

**Summary Minutes of the Twenty Third Meeting of the  
Informal South Pacific ATS Co-ordinating Group  
(ISPACG/23)**

**Santiago, Chile  
26-27 March 2009**

The twenty third meeting of the Informal South Pacific Air Traffic Services Co-ordinating Group (ISPACG/23) was hosted by Dirección General de Aeronáutica Civil de Chile (DGAC) and held at the Sheraton Santiago from Thursday 26 to Friday 27 March 2009.

David Maynard, Manager Oceanic and Offshore Operations of the Federal Aviation Authority (FAA) and Geoff deBazin, Oceanic Operations Manager, Airways New Zealand (Airways NZ) served as Co-chairs of the meeting. Joanne Kendall, Administration Manager Auckland, Airways New Zealand (Airways NZ) provided secretariat services for the meeting.

The meeting was attended by participants representing South Pacific Air Navigation Service Providers (ANSP), International Civil Aviation Organization (ICAO), International Federation of Air Line Pilots' Association (IFALPA), regulatory authorities, airlines, airline and equipment manufacturers, as well as communications service providers. A list of participants is included in Appendix C to this report.

**1. Opening Remarks**

- 1.1 On behalf of the Co-chairs and ISPACG David Maynard thanked DGAC and LAN Chile for hosting ISPACG/23 and advised that a small signing ceremony would take place to formally sign the Letter of Agreement (LOA). He also thanked DGAC for allowing the Group to tour their Santiago facilities yesterday, saying that the tour had been extremely beneficial for everyone that had attended.
- 1.2 Geoff deBazin acknowledged Chris Dalton's attendance from ICAO's Montreal office which indicates the importance that ICAO place on this meeting. It also pleased him that all areas of aviation participate in ISPACG which allows the group to achieve more at these meetings. He had watched the relationship between DGAC and ISPACG develop over the years with the result that today DGAC formally join ISPACG as signatories to the LOA.
- 1.3 Apologies and best wishes for a successful meeting had been received from the ICAO Asia Pacific Regional Office, Air Tahiti Nui and IATA. Geoff deBazin expressed his disappointed that IATA had once again chosen not to send a delegate to the meeting and said he would do everything he could to ensure that their intention to attend next years meeting did in fact happen.

- 1.4 The Co-chairs were joined by Mr Jose Carrasco, Deputy Director Air Traffic Services, Direccion General de Aeronautica Civil (DGAC), Chile and Mr Vivan Elise, Head of Air Navigation Services, Service d'Etat de l'Aviation Civile en Polynesie Francaise (SEAC) to formally sign the LOA. All other ANSPs with the exception of Air Services Limited Papua New Guinea (ASL PNG) having signed in advance.

The meeting was informed that it had taken 4 years of circulation for the LOA to reach finality and that it was of equal significance that 3 of the 7 official signatories were in attendance at this, DGAC's official inauguration and hosting of ISPACG.

- 1.5 The meeting was invited to review the proposed Agenda (WP-01) at which point LAN Chile took the opportunity to add 'Space Debris' to item 5 Future Work Programmes. The meeting accepted the updated Agenda as WP-01 Rev1.

Refer <http://www.airways.co.nz/ispacg/index.asp> for all documentation relating to ISPACG/23.

## 2. Updates from Air Navigation Service Providers (ANSPs)

### 2.1 **Airservices Australia (ASA)**

Adam Watkin, Air Traffic Controller from Brisbane Centre, advised that there had been no major User Preferred Route (UPR) changes over the past 12 months. However UPRs between Japan and Australia were scheduled to commence in May, and in June ASA plans to make UPRs available to non datalink aircraft operating between specific city pairs. Details of these city pairs will be promulgated in the June update to ERSA. He also reported that:

- Port Moresby had become more reliable with increased radar and improved High Frequency (HF) coverage, thereby reducing the workload associated with aircraft entering the Moresby FIR;
- A number of operators were still incorrectly flight planning RVSM and as a result ASA has introduced software that cross checks flight plans received against an RVSM approvals database;
- ADS-B ground system installations are taking longer than originally planned however 5 new sites were introduced in Western Australia during 2008, and the remaining ground sites are expected to become operational during 2009;
- Pre-operational trials of FMC Waypoint Position Reporting (WPR) in Oceanic airspace in the Brisbane FIR are underway with Air NZ A320 aircraft.

### 2.2 **Service d'Etat de l'Aviation Civile en Polynesie Francaise (SEAC/PF)**

Eric Lieutaud, Deputy Head of ANS, reported that Tahiti's secondary surveillance radar (SSR) located on Mount Marau, some 10km south east of Faa'a Airport, had been fully installed in the 3<sup>rd</sup> quarter of 2008. It is currently undergoing certification by the DSN Technical Team, with separation criteria to be defined as soon as the quality of the data obtained has been certified.

The TIARE system, based on the EUROCAT-X system, was intended to be operational in the 1<sup>st</sup> quarter of 2009, however SEAC's final decision to display the radar data for controllers at the very beginning has meant the TIARE system has to wait for training of the radar controllers to be completed before becoming operational. This phase is now forecast for August 2009 at which point TIARE will completely replace the former SIGMA system. It will immediately offer the already validated functions of ADS-C, CPDLC, Flight Plan Management and AIDC co-ordination with New Zealand, and if possible the USA, and later Chile. A full safety assessment for datalink services has been completed and conformity to ED122/DO306 requirements demonstrated.

SEAC will co-ordinate more Dynamic Airborne Reroutes (DARP) testing with Air Tahiti Nui and Air NZ before offering the new service permanently. This step will take place as soon as possible after August 2009. When the system becomes operational, reduction of separation will be planned according to its performances, team training and related safety assessments.

In late 2009 SEAC will also run ADS-B tests and forecasts full ADS-B coverage of French Polynesia Archipelagos within the next 5 years.

### 2.3 **Airports Fiji Limited (AFL)**

Shadendra Sharma, Team Leader Airport Systems, updated the meeting on the Air Traffic Management (ATM) system replacement programme using Adacel's Aurora ATM system with ADS-B functionality. A total of 8 ground stations will be deployed to ensure coverage to ground level at airports. Other components of the project include: Deployment of an ADS-B surveillance system; Airspace redesign; Safety Case studies; Flight Yield Billing System; and Avionics. Technical staff commence adaptation training in Montreal next week, with commissioning of the new system scheduled for April 2010. Apart from a State to State agreement (i.e. Auckland Centre being the backup for Fiji) AFL will be enhancing their internal contingency capability by having a Business Continuity System located approx 250m away whereby its flight data processors (FDP) will be updated online via a fibre optic network - this will be available with the new ATM system.

UPR are currently limited to FANS1/A equipped aircraft within the Nadi FIR, however Non FANS1/A aircraft, providing they meet RNP10 approval, will be able to UPR sometime next year. Existing dataset limitations with the current Eurocat system mean that the system cannot process DARP on UPR.

Application of tactical lateral offsets for climb and decent are not currently implemented in the Fiji FIR but will be available once the new Aurora system is operational.

Fiji are now fully compliant with AIDC Version1 and partially compliant with Version 2, the latter to be available once Aurora is operational and tests with adjacent ANSPs have been undertaken. A current difference from the ICAO ICD for AIDC is that Fiji are exchanging a non standard format for block levels with ASA only.

Shardendra advised that ADS-B implementation would be phased in and that a timeline would be forwarded to ISPACG when available.

Fiji, via subcontract to Airways NZ, is currently redesigning the Fiji domestic airspace to put in place the structure required to make full use of ADS-B and Tailored Arrivals with minimum or no vectoring at all - should airlines require minimum intervention from ATM personnel.

#### 2.4 **Federal Aviation Authority (FAA)**

Dennis Addison, Support Manager Oceanic Airspace & Procedures, updated the meeting on Asia & South Pacific Initiative to Reduce Emissions (ASPIRE), highlighting technologies and advancements made with 3 demonstration flights. ASPIRE1, NZAA-KSFO in September 2008, achieved total savings of 3,572kg of fuel and 11,208kg of CO<sub>2</sub> emissions. ALMOST 85% of those savings are available today through current procedures.

KSFO began Oceanic Tailored Arrivals in April 2007 and since that date have conducted 391 full tailored arrivals (592-1041kg fuel savings) and 675 partial tailored arrivals (172-500kg fuel savings). Procedures are currently being finalised for KLAX Oceanic Tailored Arrivals with 4 trial flights in March 2009 estimated to save a flight between 590 to 1500kg of fuel burn.

PHNL ATS route revisions were completed in April 2008 and changes are projected to save 110,000 flying miles per year which will equate to savings of 1,210,000kg fuel, or 3,823,600kg CO<sub>2</sub>.

DARPs have saved 2,000 pounds of fuel burn and 7 minutes flying time, while UPRs have also seen significant fuel savings of over 8.2million kg annually. In light of these findings projected Pacific savings could be in the area of 22.6 million kg fuel and 71.4 million kg CO<sub>2</sub> emissions annually.

#### 2.5 **Direccion General de Aeronautica Civil de Chile (DGAC)**

Gonzalo Ugarte, Oceanic Services Chief, advised that UPRs were introduced in 2008 on the Santiago/Auckland route and the first six months saw approximately 4 tonnes of fuel saved. He also reported that final UPR results of a trial conducted in early March with LAN Chile to Easter Island are currently being calculated, with a view to implementing UPRs between Easter Island (Chile) and Papeete (Tahiti) in May 2009. Unfortunately UPRs into Argentina have been unsuccessful.

Together with Qantas, and the support of ICAO, DGAC are working towards extending Class A airspace in the Easter Island FIR. They are aware there will be some issues to deal with around this change, as the airspace currently belongs to the South American region.

DGAC are also working with SITA to add ADS and CPDLC tools to their ATM system. While Stage 1 testing will be "in house" with SITA they will be looking to the FAA and ASA to help in the operational testing phase by the end of 2009.

Investment in a new HF site at Puerto Montt is hoped to help difficult coverage for flights to Tahiti and other South Pacific areas planned by the end of 2009.

Based on IATA “The One Minute Campaign” Chile have been implementing some greenhouse gas emission reduction initiatives:

- Airways realignment
- R Nav programme
- Agreements with NZ & Tahiti for the use of “UPR” on trans Pacific flights
- Redesign of MRVAC over the Andes

These initiatives have reported 152.507 minutes less fuel consumption 2004 / 2008.

David Maynard recognised the extensive efforts being made in the South Pacific region regarding HF frequency, congestion and UPRs and thanked DGAC and LAN Chile for their work on these issues.

## 2.6 **Airways New Zealand (Airways NZ)**

Paul Radford, Manager Oceanic Systems, advised the meeting that AIDC Version 2 testing with the TIARE system in Tahiti had been completed and AIDC Version 3 implementation would commence when we had agreement with an adjacent FIR.

Considerable effort has been placed on RCP monitoring of FANS1A aircraft and UPR extensions have been implemented on Pacific routes with Air NZ to/from Japan and on South American routes to/from Santiago and Buenos Aires.

No significant changes had been made to the OCS since ISPACG/22 with 4 software changes per year still being implemented. An operating system upgrade was planned for June 2009 and a hardware upgrade scheduled for 2011.

Glen Kenny, the ISPACG representative for IFALPA, asked from a pilot’s perspective if Airways NZ would be monitoring the accuracy of non datalink (DL) aircraft as they transit through FIRs. The concern being with the loading of lat/long points into the FMC. Paul Radford advised that no issues had been picked up in the last 12 months and that the 1-2 issues prior to that had been with FANS equipped aircraft. Geoff deBazin acknowledged that there was still work to be done in the area of entering lat/long positions into the FMC however from a NZ point of view loading of flight plans into the FMC was an operator issue that Airways NZ would monitor and would consider actions including withdrawing the option should serious problems develop.

## 2.7 **Japan Civil Aviation Bureau (JCAB)**

Satoshi Yamaguchi, Special Assistant to the Director ATC Division, made a brief report of significant changes since 2008 in ATC operations over the Fukuoka FIR Oceanic airspace.

ADS seamless operations between the Oakland ARTCC of FAA and the ATM Centre of JCAB commenced in June 2008. ADS seamless operation means to apply ADS 50NM longitudinal separation when crossing the common FIR boundary. JCAB

successfully introduced ADS 30/30 in August 2008. There are approximately 450 flights per day of which approximately 17% are RNP4. JCAB also introduced CPDLC position reports to ADS waypoint change reports in February 2008.

JCAB has been operating UPR between Japan and New Zealand/New Caledonia since 2007. UPRs between Asia and Hawaii were introduced in August 2008. Consideration is now being given to introduce UPRs between Australia and Japan. JCAB said that the division responsible for AIS is to publish an Aeronautical Information Circular (AIC) regarding the Australia-Japan UPR Trial to give notice to all airspace users, not only the participating airlines. JCAB noted that it is impossible to start the Australia-Japan UPR trial from May 4 due to the requirement to publishing the AIC. JCAB proposed to start the Australia-Japan UPR as an operational demonstration for evaluation of operational procedures from May 4, and to change the status of UPRs to an Operational Trial from June 4.

JCAB is operating AIDC between Oakland ARTCC/Anchorage ARTCC and planning to upgrade software to ICD Version 2. Current status is interface testing and will change to operational in near future.

David Maynard added that the progression of UPR and separation standards had come a long way due to IPACG standardisation.

### **3. Review Relevant Work Conducted Since ISPACG/22**

#### **3.1 IP-14 AIS Update from the AIS Implementation Task Force and the First Meeting of the AIS-AIM Study Group (ICAO)**

The meeting was informed of the conclusions of the third meeting of the AIS Implementation Task Force (AITF/3) (Singapore, 20-22 June 2008) that largely considered current operational AIS issues, and the first meeting of the Aeronautical Information Services-Aeronautical Information Management Study Group (AIS-AIMSG) (Montréal, 2-4 December 2008). The latter group was established to develop a global strategy/roadmap for transition from AIS to AIM and the consequent Standards and Recommended Practices (SARPs) and guidance material. The roadmap is expected to become available on the ICAO website in the near future.

#### **3.2 IP-15 Outcomes of ATFM Seminar/Workshop (ICAO)**

The meeting was informed of the recommendations and outcomes developed by the ATFM Seminar/Workshop (Fukuoka, Japan, 7-9 October 2008). The focus of the workshop was to raise awareness of ICAO provisions regarding ATFM, enhance co-ordination and co-operation between ATFM providers and users, and identify regional initiatives to optimize ATFM activities.

**3.3 IP-16 Outcomes of APANPIRG/19 (ICAO)**

The meeting was informed of the conclusions and recommendations of the nineteenth meeting of the Asia/Pacific Air Navigation Planning and Implementation Regional Group (APANPIRG/19) (Bangkok, 1-5 September 2008). The briefing focused on the meeting adopting a Regional Performance Framework on the basis of ICAO guidance material and aligned with GANP and Global ATM operational concept; and, the invitation to States to adopt a national performance framework on the basis of ICAO guidance material and aligned with the regional performance objectives. The meeting also noted that APANPIRG/19 recognized the critical location of the Manila FIR in terms of the heavily trafficked South China Sea area. Consequently, the meeting had invited the Philippines to consider an accelerated implementation of FANS data link capabilities (ADS-C and CPDLC) to urgently improve capacity in the Manila FIR.

**3.4 IP-17 Outcomes of RASMAG/10 (ICAO)**

In reviewing the outcomes from the 10th meeting of the Regional Airspace Safety Monitoring Advisory Group (RASMAG/10) (15-19 December 2008), ISPACG noted the progress RASMAG was making in terms of minimum monitoring requirements and large height deviation categorization and reporting.

**3.5 IP-18 Asia/Pacific FANS Data Link Events (ICAO)**

The meeting was informed of the APAC FANS Data Link Seminar and Satellite Data Link Operational Continuity meeting (SOCM), to be held in Bangkok from 20-21 and 22-24 April 2009, respectively. The latter meeting would review the performance and provision of satellite data link communications. Participation at both events was invited.

**3.6 IP-22 First Meeting of the Asia/Pacific ICAO Flight Plan & ATS Messages Implementation Task Force (ICAO) (Note: IP-22 supersedes IP-19)**

The meeting was informed of the discussions and conclusions of the first meeting of the Asia/Pacific ICAO Flight Plan & ATS Messages Implementation Task Force (FPL&AM TF/1) (Bangkok, 17 to 20 March 2009). The more significant outcomes of the meeting included the following:

- a) an interim strategy to ensure streamlined implementation that was ready for review by APANPIRG and the Sub-Groups. It was noted that IATA will be targeting a fixed transition date of 15 November 2012 globally for IATA members. The FPL&AM TF/1 meeting expressed serious concern that such an approach may not allow adequate testing of the interfaces between airline and ground systems and could represent a critical risk to transition. In this respect, the meeting requested that IATA provide details of the transition arrangements proposed by airlines and IATA by way of a working paper to the next Task Force meeting;
- b) a review of the new flight plan provisions in Doc 4444 identified a number of matters which would be relayed to ICAOHQ for clarification;
- c) a one day seminar would be held on the first day of the next meeting during November 2009; and

- d) a draft conclusion that by 1 July 2010 States inform the Regional Office of their scheduled date of transition to the new flight plan and ATS message formats.

### 3.7 Report on ISPACG Planning Team Activities

Kevin Chamness, ISPACG/PT Chair, reported that the Planning Team had met twice since ISPACG/22: PT/5 in Brisbane 7-8 October 2008; and PT/6 in Santiago on 23 March 2009. Since ISPACG/22 the following new business had been added to the Integrated Action Plan: ICAO Flight Plan Modifications; SatCom Voice Procedures; SSR Code Allocation Issues; FMC Waypoint Reporting Trials; and AIDC Performance Monitoring. A summary of PT/6 follows:

#### 3.7.1 AIDC Implementation

Tahiti and Airways NZ have successfully tested AIDC message exchange with no problems encountered. Only minimal progress has been made with Brisbane/PNG however Tahiti/Oakland testing is planned prior to June. Airways will co-ordinate with FAA and work with the NAT to consider common procedures in relation to the AIDC Regional Monitoring Plan.

#### 3.7.2 DARP Expansion

DARP through Nadi airspace was co-ordinated for the ASPIRE test flights however no further progress has been made in this area. DARP between Auckland and Brisbane is still under development, pending software updates to TAAATS.

Guidance material for DARP is complete and the action closed pending ISPACG approval. Once approved, the guidance material can be integrated into the GOLD. Approved - item closed.

Route truncation in ABI Messages remains a problem, which the PT will continue to monitor, and 2 new actions have been opened: assess the impact of a DARP on a long-haul flight outside the ISPACG region (e.g. Auckland to Beijing) to ensure that appropriate mechanisms are in place for accurate and complete transmission of the DARP route to destination; and introduce a paper to APANPIRG or ATM/AIS to bring this issue formally to the attention of ICAO - Asia/Pacific.

#### 3.7.3 ICAO Flight Plan Modifications

All ANSPs are to consider elimination of the FP boundary position requirement for FANS aircraft between FIRs where AIDC exists. The next step will be to determine if airlines are interested in a case-by-case elimination of the boundary position filing requirement. This action will be co-ordinated via IATA for PT/7.

#### 3.7.4 Global Operational Datalink Manual (GOLD)

The Planning Team recommended to ISPACG/23 that ISPACG support the GOLD. No objections - item closed.



- 3.7.5 Wind and Trajectory Modeling  
An ICAO State letter requesting comments on elimination of voice met reporting (Annex 3 and the PANS/ATM) will be sent out soliciting State comments. Based on current information the PT recommends ISPACG not support the elimination of voice met reports, and urges all ANSPs to conduct a full review of the ICAO State letter. The meeting was also advised that a SatWinds product is not yet commercially available.
- 3.7.6 Strategic Lateral Offset Procedures (SLOP) Documentation  
DGAC reports that they are applying SLOP per ICAO and the procedure is documented in operational procedures, but not in the AIP. An update is still pending from PNG.
- 3.7.7 SSR Code Allocation  
Airways NZ have identified ICAO document 8755-Air Navigation Plan NAM as describing mode S allocation but because the document is not current has been unable to acquire a copy. They will assess current code allocations to better understand how the process works and advise if further action is needed. David Maynard reminded the meeting that every site had to be researched and that work of this nature would take considerable time to complete. In the meantime each ANSP should assess how their automation reacts to codes received from another FIR including the use of code "2000" and whether/when aircraft should be assigned code "2000".
- 3.7.8 Standardization of Current Data Authority Procedures  
The PT agreed that, although this problem may still occur, each ISPACG ANSP has Current Data Authority procedures in place. No further action required - item closed.
- 3.7.9 User Feedback on ANSP Enhancements  
IATA have been unable to attend PT/4, PT/5 and now PT/6 to address this action, which is hampering resolution. The PT have agreed that this process is still important and will endeavour to solicit a response from IATA.
- 3.7.10 WP-06 Share Performance Metrics For Fuel And Emissions (FAA)  
Kevin Chamness, as International NextGen Projects Lead for FAA, presented WP-06 suggesting that air carrier provided fuel and emissions data is potentially the most straight forward and accurate means to create a gate-to-gate baseline performance measurement. Through efforts associated with the development and execution of the ASPIRE work program, there has been preliminary dialog with a subset of South Pacific air carriers on the development of this baseline.

The meeting agreed to endorse the development of a shared fuel and emissions baseline performance metric between Australia, New Zealand and the US West Coast, and asked that the airlines involved (Air NZ, Qantas and United) confirm their agreement to contribute information. Geoff deBazin assured the meeting that any information provided to ISPACG/PT would be after a validation process to address commercially sensitive information.

PT/7 is scheduled for September/October 2009 - dates and venue yet to be confirmed. David Maynard took this opportunity to thank Kevin Chamness for the effort he puts into Planning Team work and said that the Planning Team has helped ISPACG get back on track dealing with ISPACG issues.

### 3.8 **IP-12 HF Working Group Update (Airways NZ)**

Allan London, as Chair of the ISPACG SP6 HF Working Group, briefed the meeting on achievements and progress since ISPACG/22:

- 3.8.1 Introduced HF Hourly Area Prediction charts (HAP) for most South Pacific FIRs accessed via Australian IPS Radio and Space Services.
- 3.8.2 Expanded the HF frequency notification messaging system around the Pacific to better utilize the SP6 network.
- 3.8.3 Developed a new Memorandum of Understanding (MOU) between all HF ground stations which includes Key Performance Indicators (KPIs) for service delivery times between a ground facility and an ATC unit or aircraft. Ground stations will be required to sample their turn around time to ensure they meet their performance indicator.
- 3.8.4 Developed a “follow up” survey of the SP6 network which will ask airlines to rate the various categories of service delivery overall.
- 3.8.5 **WP-09 High Frequency Management Guidance Document (Airways NZ)**  
The South Pacific High Frequency Management Guidance document is based on similar material available in the North Atlantic, adopted by ICAO. It was produced in conjunction with representatives from the 5 South Pacific ground facilities and is designed to be the reference source of information regarding the High Frequency network in the South Pacific. While intended as a regional supplement, the document ultimately should be combined with the existing NAT / ICAO HF guidance material to become a global document.

The meeting was asked to read WP-09 Attachment and to report any comments to Allan London before Friday 3 April. If no comments are received the Co-chairs will take that as agreement by the meeting, whereby David Maynard will present the document to the ICAO Regional Office for consideration as APANPIRG regional guidance material.

On behalf of SP6 HF WG Allan London extended an invitation to DGAC to join the working group. DGAC accepted.

Geoff deBazin took this opportunity to thank the WG for the work they have done, adding that the HF Management Guidance Document is accurate, comprehensive, and excellent work.

### 3.9 **Report on FIT/16**

Brad Cornell, FIT Chair, gave a summary of FIT/16 which took place in Santiago 24-25 March 2009.

#### 3.9.1 Feedback

Operators showed increased support in efficiencies gained by using DARP and UPR, however they stressed the need to continue removing roadblocks that inhibit the full time use of DARP, UPR and Tailored Arrivals. ANSPs still have concern in the overall SATCOM system availability and FIT recommends that ISPACG continue to work in conjunction with other industry stakeholders to resolve this issue. Datalink Services Providers (DSPs) have been working together to improve overall SATCOM system latency but are aware that the FIT still see much room for improvement from DSPs in this area.

#### 3.9.2 Problem Reports

The issue of processing route clearance uplinks by A380 aircraft was addressed by way of sidebar discussion. The outcome was that Airbus and selected ANSPs will undertake further testing between test bench facilities and selected ANSPs with the aim to validating crew procedures to all A380 operators until a final software fix is available.

#### 3.9.3 Progress Toward the GOLD Standard

Extensive work by the FAA in leading the transition to GOLD was recognised and it is anticipated that the transition will be complete by the end of the year. The meeting is encouraged to view the document and forward any suggestions or additions to Tom Kraft, CSTA for Aeronautical Communications, FAA, as soon as possible.

#### 3.9.4 ANSP System Performance Monitoring

A big accolade goes to Airways NZ, in particular Paul Radford, for the comprehensive work undertaken on new monitoring requirements which have shown that with correct monitoring we can progress with problem solving, e.g. a fix is now being finalised for B777 VHF transition issues.

#### 3.9.5 INMARSAT SATCOM System Performance

Although the SATCOM Improvement Team (SIT) have accomplished much and performance improvements are being realised, SATCOM system availability continues to be a serious issue.

### 3.9.6 IRIDIUM

Both ARINC and SITA have launched ACARS-over-Iridium commercial services, with operators equipping aircraft with Iridium systems. FANS-over-Iridium trials begin in the Pacific this summer (Oakland, Japanese and Australian airspace).

### 3.9.7 CRA Problem Report Database

Airways NZ have offered to host a FANS-1/A problem report database on a free of charge basis to assist South Pacific States and possibly other regions using FANS to identify, track and capture the work completed on the resolution of individual problem reports. The new GOLD document and performance data will also be hosted on the server. The meeting accepted Airways NZs offer.

### 3.9.8 SATCOM VOICE

In general there is support in approving SATCOM VOICE equivalent to HF for routine communications. However the group recognised there is work to be done to develop minimum operational requirements for both ground and airborne systems as well as standard operating procedures. ISPACGs HF Working Group is encouraged to work together with the FAA sponsored Communication Working Group to progress these issues.

Geoff deBazin thanked Brad Cornell for his work with FIT and noted that there was still a considerable amount of work being done by the group. For FIT/16 Minutes and Action Item List refer to <http://www.airways.co.nz/ispacg/ispacg23/fit16.asp>.

### 3.10 **WP-16 FMC Waypoint Position Reporting Trial - Brisbane FIR (ASA)**

A pre-operational FMC WPR trial is being conducted by ANZ A320 aircraft in Brisbane Oceanic airspace. It is anticipated that an operational trial will be conducted prior to Q3 2009. The meeting was asked to note the results and associated Guidance Material included in WP-16.

### 3.11 **FANS-/1A Environment Document (Airways NZ)**

Discussed at the PT6. Paul Radford is still looking for feedback on this document.

### 3.12 **IP-09 Variations in Airspeed in Controlled Airspace (FAA)**

Christine Falk, Operations Research Analyst, presented a paper outlining proposed wording changes to ICAO Annex 2, Chapter 3, Section 3.6.2 “Adherence to flight plan”, noting that this is the only reference in ICAO documentation that relates to speed variation for a particular flight that hasn’t been assigned a cruise Mach number.

It was at SASP-WG/WHL/14 that the rewording was proposed, however concerns from the IFALPA representative saw the meeting agree to hold off on advancing the proposal until a US member had the opportunity to discuss the issues with the representative from IFALPA. Further discussion will take place at SASP-WG/WHL/15.

Discussion by the ISPACG/23 members also raised various concerns, with Geoff deBazin asking Christine Falk and Len Wicks to take these back to SASP so as to clarify what benchmark we start with, as well as Mach number/speed variation allowed, before ATC are required to be notified. He also added that separations will continue to reduce so we need to be looking well ahead.

Action Item: Christine Falk (FAA) and Len Wicks (CAA NZ)

**3.13 WP-04 Rev1 Update On Activities Of The Asia And South Pacific Initiative To Reduce Emissions (ASPIRE) (FAA)**

Kevin Chamness updated the meeting on the progression of the ASPIRE Partnership, gave an overview of the ASPIRE Strategic Plan and ASPIRE Work Programme “A”, and advised that the 1<sup>st</sup> ASPIRE Annual Report will be published in the 2<sup>nd</sup> quarter 2009. He added that the current ASPIRE partners are considering expansion of the partnership in 2009, noting that expansion would be carefully managed to ensure ASPIREs continued success and would focus on adding key strategic partners that would promote best practices for the environment and take a leadership role in development of new technologies and procedures. He invited the meeting to visit [www.aspire-green.com](http://www.aspire-green.com)

Capt. Brian Gallo, LAN Chile, informed the meeting that DGAC and LAN had undertaken their own type of ASPIRE flight, Concepcion/Santiago return, in August 2008. He invited the meeting to visit [http://algarrobo.dgac.cl/noticias/ver\\_noticia.asp?id=21-8-2008-562](http://algarrobo.dgac.cl/noticias/ver_noticia.asp?id=21-8-2008-562).

Geoff deBazin congratulated DGAC and LAN, adding that it is nice to hear that the ASPIRE principles are spreading beyond the South Pacific.

**3.14 WP-11 Rev1 RVSM Monitoring By Airservices Australia (ASA)**

Adam Watkin informed the meeting of software ASA has introduced to monitor flight plans as they are received: comparing Australian registered aircraft flight planning RVSM approval against the CASA RVSM approval database. A recent enhancement to this software now also allows the cross-checking of the RVSM status of flight plans received for foreign registered aircraft. He added that in addition to providing sample flight plan to Regional Monitoring Authorities, nothing precludes a State from implementing additional checking of the flight planned RVSM status. He invited other ANSPs consider instituting similar checks.

**3.15 IP-05 Advanced Technologies And Oceanic Procedures Technical Refresh Program (FAA)**

Dennis Addison briefed the meeting on ATOP Tech Refresh which involves the upgrade/replacement of hardware associated with the Ocean21 system:

- Oakland Center 05 May 2009 – 29 June 2009
- New York Center 01 July 2009 – 26 August 2009
- Anchorage Center 28 August 2009 – 04 November 2009

Service interruptions during installation are not expected, however should this change NOTAM and/or impact statements will be forwarded to operators and surrounding facilities.

#### 4. Review Open Action Items

The meeting reviewed the ISPACG/22 Open Action Items. Refer Appendix A for details of the current 'Status' and 'Actions Pending'.

##### AI 16-4 ATM Contingency Plans

Reference: No papers presented

Discussion: Geoff deBazin (Airways NZ) informed the meeting that the Airways NZ OCS Simulator is now located in a separate fire zone and can be used operationally should contingency plans need to be initiated quickly. This is also available for domestic coverage.

Shadendra Sharma (AFL) said apart from a State to State agreement (i.e. Auckland Centre being the backup for Fiji) AFL will be enhancing its internal contingency capability by having in place a Business Continuity System located approximately 250m away and having its flight data processors updated online via an optic fibre network. This will be in place with the new ATM system.

Len Wicks (CAA NZ) asked if any inter state contingencies had been put in place. Geoff deBazin informed him that: for Auckland/Brisbane it was unrealistic due to timeframes needed to transfer huge amounts of information; NZ does cover Fiji and Tahiti for foreseeable outages such as cyclones, but again the timeframe required to arrange coverage is an issue.

##### AI 16-6 Review Need for Regional Implementation of 2nm Strategic Lateral Offset Procedures

Reference: IP-07: The Effect of Strategic Lateral Offset Procedures (SLOP) on Operations in Airspace with 30 NM Lateral and 30 NM Longitudinal Separation Standards in Place

Presented: Christine Falk (FAA)

Discussion: Gene Cameron (United) advised that SLOP statistics were kept in the North Atlantic and asked if the same was done for the Pacific? Geoff deBazin (Airways NZ) said they weren't, but would be interested to know how such statistics are gathered. Adam Watkin (ASA) advised that they could be measured by CPDLC for Boeing aircraft but not by Airbus which covers FANS aircraft.

**AI 16-8 Implementation of 30/30**

Reference: IP-02: Status of 30NM Lateral and 30NM Longitudinal (30/30). Separation in Oakland Oceanic Control Area (CTA)

Presented: Bob Tegeder, Aviation Safety Inspector (FAA)

Discussion: Bob Tegeder added that improvement has been seen in performance, particularly where ADS messages are being queued, however performance improvement is needed in VHF/SATCOM transition airspace. SITA and AIRINC are looking into this. VHF is being attempted much more often than it should. This is an area that needs to be addressed.

**AI 17-1a Implementation of 50nm Lateral Separation in RNP Airspace**

Reference: No papers presented

**AI 17-1b Implementation of 50nm Longitudinal Separation in RNP Airspace**

Reference: No papers presented

**AI 17-2 UPRs**

Reference: WP-07: User Preferred Route (UPR) Implementation Updates

Presented: Dennis Addison (FAA)

Discussion: Geoff deBazin complimented the group on the excellent progress being made and the speed in which use of UPRs are expanding in the region.

Reference: WP-12: User Preferred Routes for Non Data Link Equipped Aircraft

Presented: Adam Watkin (ASA)

Discussion: Geoff deBazin acknowledged the ongoing commitment from ASA to assist its customers by extending UPRs to non DL aircraft in Oceanic Airspace east of Australia.

**AI 17-5 ADS-B Implementation**

Reference: WP-02: Summary Of The Investigation Into The Use Of Automatic Dependent Surveillance-Broadcast Data For Monitoring Aircraft Altimetry System Error

Presented: Christine Falk (FAA)

Reference: WP-18: Australian ADS-B Update

Presented: Adam Watkin (ASA)

Discussion: In his paper Adam Watkin reminded the meeting that incorrect entry of flight identification by an Air Transport Operator is a reportable event – an ATC is required to raise a Safety Incident Report. He also asked the meeting to note the various .www links contained within WP-02.

Reference: IP-03: Status Of The Development And Implementation Of ADS-B In-Trail Procedures

Presented: Kevin Chamness (FAA)

Discussion: Chris Dalton (ICAO) asked how flight crew would identify and reference 3 letter designators. Kevin undertook to ascertain an answer and respond to Chris.

Reference: IP-11: Automatic Dependent Surveillance - Broadcast (ADS-B) Program Status

Presented: David Burkholder, Manager Asia Pacific (FAA)

Discussion: Adam Watkin (ASA) asked what stance the FAA has taken on controller licensing. David undertook to follow this up and report back.  
Gene Cameron (United) asked when it was envisaged that operators would need to be equipped. David responded, by the end of 2010 for ADS-B in US airspace.

**AI 17-11 AIDC**

Reference: WP-03: AIDC Route Truncation

Presented: Dennis Addison (FAA)

Discussion: Chris Dalton (ICAO) complimented Dennis Addison on his work and supported his call for the group to work together with ICAO to avoid the creation of additional duplicate navigation points and to eliminate the most commonly used duplicated names that cause the need for AIDC Truncated Routes.

Reference: WP-13 Rev1: AIDC Truncation Issues

Presented: Adam Watkin (ASA)

Discussion: Geoff deBazin acknowledged that there are issues with AIDC truncation and advised that the Planning Team had been tasked with investigating error rates in truncating flight plans.

**AI 17-12 Terminal Procedures**

Reference: WP-14: Tailored Arrivals Examination of Aircraft Derived Data

Presented: Adam Watkin (ASA)

Discussion: David Oliver, GM Flight Technical, Qantas advised that 747 data collection was excluded from the trials due to inaccuracies. Brad Cornell added that unless a retrofit of the 747 occurred, which is doubtful, this would not change.

Reference: IP-10: Tailored Arrivals

Presented: Dennis Addison (FAA)

Discussion: Yasunobu Funai (Manager Route Planning Flight Operations, Japan Airlines) and Mark Shepherd (CNS/ATM Specialist, Air NZ) thanked FAA, Boeing and NASA for their work with TAs, both acknowledging the benefits and savings achieved.  
Paul Radford (Airways NZ) asked if any problems had occurred when constructing uplinks by cutting and pasting routes. Dennis advised that changes were rarely made and when necessary quick option buttons which auto load were used.  
Jose Carrasco (DGAC) enquired whether TA affected other traffic. Dennis advised that TAs were not given any preference over other traffic - if they fit in they are allowed to continue.



Reference: IP-21: Vision 2015  
Presented: Geoff deBazin (Airways NZ)  
Discussion: Geoff deBazin would welcome feedback on IP-21 which is a planning document, adding that Vision 2015 is a 'whole of system' approach based on the philosophy of Air Traffic Enabling (ATE) i.e. tactical and strategic approach compatible with global practices and ICAO Standards, and covers exception management. It is also consistent with the near to medium term objectives of SESAR and NextGen programmes.

**AI 19-1 Flight Plan Issues**

Reference: WP-10 Rev1: The Impact On AIDC Of Changing The A388 Wake Turbulence Indicator To "J" In Field 9 Of The ICAO FPL  
Presented: Paul Radford (Airways NZ)  
Discussion: Paul reiterated that his concern was not so much with modifying Airways ground systems to accept the use of "H" or "J" in any filed A388 FPL, but a case of wanting to avoid causing the failure of AIDC messaging because an adjacent ANSP is unable to accept the new designator. He added that ANSPs will have to be able to handle both formats in the new ICAO Flight Plan and asked the floor what ISPACG is able/expected to do regarding this issue. Len Wicks (CAA NZ) asked when AIDC will be updated to accept "J" to which David Maynard advised that implementation can be done at any time providing it is completed before the 2012 ICAO Flight Plan is issued. David Maynard (FAA) assured the meeting that he would take the lead on this at the Asia Pacific Regional Office meetings and hopes that a global plan will help narrow down some of the issues.

Reference: WP-15: A388 Flight Planning Issues ("J" vs "H")  
Presented: Adam Watkin (ASA)  
Discussion: Adam advised that ASA support the Airways NZ proposal outlined in WP-10 and encouraged the group to discuss issues and planned software implementation associated with the "J" wake turbulence category.

Reference: WP-19 Rev1: Changes to the ICAO Flight Plan – 2012  
Presented: Gene Cameron (Manager Global Support, United) for IATA  
Discussion: Paper presented on behalf of Geoff Hounsell, IATA. Comments can be given to either Gene Cameron, or forwarded to Geoff Hounsell. The question was asked what the difference between an ICAO Standard vs. ICAO Recommendation is. Len Wicks (CAA NZ) advised that Standards are evident by the use of 'shall', whereas Recommendations normally use 'may', 'should', or are written as a note.

Reference: IP-01: Optimum Flight Level Profile Flight Plans  
Presented: Gene Cameron (United) for IATA  
Discussion: ANSPs asked to be aware that request for descent might not be associated with weather, but to take advantage of wind conditions. Graham Rennie (Manager Flight Dispatch - Operational Policy, Qantas) said the introduction of DARP may change this, but to what extent he is unsure.

David Maynard (FAA) suggested that it may be worthwhile for airlines to let ANSPs know when they are going to implement DARP.

**AI 19-3 Letter of Agreement**

Discussion: LOA updated and signed by all signatories with the exception of CAA PNG.

**AI 20-1 Civil Military Co-ordination**

Reference: Standing Action Item. No papers presented

Discussion: Len Wicks (CAA NZ) informed the meeting that co-ordination of space re-entry remains an issue, in part due to the different methods of communication used by various States. There appears to be no set procedure for this line of communication, which must surely affect airlines as well as ANSPs - some more than others. He suggested that maybe through the FAA we could negotiate with NASA to have a co-ordinated approach to the issue of such advice.

David Maynard (FAA) agreed and said he would be happy to talk to the Central Altitude Reservation Function (CARF) to see if they could help.

**AI 20-2 Review of ATS Routes**

Reference: IP-06: Central East Pacific (CEP) Flexible Track Trials

Presented: Dennis Addison (FAA)

Reference: IP-08: Realignment of ATS Routes in the Vicinity of Hawaii and Adjustment of the Honolulu Control Facility Boundary

Presented: Dennis Addison (FAA)

**AI 20-3 Resolve Oakland Problems with AFN Logon**

Discussion: RFC ASA08/01 requesting an update of the logon procedures described in the FOM has been actioned. Item Closed

**AI 20-5 Address Problems with SATCOM**

Reference: WP-21: Document The Use Of SATCOM VOICE In ICAO Regional Supplements

Presented: Allan London, Oceanic Customer Specialist (Airways NZ)

Discussion: Much discussion from Operators surrounded SATCOM VOICE standardisation e.g. the issue of security, caller identification and crew response. Chris Dalton (ICAO) advised the meeting that this is a global not regional issue. A number of ICAO documents need to be amended regarding this subject. Annex 10 Vol2 looks at Air Ground Communication on HF and Related Versions to SELCAL and has guidance on how to move forward on the subject. ICAO holds supplement amendments until they read the same, providing they follow the same recommendations. He would like to see the Oplink panel work on this subject as soon as possible.

David Maynard said that clearly no resolution could be attained at the meeting and asked that the Planning Team work with ANSPs and Operators on a consolidated position, harmonise with the NAT and maybe also work with Chris Dalton since ICAO view this as a global issue. Chris Dalton (ICAO) also suggested including States that have English as 2<sup>nd</sup> language e.g. Japan/Chile in the dialogue as they will want to use the same phrase. The Planning Team is to include this in their Action Plan also.

Reference: IP-13: SATCOM Approval For Long Range Communications (SLRC)  
Presented: Brad Cornell (Boeing)  
Discussion: The meeting was asked to note that the use of SATCOM VOICE Communication should not erode the benefits that have been gained by CPDLC. It should merely be another tool for operators and flight crews to use to increase communications capability in service, and benefit operators. Brad Cornell also added that the three groups involved with this project are well aligned and working closely together. He is confident that this can be progressed with relative ease.

David Oliver (Qantas) commented that the benefits in weight reduction savings are fine but still need 2 communications systems to dispatch, adding that HF and SATCOM VOICE need very good reliability to be maintained. Brad acknowledged this.

Reference: IP-20: ISPACG/23  
Presented: Gene Cameron (United) for IATA  
Discussion: IATA recognises the work of ISPACG, one of the most pro-active forums, who without bias continuously look at the affects/benefits on everyone involved in the aviation industry. IATA fully supports the development of GOLD and efforts to resolve Satellite Datalink Communications in the region. They will continue to support the efforts of ISPACG and hope to be able to attend ISPACG/24.  
David Maynard (Co-Chair) expressed his disappointment at IATAs non attendance but did appreciate the positive feedback given in IP-20.

**AI 21-1 10 Minute Longitudinal Separation without Mandatory MNT**

Reference: No papers presented  
Discussion: No comments received. Retain AI 21-1 as an Open Action Item.

**AI 21-2 ADS-C In Trail Procedure**

Reference: IP-04: Status of the Development and Implementation ADS-C In-Trail Procedures  
Presented: Dennis Addison (FAA)  
Discussion: David Maynard (FAA) informed the meeting the value identified with this work has prompted the FAA revisit the business case for the Atlantic. Adam Watkin (ASA) asked if RNP4 was a specific requirement. Dennis advised that for a safety case yes RNP4 was, and 44degrees or less for tracks however the routes don't have to intersect.

**AI 21-3      DARP Expansion**

Reference:      WP-08: DARP Trial In Tahiti

Presented:      Eric Lieutaud (SEAC-PF)

Discussion:      ASA noticed difficulties with DARP implementation in the EUROCAT system which SEAC-PF will take into consideration and report back to ISPACG. Mark Shepherd advised that Air NZ would be happy to help with DARP trials in Tahiti.

Reference:      WP-05: Report On DARP Expansion

Presented:      Dennis Addison (FAA)

Discussion:      Dennis added that in 2006 Operators were asked for a priority work plan. Their 1<sup>st</sup> priority was SATCOM performance; their 2<sup>nd</sup> DARP. He said it is now time to work together to remove constraints.

Graham Rennie (Qantas) wanted to thank ANSPs for the excellent work they have done on DARP and advised that Qantas would commence routine DARP as of Q3 2009. That is single, not multiple DARP, on flights originating in Oakland. He anticipated that this would increase once Fiji was on line.

Gene Cameron (United) also thanked ANSPs for their support. United hope to evaluate DARP on multiple flights by the end of summer and he hopes that constraints as they are now are reduced so that savings can be made from more than just a north bound, east bound procedure.

David Maynard (FAA) noted that this had been one area where the ANSPs had got on board a project ahead of the airlines, which was not normally the case.

Reference:      WP-20: DARP Procedures

Presented:      Paul Radford (Airways NZ)

Discussion:      Adam Watkin (ASA) has sent Paul Radford one formatting amendment. ISPACG endorsed DARP Procedure be submitted for inclusion into Draft GOLD document.

**AI-21-4      User Feedback**

Reference:      ISPACG/PT6

Discussion:      No further discussion held.

**AI-21-5      Sharing of Operational Data**

Reference:      ISPACG/PT6

Discussion:      No further discussion held.

**AI 21-6      Wind and Trajectory Modelling**

Reference:      ISPACG/PT6

Discussion:      No further discussion held.

## 5. Identify Future Work Programmes

- 5.1 AI 16-2 Review & Update Capacity Enhancement Table  
Reference: WP-17: Update to Capacity Enhancements Table  
Presented: Adam Watkin (ASA)  
Discussion: ASA provided an updated Capacity Enhancements Table which the meeting agreed to update outside this forum and make available as Appendix B.
- 5.2 Other Future Work Programmes  
Reference: Space Debris  
Presented: Capt. Brian Gallo (LAN Chile)  
Discussion: Following on from discussions at ISPACG/22 regarding the issue of NOTAMs for Space Debris, Brian Gallo alerted the meeting to a number of recent instances where such NOTAMs have not been issued via the correct channels, or with the required notice being given. Sometimes NOTAMs are being issued late and becoming active 3 hours ahead of a scheduled departure, with a 6-8 day period of NOTAM advice for the return debris which means scheduled flights are having to re-route. An instance in February 2009 saw the complete route of one flight affected. He also alerted the meeting to a NOTAM that India has sent LAN, but not published, which states Zones 1-5 as danger zones with indeterminate periods. LAN wished to advise the meeting of this as it could also affect Air NZ, Qantas and other flights. They also requested assistance from the meeting to try and resolve growing compliance concerns regarding Space Debris.

David Maynard echoed LAN Chile's concerns stating that this is not just a concern in the Pacific, it had global impact and safety is a potential risk. He suggested that ISPACG raise their concerns directly with ICAO in Montreal, Lima and Bangkok, requesting a global forum to open discussions on the matter.

Len Wicks said he was unsure ICAO could help as they are 'civil' aviation, stating that the problem is the belligerence of military authorities. They are not concerned with long lead times, sending messages by fax, as if email doesn't exist. Messages then need interpreting, co-ordinating and checking, which all hampers timeliness which is not acceptable! He felt that the highest levels of each State need to address the authorities with these concerns.

Chris Dalton asked the meeting if there was any one State where a NOTAM had been issued for a danger area in another FIR, to which SEAC responded yes. Chris said that in the instance of a missile being fired from India it could close the entire Indian Ocean leaving no alternative routes at all! With this in mind he feels that ICAO need to take this to the highest State level possible and urged any of the group in the first instance to immediately advise ICAO of their safety concerns.

He thanked LAN for raising this issue and said he would like to progress it via Annex 11 and co-ordination with the Montreal and Bangkok office. The following actions were requested:

- Chris Dalton, ICAO: progress co-ordination via Montreal and Bangkok ICAO offices.
- Len Wicks, CAANZ: set up a small contact group with Chile, NZ and Tahiti to harmonise concerns as one voice.
- Planning Team: add to Action Items and consolidate all ISPACG member responses.

5.3 How to Measure Success of Future Work  
No discussion.

**6. Review & Establish Terms of Reference for Working Groups and Task Forces**  
No new working groups or task forces have been created during the course of ISPACG/23. Terms of Reference for existing groups remain unchanged.

**7. Other Business**

7.1 Arrangements for ISPACG/24

On behalf of Airports Fiji Limited, Shadendra Sharma formally invited the group to convene in Nadi, Fiji for the 24<sup>th</sup> meeting of ISPACG.

David Maynard thanked Fiji for their kind offer and also expressed his appreciation that Fiji had allowed DGAC to step in and host ISPACG/23 this year, so as to coincide with Chile becoming a formal member of ISPACG. On behalf of ISPACG he accepted Fiji's invitation and asked if possible dates for late February/early March 2010 could be considered by Fiji.

7.2 Closing Remarks

David Maynard gave heartfelt thanks to DGAC and LAN Chile for their hospitality and the opportunity to visit Santiago - for many of the group it had been their 1<sup>st</sup> visit to Chile. He also thanked the meeting participants for their accomplishments throughout the year: the FIT allows us to progress technically and numerous problems have been resolved through this forum; and, for many years there was concern that ISPACG was languishing, however the advent of the Planning Team has made huge in-roads into the effectiveness of the Group and work is progressing between meetings.

It is hoped that next year IATA will attend the meeting, while JCAB were thanked their attendance and for recognising the work that the Group does. ICAO's representation by Chris Dalton from the Montreal office, in the absence of Andrew Tiede from the Regional office, was also greatly appreciated.

However David's final words of thanks and recognition went to Geoff deBazin upon his retirement from ISPACG. "It has been a great pleasure to work with you. You will be sorely missed and we will endeavor to make you proud of us and the work we achieve."

Geoff deBazin reiterated his Co-chair's thanks to DGAC, LAN Chile and ICAO, and thanked everyone for their kind words, support and assistance over the years. He wished everyone a safe journey home and many more successful meetings to come in the future. He also took the opportunity to advise the meeting that Blair Cowles, Oceanic Operations Manager (Designate), would be taking over the role as Airways NZ ISPACG Co-chair next year.

In response Blair acknowledged that with Geoff's retirement he had huge shoes to fill however he had very capable people around him in Airways, Auckland and here at ISPACG. He looked forward to saying "Bula" to everyone, including the man from IATA, at next years meeting.

**Appendices:**

- A Open Action Items
- B Capacity Enhancement Table
- C Participant List