.), and recommended that they be put in the FOM. He also noted that USAF is doing UPR with 1 airplane.

Gene Cameron of UAL noted that UPRS proved very valuable to operators. 95% of SOPAC flights are using UPRs, but there needs to be a stake in ground on AIDC. UAL took a huge hit (4000lbs!) as a result of a recent FAA mandate increasing the average passenger weight estimate by 11 lbs. They are anxious to find ways to recoup lost efficiency resulting from the mandate. For the time being, they're operating their 747-400s at cost index=0 in order to save on fuel cost. They have pushed the TCAS climb and descent procedure, and will be ready to go in March. On position reports, pilots are thinking that the system is losing them, and we need team to go over process. They are interested in using AOC (FMC) waypoint reporting, and are discussing it with Oakland and ARINC.

Ian Varcoe of Air New Zealand urged that the FOM be pushed as a worldwide procedure. He noted that AIDC will be an enabler to get money out of their FANS investment. He noted the costs associated with ADS when it is only used for data collection. We need to make sure it's justified, and leading towards operational use. Tests shouldn't run on for years. He also reminded everyone to provide Problem Reprts to the CRA, and volunteered that Mark Shepard could provide an FOM update for that.. They are shortly going to introduce SFO-AKL service, and want UPRs from Day 1 (June 04). On the missing position reports, they need timely data from ATSUs to investigate before pilots forget

Graham Rennie of QANTAS noted that more airplanes are flying DARPS, but they are not seeing the benefits (emphasizing the need to resolve issues with AIDC), and on problems, trends need to be identified immediately.

Air Caledonie noted that they are beginners with datalink, and thanked SITA for their support. Being able to participate in ISPACG and other forums is a big help. On pilot training, they noted issues with free text, and that the Airbus course was non-compliant on SOPAC operation. Different procedures between FIRs are a problem.

Toby Gursanscky of IFALPA noted that there has been a lot of progress, and that we are getting towards the RCP concept. Logon codes to be made an Annex 4 requirement (to be charted and named after the center). The FOM has now been imposed on the Bay of Bengal.

Terry Anton of ARINC reported on changes to the media uplink priority, which is now VHF/SAT/HF for ATS, and VHF/HF/SAT for AOC (eventually to become airline selectable). She provided data on message success rates, and noted the increase in identified "bad avionics". CFRS was initiated 1.5 years ago in the NAT, and there are now 1600 flights/month. HFDL now has 13 stations – the equipment in the Canaries is awaiting AENA (who have concerns about liability). It now services over 325 airplanes , 0.5 million messages/month, up 49% over 2002. The 95%ile downlink time is 201 sec, with an 81.22 sec average

Karen Stephenson f SITA reported that they are not keeping "bad avionics" statistics. They are now carrying 570kmsg/month in Dec (~600 in Jan 04). The uplink 95%ile time is around 70 sec. 23% of rejects were Q5 in Dec 02, and 9% in Dec 03. Rejects are around 7%. ARINC, Aerothai and another DSP are sending media advisories to SITA. They have 767 VHF RGS, 38 of those having mode 2 (including Sydney and Melbourne). They are trying to increase the number of high-speed channels in IOR. Over 70 airlines use cockpit satvoice (95% air to ground), and offer two auto-dial solutions (cockpit voice dialer and aircom server module).

Jean-Francois Bousquié of Airbus reported that FANS-A+ has just been certified, and also HFDL and VDL mode 2. On the A380, FANS-A+ is basic. He expressed some reservations about the title of the FOM, based on Airbus use of the terms FANS-A and FANS-B.

Suzie Ness of the CRA noted that all Boeing airplanes are certified for HFDL, and that we need written rule for order of media priority for each operating region. There is no limitation now in the AFM on use of HFDL for ATS purposes (it's been removed).

User-Preferred Routes and UPR / Airborne Re-Route Trials

Dave Maynard of Oakland Center gave an update onUPR reroutes. They accomplished a UPR reroute with ANZ6 2 weeks ago. Mark Shepard of Air New Zealand noted that they had attempted the reroute several times previously, but weather problems precluded it. The procedure was that the route was uplinked to the ACARS printer, then an AOC route was sent to the FMC (as an inactive route). The airplane then requested that route as an ATC route clearance. The turn-around they got on it was around 2 minutes (including downlink, conflict probe and the uplink). They would like that as a standard!

Mark Goodall of Airways Corporation of New Zealand took an Action Item to document the procedure.

It was noted that the DARP procedure has been removed from FOM, and has to be reinserted for UPRs.

Antoine Martin of DGAC noted Tahiti is unable to accept reroutes, but will be able to (from Auckland & Oakland) after new version of VIVO is introduced(mid 05). They would like to make tests. They are unable to reroute within the FDPS because of its limitations, but will be able to reroute in Auckland/Oakland and Tahiti will accept that. Ian Varcoe noted that Air New Zealand would still like to be able to initiate UPRs in Tahiti FIR.

Problem Report and System Performance Review

Craig Roberts of Airservices Australia reviewed the performance statistics for the last year. We continue to see ADS messages (up and down) falling below the 95th percentile line. So far we haven't come up with a good explanation for this, but are continuing the investigation. He noted that 3 out of 15 charts he presented are all the data the FOM actually requires, and volunteered to provide guidance to ATSUs on the specific data needed to complete the report.

Suzie Ness of the CRA reviewed the Problem Report activity since the last ISPACG/FIT meeting, including new reports, those problem reports closed as a result of new airplane software releases and those proposed for closure. The meeting concurred in the following closures. PRs that were closed by BP03 software release for 777 were PRs 287, 297, 384, 385, 331, 441 and 446. The PR closed by the Pegasus 03 software release for B767 was PR 445. Closure was requested for PR 109, but the meeting decided to leave this open. Other PRs closed were PRs 119, 337, 352, 355, 360, 364, 369, 438, as well as the transfer failures in PRs 418, 422, 423, 427, 428 (which will be tracked as general PR 439 in future).

The need for a genuine free text page on 747-400 (in Load 17) was noted by several operators.

The CRA has received 50-60 new reports in the last year (resulting in 13 new PRs), implying the system is fairly stable.

On the last transfer failure study, 35 reports of failures were received. Suzie provided a breakdown of the reasons. It was agreed that the study should be repeated. An action item was accepted by the CRA and Air New Zealand to make the arrangements.

The subject of the "KAKES black hole" was discussed, and several suggestions made as to possible causes. This is still under investigation. The "Lazy ADS" problem is also still under investigation.

CPDLC Position Reports in Oakland's airspace

Oakland center discussed their continuing issue with missing position reports. They believe they have an understanding of the technical issues (e.g., 3x777 problems now corrected in BP '03) and assert that flight crews continue to forget to report. The primary basis for the assertion is that the proportion of missing CPDLC and HF voice reports are the same. The airlines were willing to help work the issue, but need to receive reports sooner than they currently do so that they can query the flight crews. Suzie Ness of the CRA volunteered to spot review a day at a time (they average 26 events a day) to determine whether position reports actually left the airplane. .

Performance Monitoring Update

Tom Kraft of the FAA (aircraft certification) briefed a working paper on the subject of performance monitoring, particularly addressing the question of "operational" vs "technical" performance. The core of his proposal was for the FIT to include operational metrics/monitoring and define the allocations for PR tracking/resolution, noting that ICAO Annex 11 2.26 requires post-implementation monitoring (for safety performance monitoring).

AT this point, the FIT/CRA only measure technical performance, and Mark Goodall of ACNZ noted that it is not FIT's task to measure anything other than technical performance. ISPACG could propose that to meet a specific safety case. There was some general concern about what would be involved, and what value would be obtained from such a radical change. There was no consensus on any conclusions.

Tailored arrival trial overview

Craig Roberts of Airservices Australia updated the group on plans for an upcoming Tailored Arrival trial in Australia. The trial was progressed based on ISPACG's recommendation last year to explore use of FANS to facilitate more efficient and predictable arrival procedures for oceanic flights..

Craig's presentation introduced the team involved in this trial, Boeing, ATM Alliance, QANTAS and Airservices Australia. The trial is a transitional step towards the 2015/2020 ATM system, and was designed to avoid some of the limitations of current generation FMCs (no descent RTA and fixed STARs in the database). It uses ADS and AOC datalink to provide data to ground, and CPDLC to uplink the trajectory to follow). He provided a simulated demonstration to show how the tailored arrivals will optimize arrival spacings. Phase one of the trials in Australia will be for data collection, with 1 flight per day for 6 months, using 747s first, and an A330 later. In Phase 1 um83 will be used to replicate an existing STAR.

A short video was also shown. Graham Rennie of QANTAS noted that they are looking for significant benefits

New and improved FANS 1/A Operations Manual (FOM)

Reed Sladen of FAA presented the FOM, a single document encompassing a standard set of operating procedures for FANS 1/A covering most all areas using FANS (all except the North Atlantic). The new document was recently adopted at FIT-BoB held in the Bangkok ICAO office. Once the South Pacific FIT has approved the FOM it will be incorporated into section III of the ICAO CNS/ATM Guidance Material for the Asia Pacific Region.

19 RFCs were introduced (with 4 or 5 from an ICAO meeting)

001	Name change – ICAO approved term – accepted (also needs to approved in IOR ~ October mtg – maybe via e-mail (also BoB and South China Sea)
002	Editorial changes – accepted
003	Communication medium – accepted as rewritten at meeting

004	Redundant requirementsts – accepted
005	Offset vs deviation – leave "as is", consider change later if needed
006	Prohibition on restating clearance – accepted
007	Use of position report to indicate CDA – accepted as modified at meeting
008	Use of ADS instead of position reports – accepted as modified at meting
009	MAYDAY responses – accepted
010	Duplicate NDA – significantly modified at meeting
011	Bizarre sentence on emergency voice deleted – accepted
012	Note on LEVEL vs REACHING – withdrawn
013	Use of CLB/DES TO REACH BY – on hold, and need new RFC on use of procedure (Adam Watkin of Airservices Australia accepted an action item to create this)
014	Change of reporting rate – accepted
015	Altitude rate/change events – accepted
016	Remove "Pacific", miscellaneous changes – accepted
017	Weather deviation procedure – accepted – (Boeing accepted an action item to propose editorial changes)
018	Message to check open messages – accepted
020	Use of HFDL as last priority – also reqt to have SATCOM for datalink – withdrawn, to be worked outside the meeting and reproposed later)

Any Other Business / Working Papers

Adam Watkin of Airservices Australia presented WP/04 on failed connections, including describing the methodology for the study. He noted that ATSUs need to be proactive in assuring seamless operation. They experienced a fourfold increase when the Nadi system was upgraded, and the data from Nadi needs to be analysed.
Ian Varcoe of Air New Zealand asked if it was worth doing the transfer failure trial if this is happening. It was recommended that we wait until the analysis has been completed and any fixes required have been installed before undertaking the trial. Paul Radford of ACNZ provided data on their transfer failures, and noted a software change to make sure they're the current data authority before the NDA and FN_CAD are sent.

Adam Watkin also briefed WP/05 on position reporting on FIR boundary, noting there are 2 procedures (position report required on the boundary, then none if ADS reporting is available or CPDLC reports if ADS is not availableADS).

Adam Watkin also briefed WP/03 evaluating ADS data for accuracy of ETA, and comparing position to the position in a waypoint change report, asking for comments and questions via e-mail. Yoshiki Imawaka of JCAB noted that they have also undertaken a study on this, and the data is available.