**ISPACG 11/4/2015**

The meeting participants introduced themselves:

* Richard Foley Lewis, Airservices Australia
* Paul Radford, Airways NZ
* Allan London, Airways NZ
* Charles Peretti, SEAC PF GCAG
* Dennis Addison, FAA
* Dustin Byerly, FAA
* Joel Laulan, SEAC PF
* Phil Irvine, Port Moresby
* Natsuki Ibe, JCAB
* Ivan Wong, Airports Fiji
* Adam Watkin, Air Services Australia

**Joel Laulan provided an update on the Tahiti, French Polynesia FIR:**

**DARP:** Tahiti has encounter issues with system processing of lat/longs in DARP requests. They currently do not have conflict probe in their ATC system. Joel stated that they will accept DARP but not initiate a DARP clearance They are completing a safety assessment on issuing DARP clearances. After the Safety Assessment is complete, they would like conduct a trial DARP with QFA7 as well as ANZ flight to IAH. Working on Conflict Probe or a display of the requested DARP route in their software. Target is 2017 for issuing DARP clearances in Tahiti FIR.

**ADS-B:** Implementing a Phased Modernization plan. They are extending their surveillance areas with ADS-B and VHF coverage. Their THALES Eurocat X system is ADS-B capable. The first phase will start in Early 2017 with the last phase completed in 2019. ADS-B surveillance separation services to begin in 2018.

**AIDC with Chile:** AIDC Testing completed from March to August 2015. AIDC issues due to malfunctions in the South American Data Network. The network is causing the loss of header data in the AIDC messages. They also have problems with lat/long inclusion. DGAC Chile is considering the need for a new ATM system.

**LOA harmonization:** Tahiti completed a project to harmonize their facility LOAs in August 2015.

**Other issues:** Tahiti has encountered no issues with unannounced speed variation so far. They are considering implementing the ISPACG Speed Variation Trial but the procedure needs needs to be accepted by France first. They are working with Ecuador on the Guayaquil FIR. More new flights are entering this No-FIR area. Currently there are no services provided in the FIR, but they have been challenged to help provide some services in the airspace to the aircraft that are transiting the No-FIR. Tahiti is investigating what services they might be able to provide such as ADS-C tracking. Dennis Addison explained how the FAA maintains a CPDLC connection with QFA through the Mazatlan Oceanic FIR uncontrolled airspace. Paul Radford stated that Ecuador was opening a new airport that would serve as a hub for traffic from South America to Asia. He suggested that ISPACG talk with ICAO in regards to traffic through the No-FIR area. Addison suggested a draft letter for ICAO to be prepared for the Co-Chairs to submit to ICAO. It was suggested that Ecuador may be a possible ISPACG observer.

**Paul Radford provided an update for Airways New Zealand:**

**ATM Systems Upgrades:** Paul advised that Airways was investigating a replacement ATM system for their domestic airspace. They plan to have a decision by 2016 as to if and what will replace their current system. Airways is working on an OCS hardware upgrade planned to be completed in 2018. Another project is the replacement of their HF air ground operating suite and replacement HF transmitters.

**Space Based ADS-B:** Airways has been visited by Aireon and they discussed Space Based ADS-B and what could be accomplished with the new mode of surveillance. They are considering all the factors of Space Based ADS-B. Aireon advised them that the service would cost $20 USD an hour for flights being provided ATC Services.

**RNP2 Separation Standards:** Airways is considering implementing RNP2 separation standards in their FIR. The 20NM lateral same identical/parallel track climb/descend through procedure is straight forward, but the rules for RNP2 for crossing traffic is more obscure in how it would be applied. He felt that the ISPACG PT should discuss and develop a concept of operations on how RNP2 separation standards would be applied. Paul would like an ISPACG and IPACG agreed upon RNP2 procedures application process for the Pacific.

**Other Issues:** Hemstitching flights are creating issues for Airways New Zealand. Addison discussed these issues with group. There are issues with the short FIR route segments and system timers which create issues with the data link transfers. The group discussed possible solutions such as modifying the FIR boundaries around 30S

The Google Loon Project has stopped New Zealand launches and has moved to Sri Lanka for at least 12 months. Balloons are still a big issue for the ISPACG countries. ICAO guidance for medium and heavy balloons is lacking on how to manage the balloons in non-surveillance airspace. ICAO SASP has been discussing balloons but no direction has been published as of this time. Kuang-Chi Science Ltd. will be launching another very heavy payload balloon (around 2000kg) in New Zealand after their first attempt did not remain aloft.

Rocket Labs will be conducting satellite launches off Christchurch NZ towards South America. There will be up to 1 launch a week.

Airways is preparing to move there facility at the Auckland airport to an adjacent industrial complex. They will be increasing their campus size at Auckland and moving sectors from Christchurch to Auckland.

New Zealand humbly provided their condolences for the Aussie’s loss at the Rugby World Cup. However there was some debate over the sincerity of their condolences.

**Ivan Wong provided an update for Airports Fiji Limited (AFL):**

Ivan thanked New Zealand and Dennis for their assistance in helping him attend the meeting. The group thanked Ivan for attending the meeting, the Nadi FIR plays a pivotal role in ISPACG operations and Airports Fiji’s attendance at ISPACG meetings is critical to the meeting’s effectiveness.

**Un-Notified Aircraft Speed changes:** AFL has extended the ISPACG Speed Change procedure NOTAM and they plan to publish the procedure in their AIP.

**UPR Requirements:** AFL has published a NOTAM with their UPR requirements and they will be publishing the requirements in their AIP.

**PBCS:** AFL is working on their PBCS monitoring. They are investigating how to create the Data Link performance charts from their system data. They are consulting with different ANSPs to learn how other ANSPs create the data and developing a plan forward.

**Equipment:** AFL is completing an Airport Modernization project. They are looking to complete a technical refresh in 2016 of their Aurora Computer System. Tahiti inquired if a technical refresh included both the hardware and software. There was discussion that the technical refresh typically updated the system hardware. Portugal went through a tech refresh that Ivan observed.

**ADS-B:** AFL currently uses ADS-B to update their Aurora System to provide more accurate aircraft profiles and they currently do not ADS-B surveillance separation standards but they are working towards that goal. AFL currently has 11 ADS-B sites. They have a 5 stage controller training process and have completed 4 of the 5 stages of training. Their training simulator needs to be upgraded to complete the fifth stage of training. The goal is to begin providing ADS-B separation services in 2018.

**Other:** AFL has a major restructure going on with traffic management. They are working to increase their controller workforce.

**Dustin Byerly provided an update for the FAA:**

Several of the projects the FAA is working on are covered in papers that will be presented later in the meeting. Those topics were not discussed in the FAA update.

**Flight Plan Interfaces:** Oakland has recently implemented a NAM interface with Vsancouver ACC. The NAM interface is working well. Oakland also implemented an AIDC interface with Mazatlan ACC. There are still some operational issues to be corrected to get AIDC with Mazatlan working to its full capability.

**Military Operations:** Byerly discussed the FAA’s efforts to balance the needs of proponents requests for large scale airspace reservations for testing and impacts to aircraft operators. The FAA has so far been successful in mitigating the impacts to acceptable levels.

**ATOP Software Upgrades:** The FAA is working on two ATOP system software upgrades. The first T23 software upgrade will improve the controllers computer interface and reduce controller workload. The second T24 software upgrade will implement the ADS-C CDP and ADS-B ITP functionality into ATOP.

**Spaced Based ADS-B:** Byerly briefly discussed the FAA’s plans for Space Based ADS-B and explained that it would be covered later in a paper.

**Contingency Plans:** The FAA is working on Oceanic Airspace facility contingency plans. Plans to re-delegate Oceanic airspace to another FAA facility in the case of a catastrophic event are being updated.

**Phil Irvine provided an update on the Port Moresby FIR:**

PNG’s plans to implement a new system have encountered difficulties. Phil briefly discussed the issue. There are many unanswered questions for PNG at this time and they hope to have more information on the status of the project at the next ISPACG Meeting.

**Adam Watkin provided an update for Airservices Australia (ASA):**

**RNP2 separation:** ASA is creating a plan to implement RNP2 separation standards. There is no planned implementation date at this time. ASA offered to share their plan with the ISPACG PT.

**Un-Notified Speed Variations:** ASA is working on implementing the ISPACG Speed Variation, but there difficulties in changing a procedure that was previously published in their AIP.

**DARPS:** There is no updates on DARPS in the Brisbane FIR at this time. However, Melbourne Center has been working with QFA and issuing DARPs their aircraft.

**CDN Trial:** The Trial to coordinate westbound CDNs from New Zealand to Brisbane idue to software issues.

**Conflict Probe:** ASA has Conflict Probe implemented in their system at this time as an advisory tool for their controllers. They are working on a plan to delegate FPCF responsibility for decision making to the system. The decision making tool will help support UPRs, free flight and proposed aircraft clearances. The target implementation of the FPCF Plan is Mid-2016.

**New Enroute system:** ASA is working on obtaining a new Enroute ATC system called CMATS (Civil Military Air Traffic System). CMATS is planned for 2022 and it will provide ADS-B and Communications enhancements.

**Natsuki Ibe provided an update for JCAB:**

Natsuki displayed the main traffic flows for JCAB and discussed their impacts.

Replacement ATC System: CARATS the JCAB is developing a long term roadmap for ATC modernization in Japan. The new ATC system will be called CARATS (Collaborative Actions for Renovation of Air Traffic Systems).

**ADS CDP/ITP:** JCAB has initiatives to implement ADS-C CDP and ADS-B ITP targeted for 2018.

**Data Link:** Natsuki reviewed JCAB’s PBCS structure. He detailed their CRA activities based on PBCS monitoring. He explained that JCAB’s CRA is exclusive to JCAB.

**Other:** Natsuki detailed the levels of aircraft equipage within the Fukuoka FIR. He also discussed their UPR and DARP, initiatives.

**Paul Radford provided a Data Link Working Group update:**

**CRA Website:** Paul is working on updating the CRA website. His goals for the updated website include:

* + Enhance on-line administration by users.
	+ “Future proof” and allow for growth of PR database and users.
	+ Update “look and feel” of the website.

The goal is to complete the website upgrade by Mid-2016. There was discussion over whether the database in the existing website can be integrated into the new website. Paul advised that the data would be pulled forward to the new website. Once the new website is operational, frequent users will be asked to review the websites functionality and provide comments before the website is operational.

A lot of the airlines using Data Link have not registered with the CRA, this is especially true of the Chinese airlines. The meeting discussed ways to increase the number of airlines registered with the CRA. Dennis asked if Paul could put together a PowerPoint for Blair Cowles to present to IATA that detailed the benefits of CRA membership to promote more airlines to register with the CRA.

**Action Item:** Paul will generate a PowerPoint for IATA on the benefits of CRA membership.

**Data Link Network Outages:** Paul provided a list of the 2015 Data Link Network Outages:

* Inmarsat classic :
	+ I3 POR. 20 September 1252-1704 = 252 minutes
	+ I3 POR. 30 October 0105-0155 = 50 minutes
	+ Global. 28 May 2230-2305 = 35 minutes
	+ Use of MTSAT and I4 mitigated impact of I3 POR outages in NZZO.
* MTSAT availability:
	+ 18 May 0023-0025 = 2 minutes
* Iridium availability:
	+ 25 September 1631-1834 = 123 minutes
* Inmarsat SBB
	+ 14 October 0350-1522 = 692 minutes, 1934-2140 = 126 minutes
	+ 26 October 0220-0241 = 21 minutes

Paul noted that MTSAT has been very reliable and should be the model for others to follow. A question was asked of JCAB if there was any discussion of a replacement system for MTSAT? Natsuki advised that nothing has been announced at this time.

**Swift Broadband:** Paul discussed the SBB performance. SBB has had some significant outages in their ongoing trials. SBB has had issues in the transition areas from VHF to SBB. VHF Transition issues aside, SBB is meeting latency numbers and it has shown to be better than other forms of Data Link.

**HFDL:** Paul advised that HFDL usage has gone up and the performance remains problematic.

**PBCS:** Paul would like to develop a Joint PBCS Implementation Plan from ISPACG and IPACG to get users on board. FAA have progressed updates to the NAT implementation plan through NAT CNSG and this material will be used to update the ISPACG plan. Paul will draft a PBCS Implementation Plan for the ISPACG PBCS Working Group by the end of November 2015. The ISPACG PBCS Working Group will provide comments on the plan by February 2016. The plan will be updated and shared with the ISPACG 30 meeting. The ultimate goal would be to create a joint IPACG/ISPACG PBCS implementation plan.

**Action Item: Paul Radford to develop a draft PBCS Implementation and CRA enrollment plan, collect comments and report back at ISPACG30.**

**Space Based ADS-B:** Airways is exploring a number options around the use of SB ADS-B to support both domestic and oceanic ATM ops. They are discussing 15/15nm separation using SB ADS-B, RNP2/GNSS and FANS1/A. They have been having ongoing discussions with Aireon about SB ADS-B. Aireon advised ANZ that the cost for SB ADS-B was planned to be $20 a flight hour. The World Bank is planning more development of terrestrial ADS-B sites in a number of Pacific states. There are other development programs are looking at providing ADS-B sites in other states as well.

Dennis shared a briefing on ADS-B that NAV CANADA provided to the CPWG (Cross Polar Working Group) meeting. NAV CANADA owns 51% of Aireon. Aireon SB ADS-B would provide global coverage. Aireon calculates that SB-ADS-B would provide NAT users $100 million saving annually. Aireon has many partners in their SB ADS-B project.

Dennis briefed that the FAA has received funding to modify their ATOP system to process data from SB ADS-B. SB ADS-B Data is free to the FAA through 2016. The meeting raised several questions regarding reliability and latency. So far no satellites for SB ADS-B have been launched so those are open questions. This issue will be kept open for further discussions at the ISPACG and IPACG meetings.

ATS Routes from Guam to Australia: Dennis started discussions with PNG and ASA as to when we could move forward with the 3 new proposed routes. The western and middle routes can be implemented. The target date for implementation of the middle and western route will be May of 2016. Biggest challenge for ASA is charting. They are in the process of decommissioning many of their NDBs and this has created a lot of work. FAA will get names for the routes from ICAO and submit a package to PNG and ASA for their final approval for a target implementation in May 2016.

**Un-Notified Speed Changes:** Dennis presented a PowerPoint on the status of the ISPACG Speed Change Trial procedure that was implemented in April 2015. The procedure has gained some pilot awareness of the issue and some pilots are complying with the procedure. However, there are still many aircrews making large speed changes and not notifying ATC. More work needs to be done to gain pilots compliance. IATA was presenting this PP at one of their regional meetings this week and IFALPA would be briefing their members. There was discussion of how a speed change was to be relayed to the next FIR, this is accomplished via AIDC. The original 6 month trial has passed and the procedure has been extended in the Oakland, Nadi and Auckland FIRs. ASA, JCAB and Tahiti are making efforts to implement the ISPACG procedure within their FIRs. ASA discussed the fact that the speed at the FIR is frequently unknown to controllers. ASA is still considering the procedure. They are having discussions whether the procedure should be changes from “average speed”. There was discussion about Mach Speed fluctuation and ADS-C reports being an instantaneous snapshot of the aircraft Mach Speed at the time the ADS-C report was downlinked. Dennis brought up the Icelandic Study where in the NAT, aircraft are assigned a fixed Mach Speed to maintain. The Icelandic study showed that 95% of aircraft ADS-C reports fell within M.01 of their assigned Mach Speed. This indicates that normal Mach Speed fluctuation is within M.01. The group agreed that we need to continue pilot education and collection of the data to monitor the effectiveness of the procedure.

**Unmanned aerial vehicles:** ANZ briefed that Google Loon has moved operations from NZ to Sri Lanka. They continue to launch balloons there. SASP has added Balloons to their work plan. Kuang-Chi Science Ltd. has an upcoming launch of a very heavy payload balloon, more info to follow. There was discussion about Global Hawk aircraft and ASA had experienced an issue with them not being in conformance with their flight plan. The FAA offered to assist ASA with coordinating with Global Hawk if issues continue.

**RNP2/GNSS separation standards:** Dennis presented a paper on RNP2/GNSS separation standards. RNP2 or GNSS is required to apply the procedure. 95% of aircraft in KZAK FIR flight plan with GNSS equipment. FAA is investigating the use of 20nm lateral separation to climb or descend aircraft through traffic. If the FAA elects to move forward with the separation standard, it would require a Safety Management Study to ensure the TLS is maintained for FAA airspace. Paul Radford proposed to use ISPACG to move forward with the project and share data, lessons learned as well as resources. Similar to what was done with ADS-C 30/30 separation. He raised concerns that an ADS-C is not a requirement of the RNP2 separation standard and wanted to have ISPACG/IPACG develop a paper on how the RNP2 separation standards would be applied. The ICAO rules for 20nm lateral separation are straight forward but there are rules for RNP2 crossing traffic that he felt could be interpreted differently. The PT felt that it would be an advantage to have a unified Pacific position on the application of the RNP2 rules.

**Action Item:** The ISPACG PT will develop a Concept of Operations for the application of RNP2/GNSS standards. This Concept of Operations would be coordinated with IPACG to gain a unified Pacific Concept of Operations.

**PBCS implementation:** The meeting discussed PBCS implementation and the desire for a unified Pacific Implementation Plan.

**Action Item:** Paul Radford to have a plan for PBS Implementation, handling of P-Codes and CRA enrollment and report back at ISPACG30. The PBCS Implementation Plan would be coordinated with IPACG to ideally develop a unified plan for the Pacific.

**AIDC Performance:** Adam Watkin presented a paper for ASA on AIDC Performance. Eurocat does not support the combination of crossing and block levels. He detailed the response times for AIDC messages and all the adjacent FIRs to ASA showed fast response times. Adam noted the data indicated some negative response times. Some of these could be caused by rounding of seconds, but he reminded everyone to make sure their system time setting was accurate. Incorrect system UTC times can cause problems with ADS-C message position report processing.

Dennis presented some data on LRMs and the responses. There was some discussion on the error reasons:

* Invalid acid responses could be related to the SSR code in the message. 2000 codes can cause rejects by the ASA system.
* Invalid Message Sequence LRMs are most frequently caused by aircraft routes of flight which pass close to corners of FIR boundaries where coordination is required between 3 facilities. The PT had discussed the use of 25nm Areas of Common Interest (ACI) for RNP10 aircraft to reduce the number of information transfers which cause the LRMs. ANZ looked at the issue and they decided not to implement the 25nm ACI for RNP10 aircraft.
* Route Truncation: There was a discussion of duplicate fixes or routes which create flight plan processing problems in different FIRs and cause them to truncate routes of flight. All FIR need to look into see if they can fix truncation problems with adaptation when they occur. Data needs to be updated.

Paul discussed issues with testing AIDC and DARP westbound from South America. They have completed testing with Chile’s Talus domestic system but there were problems with the testing. Header data is being stripped from the AIDC messages.

Brisbane brought up an issue where AIDC transfers are being rejected by them because Field 18 data is too long. He showed an example of an extended field 18. Dennis identified the added data as information that was added by the Hawaii OFDPS computer. The question was raised, can HCF fix this issue?

**Action Item:** Dustin Byerly to ask HCF if there is a way to eliminate the additional data that is being added to field 18.

**Confirming Current Data Authority (CDA):** Dennis brought up the issue that ICAO had proposed to remove the CPDLC position report message that is used to confirm CDA in the Pacific. Most FIRs thought that this was not an issue, that the CPDLC message would be retained. The discussion then changed to discuss which Operators are not complying with the Pacific CDA procedure.

**Action Item:** All ANSP’s look to see who is not complying with the requirement to send a CPDLC boundary position report and report back at the PT19 meeting.

**ADS CDP and ITP:** The FAA provided an update on the ADS CDP and ITP procedures. They discussed automated procedure and how the software works. The ATOP software to be available in early 2016. They plan to begin automated use of the procedures by June of 2016.

**Global Flight Tracking (GFT):** At ISPACG 29, ASA reported they had changed to a 14-minute ADS-C reporting rate for all aircraft to assist with GFT. The FAA reported that since June of 2015, Oakland started a 13’52” reporting rate for RNP10 aircraft. NZ has also adopted the 14 ADS-C reporting rate. Tahiti has adopted a 14/15 minute reporting rate in their airspace. Fiji is currently set at 24 minutes for RNP10 aircraft and they intend to move to a 14 minute ADS-C RNP10 reporting rate. JCAB is currently at 27 min for RNP10 aircraft, the goal is to change to 14 minute ADS-C RNP10 reporting rate next year.

Paul mentioned that there are new reporting rate standards for RNP4 separation in the at ICAO. The RNP4 ADS-C reporting rate will be changing to 12 minutes

**DARP:** Dennis gave a short presentation on DARP. He noted that there had been no problems with DARP from Oakland’s perspective. He noted that there had been a significant drop in DARP requests they have received over the last couple months. It was noted that Boeings DARP Program they had been working on went to Jespersen.

The meeting then went through the ISPACG PT Action Item chart. Any Items that had not been discussed so far were updated in the chart. The updated Action Item Chart is attached to these minutes of the PT18 meeting.

**Action Item:** All ANSPs are asked to review the ISPACG LOA and update signing personnel. The LOA is being updated and we are adding new observer ANSPs.

 **Volcanic Exercises:** The meeting ran two tabletop volcanic exercises simulating airborne volcanic ash in areas busy traffic flows. Graham Rennie from QFA participated in the exercise and they provided some great operators insights regarding their operations when volcanic ash is present. QFA needs to know the ANSP’s operational plan for dealing with the Ash so that they know what to expect. What directions from the ANSP will be issued? QFA has other assessments they need to do such as terrain and depressurization procedures. Risk assessment for the airline could take as long as 2 hours. Aircraft Reports of clear/no ash are equally important to them as reports of ash. A Critical Event Contact List (CECL) seems to be a good idea for the South Pacific much like the North Pacific CECL contact list. Satellite pictures can depict VA day or night but atmospheric conditions can prevent clear VA picture. Clear Weather conditions are needed to predict ash density. If ash is present, there is no engine certification or published guidelines for operators to use to determine if it is safe to enter the area.

The meeting discussed the need to talk to the Indonesians about the possibility of opening contingency routes through their airspace. ASA advised that there is work going on to put a route to Biak and then have aircraft UPR to the KZAK boundary.

**Action Item:** PNG to discuss contingency routes with Indonesia and invite them to attend the ISPACG PT meeting.

The meeting discussed the use of telecoms to collaboratively discuss volcanic ash events. ICAO has guidance on Crisis Management Centers that may be applicable to the VA event. It was decided that ISPACG VA Guidance Material should be created to more effectively manage VA events. Key points of the discussion were:

* Volcanic ash events below 10,000 feet typically do not require a telecom unless the ash has proximity to an airport.
* The affected ANSPs should have a conversation prior to the telecom to determine which ANSP will chair the telecom and if any of the affected ANSPs have any outcomes they cannot support.
* If an agreement cannot be reached as to which ANSP will chair the telecom, the ANSP in the country that has the lead VAAC will select the chair ANSP for the telecom. An outcome of we can manage this event needs to come from the telecom.
* The Chair/Lead ANSP will initiate the telecom and send an email to the CECL email list to advise operators of the telecom. The Chair should try to allow at least 1 hour lead time if possible for the telecom.
* The Chair will start the telecom by announcing the event i.e. “This telecom was called to discuss the eruption of Mount Karkar with volcanic ash up to FL250 drifting to the southeast. The Chair will announce the outcomes of the call i.e. “The purpose of this Telecom is to discuss how Enroute traffic will be managed”
* The Chair should detail the information of the volcanic ash plume/activity. Online web meetings can be helpful so that telecom participants can see maps and VAA information of the Volcanic Activity.
* The Chair should solicit Operator input as to the impact of the event. Will operators be avoiding the impacted area or continuing flights through the area. ICAO documents make it clear that it is the operators responsibility to determine if it is safe to fly through an area contaminated by volcanic ash.
* Based on the operator input on the affected ANSPs should make a decision as to whether it is necessary to create any traffic management restrictions to manage the traffic through the area. i.e. Are published avoidance routes required? Is interval spacing required to ensure aircraft can climb above or descend below VA?
* The Chair will determine when follow up telecoms will occur and updates to the status.
* Long/short routes how will those be worked and How will ATC manage. What is the confidence in the report from the VAA? (What is 2+0?) Default to the VAC to determine the Chair. Good discussion and a good starting point to come up with regional agreements.

The PT provided updates to the Seamless Airspace chart. Only a few changes were noted:

* Ujung CPDLC,
* Jakarta and Ujung ADS-B,

The meeting then called for any additional business; there was none so the meeting was closed. Airservices Australia was thanked for their gracious hosting of the PT18 Meeting. The next PT19 Meeting is planned for March 14, 2016 in Gold Coast Australia.