Twenty Eighth Meeting of the
Informal South Pacific ATS Co-ordinating Group
(ISPACG/28)

Papeete, Tahiti
5-7 March 2014

MINUTES

1. Opening Remarks

ISPACG Co-Chairs Karen Chiodini, Federal Aviation Administration (FAA) and Tim Boyle, Airways New Zealand (ACNZ) welcomed the ISPACG delegation and thanked Service d'Etat de l'Aviation Civile en Polynesie Francaise (SEAC-PF) for hosting ISPACG/28.

Administrative and housekeeping matters were conveyed, and delegates were invited to introduce themselves to the meeting.

The draft Agenda was reviewed and published on the ISPACG website as **WP-01** v4 Agenda.

2. Updates from States

2.1 Service d'Etat de l'Aviation Civile en Polynesie Francaise (SEAC-PF)
Joel Laulan highlighted the three main events in Tahiti over the past year and for the near future:
- Firstly, the implementation of Short Term Conflict Alert (STCA) in radar areas around Tahiti, completed Feb 2014.
- Secondly, the ADS-B project in addition to VHF deployment via satellite (2014/2020).
- Thirdly, ATS Interfacility Data Communication (AIDC) testing with Direccion General de Aeronautica Civil de Chile (DGAC) in the first half of 2014. New LOA to come.

2.2 Airports Fiji Limited (AFL)
No attendance at ISPACG/28. No update tabled.

2.3 Airservices Australia (AsA)
Adam Watkin reported that it had been a relatively quiet year in regard to ISPACG activities:
- The Automatic Dependent Surveillance-Broadcast (ADS-B) mandate came into effect last year.

- ADS-B data sharing with Indonesia was underway.
- A new ADS-B project named 'ACME' had commenced.
- In April 2013 the FMC Way Point Reporting area of implementation expanded.
- The acceptance of CDN messages from NZZO will begin in May 2014.
- Proof of concept for a "long range flow" is currently under evaluation.
- A tender evaluation for new Australian Air Traffic Management (ATM) system is underway.

2.4   Airways New Zealand (ACNZ)

Paul Radford commented that a significant software upgrade was required in 2013 for the introduction of the GRIB2 weather models after the WMO ceased production of the GRIB1 models. Operationally, ACNZ completed 2 ADS-B In-Trail Procedure (ITP) climbs in February 2014. Airways are planning to introduce the ADS-C Climb/Descent Procedure (CDP) in 2015 after changes to the controller interface to facilitate application of the procedure.

2.5   Papua New Guinea Air Services Limited (PNGASL)

Phil Irvine updated the meeting on the current constraints and issues facing PNGASL. Aeronautical data is corrupted because of past mismanagement (often there will be three references to the same place, and none of them will be correct). The ATM, Surveillance and Comms systems are all aging and unreliable (now experiencing FDP failures and trying to keep the systems operational until new systems are on line). VHF coverage is poor and HF is not much better. Land owner issues, settlement encroachment and vandalism are all major issues where facilities are located on land owner property.

A holistic approach is being taken to modernisation all CNS/ATM Systems with recruiting and training being constant, along with government and regulator stakeholder education. Performance Based Navigation (PBN) started with the implementation of RNP10 in November 2013.

Supporting projects include: Communications/Data Link with Brisbane; A countrywide Aeronautical Data Survey, due for completion in September 2014; Using AsA to upskill staff in the fields of engineering and technical; and the recently commissioned AMHS.

PNG is also embarking on a vast CNS/ATM modernisation programme called the PAMAS Project (PNG ADS-B, MLAT & ATM System Project). The tender process is completed, with contract signing anticipated for April 2014. The preferred contractor has suggested an ambitious 18 month time line. Phil gave the meeting a brief on the proposed ADS-B coverage, Multi-Lateration sites, ATM System, and VHF and HF upgrades.

2.6   Direccion General de Aeronautica Civil de Chile (DGAC)

Marcial Vidal reported that DGAC Chile is still working towards seamless airspace being in place by the end of 2015. He advised that at the end of 2013 a trial period of surveillance

using ADS-C and CPDLC in Isla de Pascua's FIR was implemented, expanding the Oceanic airspace and providing greater radar services within the newly delegated airspace in Santiago.

In 1Q 2014 DGAC are proceeding with the implementation of RNP/RNAV-10, reducing to 50/50 lateral and longitudinal separation between UPR routes in the upper airspace of the Isla de Pascua FIR.

In 2Q 2014 AIDC trials between Isla de Pascua FIR, Tahiti and Auckland FIR will be implemented, although initially limited to TOC, CPL, EST and CDN message exchange.

It is hoped that 3Q 2014 will see a trial period to "Initiate" Dynamic Airborne Reroute Procedures (DARP) with Auckland and Tahiti Oceanic FIR and in 2015 feasibility studies being undertaken along with checks for the implementation of RNP4.

2.7   Federal Aviation Administration (FAA)
Dennis Addison invited the meeting to view the new Oakland ARTCC webpage http://www.faa.gov/about/office_org/headquarters_offices/ato/artcc/oakland/.

ADS-C CDP and ADS-B ITP software target date is January 2016, but may move forward 6 months.

JCAB DARP flight requests to Hawaii must be pre-co-ordinated with ATMC atmc_ocean@cab.mlit.go.jp. Operational CPDLC is required for aircraft requesting airborne DARP reroutes. Actual and potential results between TYO – LAX/SFO showed that although savings are not huge per flight, there are savings to be had.

UPRs were recognised as an advantage with significant savings (over 32.8 million kg of fuel savings annually) however not all airlines are taking advantage of UPRs.

KSFO Tailored Arrivals: a new RNAV PIRAT1 STAR is being developed to mirror the KSFO Pacific 2 TA. The PIRAT1 STAR would provide an OPD for non FANS aircraft. The target date for implementation is April 2015. Oakland is investigating the use of the tailored arrival to accomplish Time Based Metering (TBM) in a more fuel efficient manner. First there are some issue to be worked out with TBM to KSFO.

On 04 March 2014 a simulated volcanic ash event (VOLCAN14) took place. From all accounts it appears to have been a success. The event affected several aircraft and at ICAO Paris the outcome of the exercise will be discussed.

Dennis brought the ICAO Annex2 3.6.2.2 change to the meetings attention:
c) Change in time estimate: if the time estimate for the next applicable reporting point, flight information region boundary or destination aerodrome, whichever comes first, is found to be in error in excess of 2 minutes from that notified to air traffic services, or

such other period of time as is prescribed by the appropriate ATS authority or on the basis of air navigation regional agreements, a revised estimated time shall be notified as soon as possible to the appropriate air traffic services unit.

FAA requires Oceanic Navigation Error Reporting (ONER) and Oakland undertakes automated Time Error tracking and reporting.

Mark Shepherd advised Dennis that when the time comes Air NZ would be happy to fly time based metering trial flights.

2.8   Civil Aviation Bureau Japan (JCAB)
Takayuki Harada gave an overview of the Fukuoka FIR, an update on UPRs and DARPs, 10M separation without MNT, and PBCS schedule. However it was Takayuki's overview of the Oceanic Conflict Detection and Assistance Processor (OCAP) that drew discussion from numerous attendees. OCAP provides the following functions:

- Detect predicted conflict several hours in advance between aircraft and aircraft, or between aircraft and restricted airspace (0-6 hour's variable by parameter).
- Present and manage the procedure to avoid conflict.
- Last week, 27 February 2014, assistance to avoid conflict by OCAP began being utilised by the Air Traffic Management Center.

ISPACG/28 delegates are invited to read further information on OCAP in **IP-09**. Takayuki's corresponding presentation will also be posted on the ISPACG website.

2.9   Directorate General of Civil Aviation - Indonesia (DGCA)
Yanuar Jinu Satiti, attending ISPACG for the first time, gave an in depth presentation on current capabilities of radar, ADS-B and Multilat in Indonesia.

Radar Facilities: Most PSR installations are degraded and off, because of aging radars. Most of the aging SSRs are being replaced with new MSSR Mode S radars.

ADS-B Installations: ADS-B groundstations are spread throughout 30 locations in Indonesia plus, 1 ground station in the DGCA headquarters used for monitoring and configuration all other ground stations. Indonesia has an ADS-B data sharing agreement with Singapore and Australia. ADS-B ground stations are connected via VSAT link.

Multilateration: Budiarto Airport and Soekarno-Hatta Airport are the only two airports that implement multilateration.

ATC Automation Development: Upgrading MAATS with new flight plan format capability. Development and improvements to the MAATS System. Co-ordination between ATS Unit with the adjacent centres using ATS Interfacility Data Communication (AIDC). Improvement and integration of ATC Automation System TMA/APP.

Adam and Yanuar agreed to discuss off line further details of the Jakarta Data Link Trials which are due to commence soon.

3.   Review Relevant Work Conducted Since ISPACG/27

3.1   Update on ICAO
No attendance at ISPACG/28. No update tabled.

3.2   Report on ISPACG/PT15
Allan London, Airways NZ, updated the meeting on Planning Team 15:
- The CRA website remains a work in progress with major upgrades due mid 2014.
- FANS1/A availability was reportedly good with consistent results, however Iridium showed reduced availability although it had no real effect on traffic.
- AsA raised the issue of uploading of DARPs into FMS and the differences of ground handling a clearance depending upon aircraft manufacture. FAA reported no issues. It was agreed that this would be added to the Open Action Items as 15-1.
- Enroute speed variation concerns have been around for a long time and to date there has been no resolution. Dennis Addison, FAA, has taken an action to draft a NOTAM for circulation amongst PT members for approval. Allan London will then contact AFL to confirm their acceptance.
- The completed UPR rules and guidelines were presented and will be published on the ISPACG website. These will be uploaded to individual ANSP websites and ISPACG.
- ADS-B ITP trials are unlikely to continue in the South Pacific past March 2014 due to United removing their B744's from the South Pacific routes.
- Database sharing has not progressed over the past year. ACNZ will co-ordinate the operational sharing of operational data.
- All ANSPs are urged to maintain adequate monitoring and reporting of AIDC data.
- FAA and JCAB are proposing a Volcanic Ash Exercise in late 2014 (possibly August). They will co-ordinate with AsA and AFL.
- ACNZ distribution of Contingency Plans to be further investigated (e.g. ACNZ LOA with Nadi also impacts on AsA).
- A Tiger Team will be put together to look at progressing RNP2 implementation.
- It was agreed that the ISPACG Letter of Agreement will be reviewed for signing at ISPACG/29.
- Aireon Global ADS-B will be added to the PT15 work plan.

The PT15 Minutes and Open Action Items will be published on the ISPACG website.

Planning Team teleconferences have not been totally successful therefore it is proposed to reconvene 6 monthly face to face meetings. The location and date is yet to be confirmed but will follow after the proposed FAA and JCAB VOLCAN exercise.

3.3   **Report on FIT/21**

Brad Cornell, Boeing, gave an overview of the FIT/21 meeting:

Feedback from Operators: From mid-March United will be operating 777-200ERs on South Pacific routes which are not ITP equipped, they would therefore like to see ADS-C CDP procedures adopted by more ANSPs.   They are also working towards using DARP procedures in the near future. In addition to daily UPRs on all North America routes, on southbound flights Air NZ also uses DARP wherever possible. Positive feedback on both procedures had been received.

Feedback from ANSPs: AsA raised concerns about unloadable route clearances, to which Airbus and Boeing have undertaken to ensure they supply AsA with additional information on duplicate waypoint resolution processing.

Problem Reporting: In 2013 270 PRs were received, with 50 already received to date this year, indicating around 300 could be lodged by year end.

System Performance Monitoring: Data received this year is very detailed and when broken down gives further insight as to where to focus efforts in conjunction with problem reporting.

3.4   **Report on HF Working Group**

Allan London, Airways NZ, presented **IP-10** and advised that the HF WG last met in Brisbane, November 2013. Responses to the survey question "How Can The HF Network Be Improved?" had changed little over the past 5 years and resulted in 3 main issues below.

- *Too many facilities using the same frequency*: A notification process is in place so each air ground station notifies its adjacent provider of its primary and secondary frequency so as to avoid using the same HF frequency.

- *The quality of HF*: It will never be that of VHF. ANSP's encouraged to look at aerial efficiency and coverage when replacing their HF systems to ensure that they provide the most efficient and best quality signals.

- *Response times to clearance requests*: Each HF facility in the network is required to monitor and report on the delivery time of HF clearances. Average response time was just under 2 minutes which doesn't support this comment. Other factors that affect delivery are traffic, the position of the aircraft in relation to the FIR boundary and co-ordination requirements with the next and previous sector.

Comments were received asking HF to be replaced with Data Link / FMC WPR / SATCOM Voice but it is up to the operator to equip the aircraft. HF is mandated until least 2025.

Network performance: ACNZ have offered assistance to one ground facility and are awaiting a response. Air NZ expressed concern with the overall performance of one facility and indicated that they would raise this issue at the next meeting and if no improvements were visible by then and may look to ICAO for assistance.

3.5   **Report on Communication Failure Co-ordinating Group (CFCG)**
Keith Dutch, FAA, talked to **IP-03** in conjunction with a presentation entitled ICAO CFCG Update. The CFCG was formed by the ICAO in 2012 to resolve the differences in conflicting amendment proposals for existing communication failure provisions. They are currently conducting detailed reviews of present communication failure procedures.

Consensus of the definition of 'communication failure' has been divided, as has the term 'flight plan' to the various ATMs and operators. Therefore in order to move forward two focus groups are being formed: One group will develop a concept for providing communication failure procedures, based on phase of flight; while the other group will be responsible for adding definitions, or clarifying existing terminology used with communication failure.

Keith asked the ISPACG meeting to review IP-03 and forward comments to him by 30 April 2014 so that he can take them to the next CFCG meeting.

4.   **Review Open Action Items (Appendix A)**

AI 17-1a   **Implementation of 50NM Lateral Separation in RNP Airspace**
PNGASL 50/50 implementation completed November 2013. Item Closed.

AI 17-1b   **Implementation of 50NM Longitudinal Separation in RNP Airspace**
PNGASL 50/50 implementation completed November 2013. Item Closed.

AI 17-11   **Air Traffic Service Inter-Facility Data Communications (AIDC)**
WP-05:   Adam Watkin, AsA, asked the meeting the consider the need to conduct regular analysis of AIDC performance and interoperability, and advised that after many delays, the implementation of CDN messages for revising co-ordination for westbound flights from NZZO has been tentatively scheduled for late May 2014.

IP-02:   Keith Dutch, FAA, reported on the ICAO Inter-Regional AIDC Task Force (IRAIDCTF). Progress to consolidate the NAT and APAC AIDC has been limited but effective. Proposed changes are located on http://portal.icao.int/AIDC. IRAIDCTF/3 will meet 24-28 March 2014 in Montreal with a view to completing consolidation and providing a draft deliverable to NAT SPG and APANPIRG by mid-2014.

Paul Radford, ACNZ, advised that ICAO Oplink Data Link Panel also had AIDC on their work plan and that work was progressing on how to combine AIDC On-Line Data Interchange (OLDI) with AIDC. He reiterated that we also have a regional requirement for AIDC monitoring. Invalid message sequencing from ACNZ, AFL and ATOP needs to be formalised more in an effort to minimise occurrences.

AI 21-5   **Sharing of Operational Data**
Paul Radford, ACNZ, advised that work stalled during 2103 due to resources. Monitoring and collection of data for FANS1/A aircraft will recommence and regional figures will be extracted and taken to ICAO for inclusion into ICAO Regional Plan.

AI 25-1   **RNP-4 Equipage**
IP-01   Dennis Addison, FAA, demonstrated the savings to be had with RNP4 and FANS1A equipment in the Pacific. He also noted that Oakland Oceanic FIR traffic levels have increase nearly 38% to 690 flights per day from those in 2009. With more aircraft in the Pacific airspace, there is more competition for optimum altitude assignments and data clearly shows that RNP4 and FANS1A equipped aircraft have a higher likelihood of operating at their optimum altitude. The FAA has conducted several studies which show that lack of FANS equipment and RNP4 cause extra fuel burns of 21,000 to almost 29,000kg for a fifteen day period. If the data was extrapolated over a year the extra fuel burn due to lack of FANS and RNP4 in the Oakland FIR would be 847,825 to 1,031,493 kg. There are also additional benefits that are not currently tracked e.g. savings that could be realised by developing route systems based on a 30nm lateral standard.

He asked that Operators recognize the significant benefits of RNP 4 and FANS equipment, and asked that they consider certifying FANS equipped aircraft as RNP 4; and consider equipping aircraft with satellite FANS and RNP 4 ops spec approval .

Jean-Francois Bousquie, Airbus, said that Airbus GPS primary ensures much less than the current RNP4 they are certified with. Brad Cornell, Boeing, added that Boeings come certified with RNP4.

Gene Cameron, United, indicated that he would like to see the information in this presentation distributed to operators via IATA in Singapore and also requested monitoring and updates continue to ISPACG on an annual basis. Mark Shepherd, Air NZ, agreed and thanked the FAA for championing this with IATA.

AI 25-2   **Speed Variation Concern**
Allan London, ACNZ, referred the meeting to PT/15 Action Item 8-A discussions and outcomes. He said in essence speed variation concerns

had been on-going for some 8 years. They had been raised twice with ICAO and rejected by the Regional Office. The meeting was in agreement that something needed to be done.

Dennis Addison, FAA, will draft a NOTAM regarding speed variation in the South Pacific region. The NOTAM wording will first need to be approved by all regions ANSPs (ACNZ will seek approval from AFL). Once approved the ANSPs will distribute to their Operators for comment. Because this involves both ANSPs and Operators Tim Boyle suggested that this is kept as an ISPACG Action Item.

AI 25-3   **Central Reporting Agency (CRA) Website**
Paul Radford reported on the efforts of getting ANSPs and Airlines registered on the CRA website. Attendees of ISPACG are generally all on board, however work is now being done through FIT Asia in an attempt to get Asian ANSPs and operators registered. All ISPACG delegates are asked to encourage others in the region to register on the CRA website.

Mark Shepherd, Air NZ, suggested the CRA having its own CRA email address, rather than a Boeing email address. Paul Radford will look at incorporating a new email address in the website which is currently being upgraded.

AI 27-1   **SATCOM Voice Capability in Flight Plan**
IP-07   Tom Kraft, FAA, talked to IP-07 and presented "SATVOICE – Another Means of Communication".

In June 2013 APANPIRG Conclusion 24/35 adopted revised AMS strategy, which expanded scope on use of SATVOICE. The AMS strategy for the Asia/Pacific Region is to:

- Retain HF voice for communication in areas where VHF coverage is not available;
- Provide (SATVOICE) where appropriate. States providing SATVOICE service should publish relevant details in their AIP;
- Plan for enhanced AM(R)S and AMS(R)S applications within a performance-based communication and surveillance framework; and,
- Plan and implement new communication technologies and applications to meet the demands of aviation in the ASIA/PAC Region with the involvement of all stakeholders and taking account of costs and benefits. States may still need to update their AIPs.

ICAO OPLINKP are currently on track for converting SVGM to ICAO document, targeting publication for 4th quarter 2014.

The OPLINKP is targeting 4Q 2014 for publishing Doc-[SVGM] and are still investigating the need for amendments to annexes, such as Annex 10, Volume III, and PANS.

PARC CWG established a "tiger" team to resolve issues with using Iridium Safety Voice service. They continue to work with FAA on policy updates. Next steps are to complete ground testing with remaining operators, followed by reviewing and publishing the Operational Voice Test Plan to include measurement criteria, reporting, and oversight.

Challenges for SATVOICE:
- Amendments to ICAO Annexes and PANS needed.
- MMEL policy depends on reliable infrastructure (sufficient number of lines, dialing capability, receiving calls, safety service).
- Managing SATVOICE numbers for ARTCCs/aeronautical stations (provide SATVOICE numbers in AIPs and published on aeronautical charts).
- Iridium Safety Voice service is ready for use. (Operators need to update SATVOICE system, at least update SIM cards. Suppliers need to provide service bulletins, or guidance to operators).

Jean-Francois Bousquie reported that Airbus was about to send an official letter to EASA, seeking the removal of 1 HF so they can offer customers 1 HF and 1 SATCOM.

WP-03   Paul Radford said ACNZ have been working with INMARSAT for years. Access is now via Astrim (formerly Vizada) however we currently have no access to anyone via Inmarsat or Iridium since implementation of 13 upgrades when Inmarsat removed Vizada from the supply chain without telling anyone. The last time ACNZ made call via SATVOICE was last July! Consequently ACNZ are trying to re-establish SATVOICE comms from Auckland.

SITA is the designated Communication Service Provider for MTSAT however they advised Airways NZ in 2013 that they do not provide access for satellite voice communications calls to aircraft via MTSAT.

ACNZs intention is to incorporate the satellite voice automation into the OCS controller and air ground operator work stations by 2016. Provision will be made to use the filed FPL CODE in Item 18 instead of a database to determine aircraft phone numbers.

Group Response:
SEAC-PF   SATVOICE for non routine and emergency calls. No SATCOM introduction at this time.
AsA   No update.

AFL	Allan London on behalf of AFL, reported Fiji had set up SATVOICE comm but he had no idea if they had continuously updated their database. They may have had their service cut like ACNZ. He will follow up with AFL.
PNGASL	Will talk to the parties who wrote the communications requirements and follow up / promote.
DGAC	Not in their scope.
JCAB	Currently being reviewed for emergency use only. JCAB are very interested in discussion regarding SATVOICE.
DGCA	No comment
ARINC	Use with some operations in Oakland airspace. Arinc have taken steps to upgrade switch. Still have issues getting correct info into database, so tactically usable all time for operator, but this is improving all the time.
Air NZ	Easy for Air NZ except for 1 FIR. Inmarsat short code number, or telephone number. They have not had a call from Arinc or any other service provider for +/- 5 years.
United	Some planes are getting older and they are now evaluating whether to trade Inmarsat for Iridium however there is concern in the data performance of Iridium. United will probably start with wide body fleet and evaluate.
Boeing	Not a lot of pressure to change. All in all the industry is happy to use for emergency calls, however there are often no instructions on how to use, e.g. phone numbers etc. They keep asking ANSPs if they are going to provide. HF has problems so it seems to be out of sync and without momentum to provide service in future.
Airbus	Shares same concerns as Boeing.
ACNZ	Use for emergency and non routine. Cost of calls is expensive.

Tom Kraft advised the meeting that the PARC CWG will evaluate any issues that people bring to the table, but added that they can't resolve them, they can only recommend change.

Tim Boyle, Co-chair said that the HF Replacement Project recognised that the interface with the International Air/Ground operator should include the facility for SATVOICE. And added that the ability to call aircraft should be easy.

AI 27-2 **SATCOM Voice Capabilities in AIP**
The question was asked if SATVOICE capabilities are published in their AIPs.

SEAC-PF	Have AIP enroute form only for French Polynesia. Trialing SATCOM when aircraft have a non routine or safety issue.

AFL	Mark Shepherd, on behalf of, said AFL has a short code number but he's not sure if it is published.
AsA	Contact phone number for 2 Centres is listed in AIP.
ACNZ	Needs to be published under SATCOM but is in AIP. Can take calls at any time, just need to publish how calls are handled by Airways. Approx 3-4 months to publish.
PNGASL	Nothing published – possibly in 1+ years.
DGAC	Nothing yet – maybe next year.
FAA	Short code published in Pacific AIP.
JCAB	AIP draft now in final stages. Publish in AIP 2Q or 3Q, including INMARSAT short code and example for comms between Airbus and ANSP.
DGCA	No SATCOM capability - nothing published.

AI 27-3   New ICAO Flight Plan Format

WP-07   Adam Watkin, AsA, advised the meeting that there were a number of perceived ambiguities in Doc 4444 Appendix 2, flight planning requirements concerning the flight planning of ADS-B capability. He worked through Airservices proposed recommendations as outlined in WP-07 and the meeting decided that this subject should in fact be allocated a separate Open Action Item (ref AI 28-01).

WP-06   Gene Cameron, on behalf of IATA, tabled WP-06: Wake Turbulence Category "J" for A380 and its Allocation in Item 9 of the ICAO ATS FPL.

After much debate as to the chain of events, and who specified category "J" or "H", the meeting was at an impasse and was referred back to IP-10 from ISPACG/26. It was agreed that Emirates should take this concern up with CAA directly, and not with ISPACG. Gene Cameron advised that he would table the paper at IATA RCG for Asia Pacific in Singapore.

5.   Review Work Programmes

5.1   Seamless Airspace Chart

The Pacific FIR Seamless Airspace Chart, Capacity Enhancement Table, UPR Chart and UPR Status were all updated at Planning Team 15 and will be published on the website.

5.1.1   Surveillance
IP-14   Australian ADS-B Update (AsA)

Adam Watkin, AsA, gave an update on the Australian ADS-B mandate which came into effect on 12 December 2013. The mandate applies to all IFR non-State aircraft flying at or above 29 000 feet in Australia's airspace. For a non ADS-B-equipped aircraft to operate

within this ADS-B airspace it must: be a STATE aircraft; or have received an approval from AsA; or be subject to an Emergency or declared a MERCY flight.

"ADS-B Exempt Airspace" has been defined as Australian administered airspace that is not ADS-B airspace. A non ADS-B equipped aircraft can operate within this area with the approval of CASA, or alternatively below FL290.

Additional mandates for Australian registered aircraft will come into effect over the next 3 year period and a Coverage and Communications Enhancement Project (ACME) will see 14 new ADS-B ground stations installed between 2014 and 2016.

WP-04 **Benefits of Sharing ADS-B Information Across FIR Boundaries (AsA)**
Adam Watkin reported on the benefits of sharing ADS-B information across FIR boundaries with Indonesia. Any detected co-ordination discrepancies are reported as "errors". Early detection allows ATC to correct the discrepancy prior to it becoming operationally significant.

Tim Boyle, ACNZ, congratulated AsA on the success of the ADS-B project and said he feels certain there will be a lot of interest from around the region. SEAC-PF indicated that it was their intent to have an ADS-B mandate put in place, while PNGASL said it would take time to legislate such a mandate.

IP-08 **Seamless Airspace in Chile (DGAC)**
Marcial Vidal of DGAC reported that Chile was working towards a single airspace, as reported in 2.6 above. In 2Q 2014 AIDC trials will be implemented between Isla de Pascua FIR, Tahiti and the Auckland FIR although these will be limited to TOC, CPL, EST and CDN messages exchange initially. From the end of 2013 Chile have been able to accept DARP and their intention is to initiate a trial DARP period with the Auckland and Tahiti Oceanic FIR in 3Q 2014. During 2015 feasibility studies and checks for the implementation of RNP4 in Isla de Pascua FIR will be set and therefore the reduction of lateral and longitudinal separations to 30NM.

IP-11 **ADS-B Implementation in French Polynesia (SEAF-PF)**
Sebastien Mariette, ABS-B Project Manager at SEAC-PF, informed the meeting that at the end of 2013 agreement from Paris had been given for ADS-B implementation and VHF extension in French Polynesia. In all 9 ADS-B receivers (2 in 2014, 3 in 2015 and 4 in 2016) will be installed on existing VHF sites.

IP-05 **ADS-C CDP Project Overview (FAA)**

Dennis Addison advised the meeting that ADS-C CDP was demonstrated in operational trials by manually applying ADS-C CDP without changes to FAA ATOP automation system. Trials had concluded in February 2013 and during the two year time frame ADS-C CDP had been successfully utilised eight times. CDP procedures had been seen as a benefit however there are no plans to extend the manual trial.

Gene Cameron, speaking on behalf of IATA, informed the meeting that IATA Singapore supports this procedure and hopes that all ANSPs can implement ADS-C CDP as soon as possible, adding that IATA would like to present a recommendation letter along these lines. Paul Radford advised that Airways had ADS-C in their work plan and were targeting 2015/16, around the same time as the FAA.

5.1.2 **Automatic Dependent Surveillance – Broadcast In-Trail Procedures**

IP-13 **ADS-B ITP (ACNZ)**

Allan London notified the meeting that Airways NZ had undertaken to perform ADS-B ITP some time ago; however the timing of flights, high frequency of weather deviations in the South Pacific and having suitably equipped aircraft in proximity of each other had proved difficult. Controller training had been undertaken using simulated scenarios and with CAA approval the trial was extended. On 18 February 2014 UAL863 and UAL839 undertook 2 ITP climbs with UAL863 on both occasions requesting climb through the level UAL839 who was in trail. The withdrawal of United's ADS-B equipped aircraft from the South Pacific at the end of March will mean that further trials will not be possible however Airways focus will be to develop software automation to facilitate the application of ADS-C CDP in the Auckland Oceanic Control System.

IP-06v2 **ADS-B ITP Operational Flight Trial Project Status (FAA)**

Ken Jones, NASA, said the FAA had begun an operational evaluation of ADS-B ITP in all Oceanic airspace controlled by KZAK in December 2011. AFL and ACNZ had joined the operational evaluation in late 2013 which had expanded the availability of ADS-B ITP to the Nadi and Auckland FIRs. There is comprehensive designated data collection for an operational evaluation which is being used to enhance the understanding of the economic, safety and operational impact of ADS-B ITP. Timelines going forward are:

August 2014	Complete 3rd Year ITP OpEval data report
October 2014	Begin 4th Year ITP OpEval (limited data)
June 2015	ATOP ITP MODS Completed
August 2015	ATOP ITP Initial Daily Use

5.1.3 User Preferred Routes (UPR)
Nil to report

5.1.4 Dynamic Airborne Route Procedures (DARP)
Nil to report

5.1.5 FMC Way Point Reporting
IP-15   FMC WPR in YBBB

Adam Watkin, reported that Airservices Australia have been conducting FMC WPR in portions of the southern Tasman Sea airspace since 2010 for routine position reporting, notification of maintaining a new level, and notification of revised estimates.

During December 2013 a total of 1,214 FMC WPR ARPs were received. Unfortunately format changes to FMC way point reports sent by flight crew has meant it is no longer easy to determine exactly how many level reports were received. An analysis of the AFTN position reports received indicate a small number of issues relating to message transit delays and incorrect waypoint time entered by flight crew.

Mark Shepherd, Air NZ, thanked Airservices for accommodating Air NZ with this service, stating that it has benefited them enormously.

5.1.6 Network Optimisation
IP-12   PBN in French Polynesia

Joel Laulan, SEAC-PF, advised ISPACG that although a national plan had been defined for the implementation of PBN operations in France, French Polynesia had chosen to perform its own version in 2012. In May 2013 monthly meetings commenced between pilots, controllers and relevant stakeholders and work began towards the implementation strategy of RNAV/GNSS procedures in Faa'a, Tahiti. SEAC-PFs 2013/14 road map will focus on:

ATM   Contribution to the PBN 'seamless' network in the APAC region.

NAV   Study, publication and improvement of RNAV/GNSS procedures and networks.

COM   Ongoing improvements to Data Link specifications in the Eurocat-X tool.

SUR   Continuation of the study of ADS-B / VSAT installation in French Polynesia.

5.2   ATM Contingency Plans
Nil to report.

5.3   Civil Military Co-ordination
Nil to report

5.4   ASPIRE Update (IP-04)
Michael Lam, FAA, reported that the April 2013 ASPIRE Annual Co-ordinators
Meeting had included updates from members, future planning, and discussions around
further expansion of the partnership to include additional ANSPs and airlines in the
region. A new two year term as Chair of ASPIRE was bestowed on Mr. Kuah Kong
Beng of CAAS. Members also reviewed progress and future plans for the
development of shared metrics for fuel and emissions.

An additional best practice of Network Optimization – Collaborative Decision
Making, was added to the existing seven best practices which are now certified with a
star rating based on the number of best practice procedures available. The ASPIRE-
Daily programme now has 19 city pairs validated.

Michael also invited the meeting to view the 2013 ASPIRE Annual Report and
Strategic Plan which was published in December 2013 on www.aspire-green.com
adding that the next ASPIRE meeting will be held in Queenstown, NZ from 8-10
April 2014.

6.   Other Business

6.1   Central Reporting Agency Service (AI 28-2)
Brad Cornell, Boeing, presented **WP-02** and reiterated that the Central Reporting
Agency (CRA) service in the Asia Pacific ICAO Region and the Data Link
Monitoring Agency (DLMA) service in the North Atlantic ICAO Region will expire
at the end of 2014. Alone Boeing had funded the service for the 1st six years, at which
point the FAA had come on board and also contributed towards funding. The CRA
service contract with the FAA ends in December 2014 and Boeing has announced that
they will not fund the CRA on their own. A solution needs to be urgently established:
Technical and financial aspects need to be studied to identify funding, security and
resource management, along with the development of a Terms of Reference (TOR)
defining the requirements of the CRA service.

ACNZ will continue to host the CRA website which is used for problem reporting by
the NAT and ASIA/PAC Regions. An upgrade of the website is due in June 2014.

Karen Chiodini informed the meeting that she was currently undertaking a funding
review for the FAA's portion of the CRA budget. In 1-2 months she should be in a
position to advise whether FAA funds will be increased.

Brad Cornell has had two telecons with CANSO and thinks they would be willing to
host the website and tools so that people could enter data and produce their own
charts, but he does not know if CANSO are investigating funding the Problem
Reporting function.

Paul Radford advised that CANSO has the ability to invoice users but agreed that Problem Reporting and Performance Monitoring are both subjects that require ongoing work so that issues are able to be rectified as they arise. Last year alone there were 270 problem reports lodged. He indicated that the function needs to be turned into a commercial entity and operated under one umbrella, so as to glean a better picture of the issues, rather than by a number of CRAs in different locations which could result in disjoined or repetitive functions.

6.2   "Loon for All" by Google
Tim Boyle, ACNZ, offered the meeting Google's latest venture: http://www.google.com/loon - balloon powered internet for everyone. Google are proposing to launch a series of balloons that will float above 650: approximately 1,200-1,500 balloons; providing wide area Wi-Fi across the entire surface of the earth.

On 14 March 2014 two trial programs commenced in NZ with 18 balloons (aka loons) being launched. It is anticipated that they will stay afloat for approximately 100 days and provide ground signal coverage for a 20km radius. The loons are currently in the NZ and Chile FIRs and are effectively 'aircraft'. A 30 minute notification will be received when the transponder equipped balloon is about to come down - at a speed of 3,000 feet per minute.

From an NZZO workload perspective the 18 loons have meant a lot of extra work. It's a very ambitious project that will present its fair share of questions and problems. For example: How do we transfer the loons between adjacent FIRs? Will Google co-ordinate and manage the tracking of the loons? What risks are involved when contact is lost or fails?

Mark Shepherd, Air NZ, advised that airborne TCAS algorithms may not have been designed with balloons in mind. TCAS and its response to an unplanned descent should be evaluated, as there may be a potential safety issue. Tim Boyle advised that Google are looking at providing something similar to ARINC position reports that could be sent to individual ANSP's, however this will require a significant amount of software work. He added that in the domestic FIR they do have a flight plan. One of his concerns is that Google are not necessarily talking to the right people and asked if Brad Cornell could talk to the TCAS group.

6.3   Turbulence Uplinks by ANSPs
Karen Chiodini, ISPACG Co-chair addressed some further concerns received from Gene Cameron, on behalf of IATA about the inconsistency of how weight turbulence reports are issued.

Adam Watkin for AsA advised that turbulence reports are distributed only if they are aware of them. They provide reports to flight crews on request. They direct SIGMET information to aircraft, but only up to 2 hours after publication time. After 2 hours, those that don't have SATCOM don't get the information.

Allan London for ACNZ said their mandate was to pass any reports on to the Met Office. For severe reports they publish Sigmet accordingly for up to 90 minutes. Moderate turbulence is not passed on, however Moderate – Severe is passed on. The word 'severe' being the trigger. Airways will also pass on reports on request.

Marcial Vidal for DGAC reported that all turbulence reports are passed to other flights by the ATC (Severe, Moderate, or Light) but Severe and Moderate are passed to the meteorological office to be published by SIGMET.

Phil Irvine for PNGASL said reports from individual flight and crews were passed on to other aircraft.

Oliver Cougouil for SEAC-PF provide information to other aircraft and then transmit to the Met Service.

Dennis Addison for the FAA advised that Moderate or greater reports were passed on to other aircraft. Sigmet activity within 150 miles near or through is also passed on to other aircraft.

6.4   ICAO Liaison

Karen Chiodini, FAA, informed the meeting that there are a lot things ISPACG are trying to do which require ICAO response or involvement e.g. speed variation, volcanic ash, etc. For this reason she has assigned Michael Lam, FAA, to act as ISPACGs ICAO liaison person. Michael has previously worked for ICAO in Montreal and has a good working relationship with them. He is also happy to help influence ICAO to accomplish what ISPACG are trying to achieve. He will begin by working through the relevant items on the Open Action List.

6.5   oneSKY Australia

Adam Watkin, AsA, presented ISPACG with an outline of oneSKY Australia. The premise of oneSKY is that customer, stakeholder and owner expectations will be met; existing system limitations addressed; and future growth and complexity managed. Safety will be improved through one national system in one Australian FIR and enable AsA and the Australian Defence Force to deliver safe ATS, support national security and manage air traffic growth together. The oneSKY RFT is currently in the evaluation process and Adam will keep the meeting informed on progress at ISPACG/29.

6.6   Tahiti Runway Works

Mark Shepherd, Air NZ, asked SEAC-PF if they could give an indication of the day time runway works planned for the Tahiti runway. Nicolas Lochanski (SEAC-PF) advised that it was intended that the Director General address the meeting to outline the project, however he had been called away unexpectedly. Bearing in mind that this is not Nicolas's area of expertise he offered the meeting a general overview of the runway project.

The current runway is 25 years old and tenders are currently being called for. Works are expected to start in mid-August and go through until mid-November, to be completed prior to the start of the rainy season.

The importance placed on safety is paramount. The runway will not be closed. Work will be done each day in daylight hours and in 9 stages. At night the runway will be given back to services for international aircraft - the main impact will be on domestic flights. Much work is being put into safety studies to ensure no issues arise during the works period.

Nicolas stressed to the meeting that the principle problem for everyone to consider will be not being able to divert to Tahiti during day light hours, although this will be allowed at night time. Scheduled flights are not affected and information to airlines on the runway works will be sent regularly.

7.   Review & Establish Terms of Reference for Working Groups and Task Forces

7.1   ADS-B Flight Planning Task Force (AI 28-01)
Karen Chiodini (FAA) will draft the Terms of Reference which will include the composition of a Tiger Team, determination of the assigned tasks and the time line to achieve resolution.

The Task Force will be led by Adam Watkin (AsA) and will consist of an ACNZ representative, Steve Kelly (Air NZ), Gene Cameron (United), Dennis Addison (FAA) and Phil Irvine (PNGASL).

Draft recommendations are to be published within 6 months (by end August 2014) by Adam Watkin (AsA) and Tim Boyle (ACNZ).

The issues are in relation to ADS-B capability, in particular ADS-B flight planning inconsistencies referred to in **WP-07** and the various interpretations of ICAO flight plan requirements. Is this a regional issue, or not? Does Doc 4444, Appendix 2 need amending? Understanding of the ambiguities is required and if after consultation an agreement can be reached on the wording ISPACG can possibly look to move it forward through to the ICAO Regional Office.

8.   Closing Remarks
Juan Carlos Rojas (DGAC) offered to host ISPACG/29 in Chile in 2015. This was graciously accepted by the Co-Chairs. Dates not yet confirmed, although likely to be sometime in March 2015. There is a need to ensure that there are no conflicts with ATM Global meetings, NATS, CSG or OPLINKP. The Co-chairs will co-ordinate with Chile. The Secretariat will be provided by FAA and Tim Boyle/Jo Kendall (ACNZ) will advise Chile of the secretariat requirements within the next month.

Tim Boyle (ISAPCG Co-chair) thanked Nicolas Lochanski, Olivier Cougouil and the SEAC-PF team for hosting ISPACG/28. The organisation and running of the event had been exceptional and SEAC-PF had set a very high standard which is a real achievement when so many different countries and cultures are involved. On closing Tim thanked the group and said his first meeting had been a huge learning curve for him. He will look forward to seeing everyone in Santiago next year.

Nicholas Lochanski (SEAC-PF) admitted that when he was told about hosting ISPACG/29 he questioned the expense for hosting an 'Informal' meeting in the South Pacific. During the course of the meeting he came to learn very quickly that the issues raised were those of the South Pacific, not all of the Pacific, and that the group deals with technical Oceanic problems which he found very interesting. The group is full of experts in their field who know what they are talking about and bring value to Tahiti and everyone else in the region. He has seen the proof that we exchange ideas, have a pioneering spirit, and have the freedom to allow ideas to progress. He wished everyone an enjoyable stay for the remainder of their time in Tahiti and invited everyone to enjoy an enchanted evening tonight with SEAC-PF staff.

Karen Chiodini (ISPACG Co-chair) thanked SEAC-PF for the experiences and having taken such good care of the 28th ISPACG. She added that this group is the model of how all regional groups should act, what they should achieve and the common goal they should take to other areas and regions. We should all be very proud.

Attachments:
Appendix A   Open Action Items
Appendix B   Seamless Airspace Chart
Appendix C   Participation List