

**Summary of Discussions
Forty-fourth Meeting of the
Informal Pacific Air Traffic Control Coordinating Group
(IPACG/44)**

August 22 & 23, 2018
Honolulu, Hawaii

1.0 Background

1.1 The Forty-fourth Meeting of the Informal Pacific Air Traffic Control Coordinating Group (IPACG/44) was held at the Ala Moana Hotel in Honolulu, Hawaii, on Wednesday, September 22, and Thursday, September 23, 2018. The IPACG was established to provide a forum for air traffic service providers and airspace users to informally meet and explore solutions to near term air traffic control (ATC) problems that limit capacity or efficiency within the Anchorage, Oakland, and Fukuoka Flight Information Regions (FIR).

2.0 Welcome and Opening Remarks

2.1 The meeting was co-chaired by Ms. Coleen Hawrysko, Manager, Oceanic & Offshore Operations Group, Federal Aviation Administration (FAA), and Mr. Toshiya Shigenobu, Special Assistant to the Director, Air Traffic Control Division, Air Navigation Service Department, Japan Civil Aviation Bureau (JCAB).

2.2 The 30th Anniversary of IPACG began with a recognition ceremony including congratulatory messages from FAA Air Traffic Organization Chief Operating Officer Teri Bristol and JCAB Director General Yasuhiro Iijima. Ms. Hawrysko welcomed the meeting participants to Honolulu and hoped that they would enjoy their stay in Hawaii. Mr. Shigenobu said it was a pleasure to visit Hawaii, and that he was looking forward to a productive IPACG meeting. He noted that this was his first time co-chairing the meeting and thanked the FAA for the warm welcome and the opportunity to celebrate the 30th Anniversary of IPACG.

2.3 All IPACG/44 attendees introduced themselves to the meeting, including the meeting interpreter, Ms. Reiko Kurachi.

3.0 Submitted Papers

3.1 The following working and information papers were presented to IPACG/44 and were available on the IPACG website and shared among the meeting participants:

http://www.faa.gov/about/office_org/headquarters_offices/ato/service_units/systemops/ato_intl/ipacg/

Paper Number	Agenda Item	Title	Presented by
IP01	2	PARC CWG	FAA
PPT01	2	OPDLWG	FAA
IP02	2	APANPIRG ATM SG	FAA
PPT02	2	ICAO VOLKAM	FAA
IP03	5	SATVOICE	FAA
IP04	5	Datalink Equipage in the Oakland and Anchorage Flight Information Regions	FAA
IP05	5	The Analysis of PBCS Implementation	JCAB
PPT03	5	PBCS Post Implementation	FAA
IP06	5	The Network Outage Detection and Reporting (NODAR) Project Team	FAA
IP07	5	UPR and PBCS Readiness Survey	IATA
PPT06	5	INMARSAT Update	INMARSAT
IP08	5	High Altitude UPR	FAA
IP09	5	Strategic Lateral Offset Procedure (SLOP)	FAA
IP13	6	A Study on the Influence of Weather Prediction Error upon DARP Operational Benefits Evaluation	ENRI
IP10	6	Discussion on the Use of Variable Mach in the North Atlantic Region	FAA
PPT04	6	Unannounced Speed Changes	FAA
IP11	6	Monitoring Agency Activity in North Pacific Airspace	FAA
IP12	6	Rocket Activity	JCAB
PPT05	6	Commercial Space Activity	FAA

Wednesday, September 22, 2018

4.0 Agenda Item 1: Review and Approve Agenda

4.1 Ms. Hawrysko drew the meeting's attention to the agenda and timetable for the IPACG/44 meeting. The following agenda was proposed and adopted by the meeting:

Agenda Item 1	Review and Approve Plenary Agenda
Agenda Item 2	Reports on Relevant Outcomes from Other Meetings
Agenda Item 3	Report on the Outcome of the Providers Meeting (PM22)
Agenda Item 4	Report on the Outcome of the FANS Inter-operability Team Meeting (FIT31)
Agenda Item 5	Communications/Navigation/Surveillance (CNS) Issues
Agenda Item 6	Air Traffic Management (ATM) Issues
Agenda Item 7	Review and Update of CNS/ATM Planning Chart
Agenda Item 8	Action Item Review
Agenda Item 9	Other Business

5.0 Agenda Item 2: Reports on Relevant Outcomes from Other Meetings

5.1 IP01 Highlights from The Performance-based Operations Aviation Rulemaking Committee Communications Working Group (PARC CWG) (FAA)

Ms. Theresa Brewer of FAA provided the presentation which included relevant outcomes and discussion points from the 39th meeting of the PARC CWG held in Austin, Texas, United States, from February 7-8, 2018. Ms. Brewer reviewed the items of most interest to IPACG in the working group's project workbook. She invited the meeting co-chair, Mr. Mike Matyas of Boeing, to provide input as well. Mr. Matyas thanked JCAB for their participation at the PARC CWG, especially in light of the effort required to fly to the U.S. Mr. Matyas mentioned that the project workbook was not up to date at this time, however he welcomed Ms. Brewer's paper summarizing the activities.

5.2 PPT01 Outcomes from Operational Data Link Working Group (OPDLWG) (FAA)

Ms. Theresa Brewer of FAA provided a presentation on the OPDLWG meeting held May 7-11, 2018, in Reykjavik, Iceland. Ms. Brewer provided an overview of the OPDLWG which undertakes specific studies and develops technical and operational ICAO provisions for ATM voice and data communications systems, supporting procedures and their applications. Ms. Brewer then provided updates from the Global Operational Data Link (GOLD) Project Team which maintains ICAO Doc 10037, GOLD Manual. She also delivered updates from the Performance-based Communication and Surveillance (PBCS) Project Team which maintains ICAO Doc 9869, PBCS Manual. The briefing included updates from the Global documentation for ATS Inter-facility Data Communication (AIDC), Long Range Voice Communication Implementation Strategy, and ICAO Inter-panel

coordination. Ms. Hawrysko inquired if Ms. Brewer would expand on the Civil air Navigation Services Organisation's (CANSO) role in the group, and if they brought a recommendation. Ms. Brewer responded that there is a concern that CANSO's efforts are not in coordination with the OPDLWG, which could result in inconsistencies between their document and the GOLD. There is hope that through coordination, the OPDLWG can incorporate the CANSO document into GOLD. Ms. Brewer relayed that the CANSO document addressed new air navigation service providers (ANSP) to Datalink, and that CANSO does desire to collaborate in order to ensure consistency.

5.3 PPT02 ICAO VOLKAM (FAA)

Mr. Dustin Byerly provided an overview of the recent VOLKAM planning meeting in Magadan, Russia. Mr. Byerly shared that the VOLKAM exercise will occur April 18-19, 2019. Three states including Japan, the Russian Federation, and the United States will participate in this exercise, in addition to some airline operators, Volcanic Ash Advisory Centres (VAACs), Meteorological Watch Offices (MWOs) and Volcano Observatories (VOs). Mr. Byerly shared that the exercise will include two volcanos. The Opala Eruption will include an ash plume to FL450 moving SE at 400 km/hr to impact Trans-East, North Pacific (NOPAC) and Pacific Organized Track System (PACOTS) routes. The Ushkovsky eruption will include an ash plume to FL250 moving NW at 250km/hr to impact Trans-East routes. Mr. Byerly stated that the objective of the exercise is to demonstrate tactical re-routes using methods including a Dynamic Airborne Reroute Procedure (DARP)-like test using Controller Pilot Data Link Communications (CPDLC). The exercise will also demonstrate divert into Petropavlovsk-Kamchatsky to test emergency procedures. Other objectives include the demonstration of air traffic flow management (ATFM) measures in certain sectors of Magadan and Anchorage FIRs, VAAC Tokyo/VAAC Anchorage/VAAC Washington handover procedures, transmission of Air-Reports on volcanic ash in accordance with ICAO Annex 3 using CPDLC, Very High Frequency (VHF) and High Frequency (HF), and information sharing via teleconferences and website. Ms. Makoto Ishida of JCAB said that during the previous exercise, the telecommunications system did not work well, and that JCAB's Air Traffic Management Centre (ATMC) is currently working to improve the coordination and contingency planning in preparation for the exercise. Mr. Byerly informed the session that they are looking for more participation from airlines in the planning and in the data exercise as well. A Delta Airlines representative indicated that they will participate.

6.0 Agenda Item 3: Report on Outcomes from IPACG Providers Meeting 22

On behalf of JCAB and FAA, Ms. Hawrysko indicated that the Providers Meeting 22 held on September 20, 2018, was very productive. She provided the following summary of discussions from the meeting:

- FAA Briefing on Implementation of AIDC between Anchorage ARTCC and Magadan ACC
 - Anchorage ARTCC and Magadan ACC share a common Flight Information Region (FIR) boundary.
 - Anchorage and Magadan controllers complete coordination on trans-border flights between Asia and North America.
 - The coordination has been conducted manually via controller-to-controller voice telephone call.
 - Anchorage and Magadan have begun the move to automate the coordination.
 - In January 2018, Anchorage and Magadan began an AIDC trial that will continue until February 2019.

- FAA Briefing on Eliminating the FAA Requirement for a CPDLC Position Report at the Boundary
 - Oakland and Anchorage ARTCCs have implemented a “Welcome Message” uplinked to CPDLC aircraft shortly after the aircraft enters the FIR.
 - With the “Welcome Message”, the requirement for an ADS-C equipped aircraft to send a CPDLC boundary position report to confirm CDA is no longer required.
 - FAA plans to implement this on November 8.

- FAA Update on PBCS Post Implementation
 - The briefing provided FAA PBCS implementation updates as well as a post-implementation assessment including filing rates of RCP240/RSP180 by airspace and top data link operators, trends in altitude clearances, and trends in climb/descend procedure (CDP).

- JCAB Update on Performance-based Communication and Surveillance (PBCS)
 - The update from JCAB’s ATMC provided an analysis of PBCS filing percentage and approval rates by user.
 - Other measures highlighted included:
 - Altitude change requests after applying PBCS
 - Deviation requests after applying PBCS
 - Route changes relating to PBCS
 - ATMC’s measures against PBCS application

- A Graph Search-based Wind-Optimal Trajectory Generator to support NOPAC Realignment considerations (Presented by the Electronic Navigation Research Institute (ENRI))
 - To support airspace restructuring considerations in the North Pacific oceanic airspace, ENRI developed a proof of concept program analysing a method of generating optimal flight trajectories that take into account the effect of wind while reflecting operational constraints.
 - The briefing introduced the concept of the trajectory optimizer and presented the results of investigations to date which show promising results.

- NOPAC Realignment Joint Discussion
 - The FAA and JCAB recently met to discuss the realignment of the NOPAC Air Traffic Services (ATS) route system and the PACOTS.
 - The FAA and JCAB will continue to work together to begin the implementation of PBCS exclusive airspace on specific routes such as R220, A590, and Track C.

- FAA Briefing on an Oceanic Contingency Plan
 - The FAA proposed the development of a coordinated plan to implement procedures to enact in the event of a long-term facility outage.
 - This effort would be in alignment with ICAO contingency plan recommendations.
 - The FAA proposed a contingency route structure and requested JCAB review.
 - FAA will provide a more detailed outline of the plan at the next meeting.

- FAA Briefing on the Dynamic Ocean Track System Plus (DOTS +) PACOTS Track Generation
 - The FAA utilizes the DOTS+ system to generate westbound PACOTS Tracks.
 - IATA has requested that the FAA make two changes to their PACOTS generation procedures.
 - The requested changes by IATA are expected to provide a fuel savings to the operators that flight plan via the PACOTS tracks and do not take advantage of the User Preferred Route (UPR) procedures.
 - FAA has requested that JCAB consider the track generation for both westbound and eastbound tracks in order to provide greater efficiencies.
 - JCAB is considering the request and will assess the capabilities using their current Oceanic Track Generator (OTG) system.

- FAA Briefing on PACOTS Tracks J and K UPR Guidance
 - JCAB and the FAA have worked together to provide UPR guidance for 19 of 22 PACOTS routes. A PACOTS Track K UPR Trial began in May 2011.
 - PACOTS Track J remains one of the 3 PACOTS routes without a UPR

alternative.

- The FAA proposes to expand the existing Track K UPR Guidelines to include Track J.
- FAA provided a proposal for an operational UPR trial in conjunction with PACOTS Tracks J and K.
- JCAB has agreed to assess after migrating to their new Trajectorized Oceanic Traffic Data Processing System (TOPS) with requested restrictions.

Review and Update of Communications, Navigation and Surveillance (CNS)/ Air Traffic Management (ATM) Planning Chart

- FAA proposed changing 30 NM to 23 NM lateral.
- FAA proposed adding column 4 longitudinal as well.
- ICAO Separation and Airspace. Safety Panel (SASP) and Air Navigation Commission (ANC) are looking to adopt like standards.
- JCAB agreed to the proposal.

7.0 Agenda Item 4: Report on the Outcome of the FANS Inter-operability Team Meeting (FIT)

Mr. John Roman reported on the outcomes of the FIT/31 meeting held on Tuesday, September 21, 2018, that he co-chaired with Mr. Hiroyuki Wada of JCAB. Mr. Roman shared that seven papers were presented covering problem reports, PBCS and datalink issues. Mr. Roman also said that PBCS implementation led to large number of new issues being submitted including thirteen new problem reports. JCAB CRA received and processed 66 new problem reports during the past year. 71% of those were due to “Auto Transfer Failure.” Auto Transfer issues were also discussed in later papers. PBCS monitoring reports were presented, with overall compliance. Iridium performance showed improvement except for January through March, due to change in ground system that was corrected in March. The FAA also presented filtering data from PBCS communications, and datalink issues affecting facilities were discussed. The main issue again was Auto Transfer Failure.

Agenda Item 5: Communications/Navigation/Surveillance (CNS) Issues

8.0 IP03 SATVOICE (FAA)

Mr. John Wennes of the FAA provided an overview of the new guidance effective September 13, 2018, which will permit the use of Satellite Voice (SATVOICE) for all routine communications with New York and San Francisco Radio. Ms. Makoto Ishida of JCAB noted that Tokyo Radio in charge of Japanese oceanic airspace, does not have SATVOICE equipment. She noted that JCAB would like to see how many operators use SATVOICE with Oakland Center, and asked if FAA would provide the information including the number of airlines and the number of messages sent. Mr. Wennes agreed to share the information. Mr. Shigenobu added that JCAB only uses SATVOICE for emergencies, as Tokyo Radio does not have the SATVOICE equipment. He noted that their Oceanic ATC Data Processing

System (ODP) supports SATVOICE, but currently not TOPS. He stated that JCAB continues to discuss the need for SATVOICE.

8.1 IP05 The Analysis of PBCS Implementation (JCAB)

Ms. Makoto Ishida of JCAB provided a summary of the operational impact of PBCS implementation in the Fukuoka oceanic airspace. The presentation included the approval rate of PBCS, its impacts, and JCAB's ATMC measures within oceanic airspace. Ms. Ishida urged that each state emphasize the importance of PBCS approval and urged the airlines to obtain approval without delay. Mr. Blair Cowles of the International Air Transport Associations (IATA) thanked Ms. Ishida for the analysis and praised JCAB for their preparedness. Mr. Cowles shared that the majority of airlines are keen to obtain approvals and return the system to its previous efficiency. Mr. Cowles said that the majority of delays are due to the inability of some states to provide certification. In other cases, the airlines are waiting to demonstrate compliance. He added that, of the critical airlines, the majority are undergoing the process of obtaining PBCS approval. One of the manufacturers indicated the majority of airlines will be able to be certified by the 2nd quarter for 2019. Mr. Cowles stated that IATA will speak with the two largest cargo airlines in two weeks to obtain their update on the PBCS pathway. Mr. Cowles said that as far as IATA was aware, all key states have a certification process in place and hope to see increasing compliance, specifically in the critical NOPAC airspace.

8.2 PPT03 PBCS Post Implementation (FAA)

Ms. Theresa Brewer presented the FAA's PBCS Post Implementation status which provided an overview, approval rate update, and post-implementation assessments. Mr. Dustin Byerly of the FAA added that the FAA has seen an increase in PBCS approvals, and thanked Mr. Cowles for his efforts in contacting airlines that are not yet approved. Mr. Byerly mentioned that Oakland Center looks forward to the approval of the two largest cargo carriers which will improve the current situation. Mr. Cowles thanked Ms. Brewer for the comprehensive briefing, and shared that from IATA's perspective, slide 21 of the presentation is a positive story, demonstrating the value of the IPACG forum. Mr. Shigenobu of JCAB agreed with the importance of the slide graph, and said that the approval rate will improve moving forward. He then expressed his thanks to Oakland Center as well, and said that JCAB did not experience much of an impact due to Oakland Center's use of the Climb/Descend Procedure (CDP). Mr. Shigenobu shared that that JCAB's new TOPS system has a CDP function, and that they will conduct a round of confirmation testing after the TOPS migration. He confirmed that JCAB will work toward implementation of CDP in the Fukuoka FIR and will share their progress at the next plenary session.

8.3 IP06 The Network Outage Detection and Reporting (NODAR) Project Team (FAA)

Ms. Theresa Brewer provided the paper for the FAA which provided information concerning the recently formed Network Outage Detection and Reporting Project Team (NODAR PT). Ms. Brewer shared that in April 2018, the NODAR Project Team was established by the North Atlantic Technology and Interoperability Group (NAT TIG) to work collectively with the data link system stakeholders to improve the detection and reporting related to outages at the communication service provider (CSP) and satellite service provider (SSP) system levels. Mr. Blair Cowles of IATA recognized the concern expressed in paragraph 1.4 of the presentation. The section stated that, after thorough review of the information contained in the CSP outage reports and feedback obtained from FAA operations ATS regarding the timing, content, and format of the notifications, it is clear that the current level of detection and reporting is insufficient to support the PBCS environment going forward. Mr. Cowles asked if, aside from the formation of the project team, were there any other actions to be undertaken. Ms. Brewer responded that the team is streamlining the processes internally.

8.4 IP07 UPR and PBCS Readiness Survey (International Air Transport Association (IATA))

Mr. Blair Cowles of IATA provided a summary of the results of a survey taken by IATA to determine the UPR and PBCS readiness of airlines flying trans-Pacific routes in the NOPAC and PACOTS airspaces. Mr. Shigenobu added that FAA and JCAB discussed UPRs in the Providers Meeting, and noted that it is effective and meaningful to improve the ratio for airlines that can use UPR and PACOTS. He asked if IATA would include this report in future IPACG Meetings.

The question was posed about the limitation noted on the presentation graph. Mr. Cowles responded that some flight planning systems are very unfriendly for implementing UPRs, and he suspects some respondents may not know how to use all features of the system. He shared that IATA may develop a training course, especially for the mainland Chinese carriers. The representative from Delta noted that the survey was complex, and part of Delta's issue lies in their database which is built with certain connections. Delta's dispatchers are presented with a series of options, but the UPRs have to be built from scratch, so there is not always time to do so. The representative from United shared that UPRs are fully accepted at United, and that they support the capability. He noted that he does not think that there is a penalty associated with UPRs. There is a perception that some flight levels are unavailable for UPRs, but these are being addressed. Mr. Byerly of FAA responded that at one time, UPRs were not prioritized over PACOTS flights. Oakland Center has since updated the guidance to say that altitudes are first come, first served. The representative from American Airlines added that UPRs are very labor intensive for them to generate. Therefore, until they obtain a new flight planning system, American Airlines likely will not participate very much. The representative from ANA stated that their pilots and dispatchers are trained on UPRs, and that their flight plan is developed mostly manually. The ANA dispatchers are validating whether UPRs offer time or fuel savings. For dispatchers of North American flights, they

have only one person per shift, with one or two assistants. Therefore, if there is one irregular event, which takes some effort, the priority of developing or validating UPRs lowers. On days they conduct UPRs, they conduct them for most flights. However, on other days, they may not conduct them at all. He noted that if ANA can reduce 100 lbs or 1 minute, they are willing to use UPRs for almost all flights. Mr. Shigenobu thanked the airlines representatives for their thoughts and added that they want to continue discussing UPRs in PACOTS, in order to see improvements. The representative from United added that they must keep the cost of fuel in mind. Fuel costs have significantly increased over the last year, so anything they may save is well worth the effort. He thanked both JCAB and FAA for broadening the use of UPRs, as United believes it is the most efficient way to operate, in terms of both fuel and emissions.

8.5 PPT INMARSAT Update (INMARSAT)

Ms. Lisa Bee of INMARSAT provided an INMARSAT Classic Aero and FANS1/A Over SwiftBroadband Update. The presentation included an overview of the Classic Aero I3 to I4 transition, INMARSAT Air Traffic Services, SwiftBroadband Safety, and Enhanced SB-Safety (Airbus LCS program). Ms. Bee confirmed that INMARSAT will continue using I3 during the initial transition to the I4 network.

8.6 IP08 High Altitude UPR (JCAB)

Ms. Makoto Ishida of JCAB presented a paper on High Altitude UPR. She noted that IATA requested that JCAB add KALNA and EMRON to LEPKI, SEALS, MOREY, FORDO and TONIK as west-bound high altitude UPR gates. JCAB reported at the previous IPACG that they would expand them after the TOPS transition, around October 2018. In addition, Ms. Ishida noted that JCAB would like to suspend the trial of east-bound high altitude UPR scheduled in October this year until soon after TOPS transition is completed. The United Airlines representative referred to section 2.2 of the presentation, and asked if JCAB could add GURAG A590, referencing a flight from Singapore. Ms. Ishida agreed and said JCAB will assess the possibility. She stated that JCAB knows that this is being filed, but there are many restricted airspaces in this area. The United Airlines representative noted that they understand restricted areas have to be accounted for in UPRs. He added that United has a twice-daily Singapore to San Francisco flight that would be a candidate. Ms. Ishida responded that JCAB has different conditions for high-altitude UPRs and PACOTS. Although Notices to Airmen (NOTAM) are issued for restricted airspace, many aircraft file across restricted airspace. Therefore, controllers are performing reroutes, but JCAB is concerned about additional reroutes due to the start of the trial. Ms. Ishida agreed that JCAB will study the possibility. The United Airlines representative thanked her for the effort and requested flexible airspace due to new emerging city-pairs. Mr. Blair Cowles of IATA noted that UPRs in Anchorage westbound only has expanded to Anchorage, Oakland and Fukuoka, in both directions. He added that as more ultra-long range aircraft come into service, the availability of UPRs is appreciated to support new city-pairs.

8.7 IP09 Strategic Lateral Offset Procedure (SLOP) (FAA)

Mr. John Wennes of FAA provided a presentation on SLOP. The paper requested coordination in support of the North Atlantic (NAT) Math Working Group (MWG) for one specific U.S. operator to fly offset positions in increments of 1/10 of a NM to the right of the route centerline up to a maximum of 2 NM. The data obtained from these flights would support more robust implementation of SLOP, in increments of 1/10 of a NM. The specific request was to allow a single operator, the US Air Force (USAF), with a single aircraft type, the C-17 Globemaster, to fly SLOP in 0.1NM increments, up to a maximum of 2.0NM right of centreline, as published in ICAO Doc 4444. He noted that State Aeronautical Information Publications (AIP) in the NAT currently restrict SLOP to centreline, or right offsets of either 1NM or 2NM, so this authorization would be valid despite contrary language in the State AIPs. The C-17s flying 0.1NM offsets would be for a 1-year defined period, to begin as early as October 1, 2018, and could be terminated at any time if unexpected problems arise. The USAF would use an offset schedule associated with the Julian Date, coordinated with the NAT/MWG. Typical call sign for the USAF C-17s is "RCH." Mr. Wennes noted that there are approximately 220 C-17s in the USAF fleet, with frequent transatlantic crossings. The United Airlines representative noted that last November, Nav Canada asked if United or Air Canada could do 0.1nm SLOP as well as 1.5nm SLOP. The United 787 fleet advised that they could do 0.1nm SLOP, although the aircraft isn't programmed to do so. It would require programming, and crew training to do so, as well. Mr. Wennes responded that there were more aircraft capable of doing 0.1nm SLOP. Ms. Theresa Brewer of FAA added that the NAT Technology and Interoperability Group (TIG) is tracking manufacturer info on equipage related to this function. This trial is related to the support of data collection. She noted that the NAT MWG would need to identify these much smaller offsets, to update the collision risk model analysis. Mr. Shigenobu said that JCAB does not currently support this in their AIP and asked if SLOP would be expanded the NOPAC. Mr. Wennes answered that he did not know but he could see a request being made in the future in airspaces other than the NAT. A representative from ANA noted that SLOP was discussed at prior meetings, and that he believed that the SLOP in the ICAO Procedures for Navigation Services – Air Traffic Management (PANS-ATM) is different from the SLOP discussed in the paper. He then asked if PANS-ATM allowed operators to operate with 0.1nm deviation over the high seas. Mr. Wennes responded that the FAA is trying to share this information at the meeting to inform them of what is occurring in the NAT. Ms. Brewer added that it is an attempt to quantify the safety benefits of using smaller SLOP increments and that it is something to assess as equipage increases. Mr. Shigenobu added that in Japan, JCAB uses SLOP to avoid wake turbulence. JCAB has not studied this yet however, including the collision risk. He noted that JCAB would like to continue learning what is being done in the NAT and added that JCAB needs the AIP for smaller increments. He added that for equipage, they need regulator input. Mr. Wennes agreed to provide an update at the next meeting.

Thursday, September 23, 2018

9.0 Agenda Item 6: ATM Issues

9.1 IP13 A Study on the Influence of Weather Prediction Error upon DARP Operational Benefits Evaluation (ENRI)

Mr. Navinda Kithmal Wickramasinghe of the Electronic Navigation Research Institute (ENRI) provided a presentation on the Study on the Influence of Weather Prediction Error upon DARP Operational Benefits Evaluation. The paper provided a quantitative study on the weather prediction error and its influence on the evaluation of DARP operational benefits. Mr. Wickramasinghe shared that a series of Quick Access Recorder (QAR) data from DARP operated aircraft with corresponding flight plans were used to estimate the prediction discrepancies of wind and temperature by comparing with numerical weather prediction data acquired from the Global Spectral Model (GSM). The study further focused on the estimation discrepancies of fuel consumption due to these prediction errors. Mr. Wickramasinghe noted that the results of the study will be used to compare with the output from the ground-based system to investigate the impact of the difference in evaluation methods on performance estimation discrepancies. He added that enhancing the QAR database will provide further information on tendencies of weather prediction error (impact on different flight phases, impact due to seasonal changes etc.) and help improve the accuracy of the ENRI Aircraft Performance Model (EAPM). The study will also provide researching the possibilities on enhancing DARP operational benefits through dynamic 3D-rerouting (4D-TBO).

9.2 IP10 Discussion on Use of Variable Mach in the NAT (FAA)

Ms. Theresa Brewer of FAA provided a presentation on information concerning the North Atlantic Region's efforts to trial the use of the CPDLC phraseology RESUME NORMAL SPEED to allow for the use of variable Mach. Ms. Makoto Ishida of JCAB asked what speed it would be compared to, and Ms. Brewer responded that it would be compared to the requested Mach Speed. Mr. Dennis Addison of FAA mentioned that in section 2.3, Ms. Brewer discussed the requested speed. He asked if there is also a requested Mach speed, with a request to resume normal speed. Ms. Brewer responded that she assumed that it was what was listed in the flight plan, but would confirm. Mr. Addison replied that if NAT is defining what "resume normal speed" means, those in the Pacific need to be aware of any changes or impact. Ms. Hawrysko added that this is a challenge unique to the U.S. The NAT is very harmonized, and the Pacific is harmonized; but they aren't harmonized with each other. She noted that it is an ongoing struggle to try to balance both of the regions. Ms. Brewer responded in agreement and added that sharing the activities in each region would assist with harmonization. The representative from Adacel asked how the Mach speed variation affects the separation standard, especially if ATC is unaware. He added that Mach technique depends on Mach speeds of both aircraft, therefore if ATC is unaware of one of the Mach speeds, then it may pose a problem. Ms. Hawrysko responded that the next presentation on the agenda may answer his concerns.

9.3 PPT04 Unannounced Speed Changes (FAA)

Mr. Dustin Byerly of FAA provided an update on speed variation and the dangers of unannounced speed changes. He shared that the data Oakland Center compiled during the first ten days of every month indicated that aircrews were not fully complying with the procedure to notify ATC in the event of a speed change. Mr. Byerly said that Oakland Center will continue to work to raise pilot awareness and compliance with the procedure, and has included a friendly reminder in the Welcome Messages about notifying ATC of speed changes. Mr. Byerly added that Oakland Center hopes to see downward trend in the number of unannounced speed changes with the new reminder. He noted that if the numbers continue to show that aircrews are not complying, Oakland Center will work towards an automated solution for issuing pilot deviations and announce these efforts at the Oceanic Work Group (OWG) in January 2019. Ms. Makoto Ishida of JCAB asked if the speed to which Oakland Center compares is the filed speed in the flight plan. Mr. Byerly responded that they analyze Automatic Dependent Surveillance-Contract (ADS-C) data once the aircraft enters the FIR. The ADS-C speed at FIR entry is used as the baseline speed for the entire flight. Ms. Hawrysko asked the Adacel representative if the presentation answered his question on loss of separation. He responded that he thinks there will be a difference in separation standards, but did not believe a difference of 0.1Mach would make a difference. Mr. Byerly thanked Hawaiian Airlines for their efforts to reduce unannounced speed changes.

9.4 IP11 Monitoring Agency Activity in North Pacific Airspace (FAA)

Ms. Theresa Brewer of FAA provided the information paper which provided the meeting with a summary of relevant safety monitoring activities conducted for North Pacific airspace by two ICAO-endorsed monitoring agencies, the Japan Airspace Safety Monitoring Agency (JASMA) and Pacific Approvals Registry and Monitoring Organization (PARMO)). These organizations provide enroute monitoring agency (EMA) and regional monitoring agency (RMA) services for North Pacific Airspace. Ms. Makoto Ishida of JCAB noted that the JCAB subject matter expert was not present at the recent meeting but that they would like to continue to cooperate with the monitoring agencies. Ms. Hawrysko thanked Ms. Brewer for the presentation and emphasized the importance of reporting. She encouraged the pilots and ATCs to report, in order to mitigate issues before high-risk events occur.

9.4 IP12 Rocket Activity (JCAB)

Ms. Makoto Ishida of JCAB provided an overview of rocket activity in Japan. She noted that a rocket launch scheduled at the end of October to November from the Tanegashima Space Center in Japan will have a significant impact on the operations of civil aviation beyond their FIR. She shared that JCAB has obtained cooperation from the affected FIRs. Ms. Ishida noted that the mission of the rocket includes launching as well reentering the earth's atmosphere. Reentering affects operations over a wider area. The briefing included information on detouring routes when the H2B rocket (KOUNOTORI) reenters the earth's atmosphere. The representative from United Airlines inquired if there be an impact area NOTAM defined using

Latitude-Longitude format. Ms. Ishida responded that JCAB will indeed inform the impact area and detours by NOTAM separately. The United Airlines representative responded that the Latitude-Longitude of the impact area is greatly appreciated, as it provides an additional layer of protection for flight planning system and charts. Mr. Byerly noted that the exercise has the potential to have a very large impact and asked if JCAB knows the actual date when the mission might take place. Ms. Ishida responded that the mission has been delayed twice, but is now planned for mid-September. She added that the AIP supplement has been issued for that, and that re-entry is planned for end of October-November. Mr. Byerly responded that the Oakland Center International Office has been tasked with working the issues and sharing information with FAA controllers. Ms. Ishida referred to the proposed detouring route on page 3 of the information paper and asked if the routes were possible. Mr. Byerly confirmed. The ANA representative added that their operators will most likely use the detour when filing which will impact their Tokyo-Honolulu flight, for which they use Extended Twin Engine Operations (ETOPS) and WAKE and MIDWAY. Ms. Ishida responded that it will be better for ANA to use the detour. She noted that JCAB does not have the decision authority for re-entry. Once the mission starts, JCAB will not be able to issue a clearance, even in an emergency situation.

9.5 PPT05 Commercial Space (FAA)

Ms. Holly King of FAA provided a presentation of the FAA's commercial and military space operations and future outlook. The briefing included an overview of coordination processes, restrictions to airspace, system limitations, and the impact to Oakland operations. The United representative asked when the aircraft is considered too close to the restricted area. Ms. King responded that the distance is 25 NM of the NOTAM area. The United representative stated that the flight planning system does not know that information, and this process therefore requires human intervention. Ms. King responded that Oakland Center issues flow NOTAMs when necessary and assesses traffic flows when they issue flow NOTAMs. She noted that if it is a remote area, the operator should expect an airborne reroute. Ms. Makoto Ishida of JCAB noted that JCAB accepts 50nm from the impact area as the protection area. Mr. Shigenobu asked how many hours the impact may last, and Ms. King responded that the last ASTRA launch required a six-hour window.

10.0 Agenda Item 7: Review and Update of CNS/ATM Planning Chart

Mr. John Wennes provided an overview of the current CNS/ATM Planning Chart. The Delta representative noted that Anchorage domestic and Arctic do not show ADS-C or CPDLC. Mr. Wennes agreed to update the chart accordingly.

11.0 Agenda Item 8: Action Item Review

Action Items from IPACG 43 were reviewed and updated.

12.0 Agenda Item 9: Other Business

Mr. Shigenobu announced that IPACG/45 would be held in a still to be determined location in the Japan in late August 2019. Mr. Shigenobu then thanked the IPACG delegates for a productive 30th anniversary meeting.

Ms. Hawrysko thanked the meeting delegates for the successful conclusion of IPACG 44, and recognized the efforts of the IPACG participants, noting the accomplishments of the meeting.

Ms. Hawrysko officially closed the IPACG/44 meeting.

Ms. Coleen Hawrysko
Co-chair for FAA

Mr. Toshiya Shigenobu
Co-chair for JCAB