



## **Federal Aviation Administration**

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### **Memorandum**

To: Oceanic Work Group Members

From: Dennis Addison, Support Manager - Oceanic Airspace and Procedures

Subject: Synopsis, Oceanic Work Group (OWG) Meeting, September 18, 2013

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#### **Introduction**

Dennis Addison, Support Manager, Oceanic Airspace and Procedures at Oakland Center welcomed the members of the Oceanic Work Group to the meeting.

#### **Vancouver ACC**

Vancouver ACC dialed into the virtual meeting. Dennis thanked them for their participation and asked if there were any questions for Vancouver ACC. Vancouver stated that they are still working on the NAMICD which will allow automated flight plan passing and handoffs between facilities. Gene Cameron from United Airlines asked if the ICD interface with Vancouver will allow for DARPing and/or UPR's into Vancouver ACC airspace. Vancouver stated that they will need to review those procedures and run tests in order to determine the feasibility of both and will get back to the work group on that issue. There were no other questions.

#### **Oakland ARTCC Update**

##### **Dennis Addison**

- Dennis led off the meeting discussing NAMICD interface with Vancouver ACC and the upcoming release of the T20 software update to the Ocean 21 system. Anchorage center is currently using the T20 software, New York Center and Oakland Center are still on T19 until the issues both centers have had with T20 are patched. This is expected for Oakland center sometime in mid-late October.
- Dennis then began the briefings talking about the Oakland Center website that is in development and the different links that are currently up and functioning on the website, specifically the Oceanic Airspace and Procedures link. This link provides information to the operators concerning UPR flight plan guidance, PACOTS flight plan guidance, CEP flight planning and the separation standards in the CEP route structure. It also provides information on CPDLC interface and the Guam Preferential Routing flight plan guidance. Thirdly, there is a link for the Pacific Meetings which takes you to links for the different meetings; ie. IPACG, ISPACG, OWG, etc. Dennis then asked what people would like to see on the website. Gene Cameron from United asked to see more graphics such as airspace maps showing Oakland FIR and other adjoining FIR's, Special Use Airspace, etc. Greg Scott from Delta Airlines asked how the data on the website is updated for things such as NOTAMS and military operations. Dennis replied that updating the website is much easier and quicker than updating publications such as the Pacific Chart Supplement and if pushed, he can get updates done same day. The NOTAM

link on the ZOA webpage links to another website which lists current NOTAMS. Gene Cameron thanked Dennis for all the help Oakland Center has provided. URL is:  
[http://www.faa.gov/about/office\\_org/headquarters\\_offices/ato/artcc/oakland](http://www.faa.gov/about/office_org/headquarters_offices/ato/artcc/oakland)

- Dennis then moved on to discuss the ADS-B ITP Procedure. Dennis reminded the users that this two year trial for decreased separation climbs and descents (down to 18nm) took a long time to see significant use due to the lack of trained and certified aircrews. The current manual trial expired August 15, 2013 and the paperwork for extending the trial has been filed, however it has not been approved as of yet and so ADS-B ITP requests are not being granted at this time. It is expected to resume by the end of September 2013.

The FAA conducted controller and pilot interviews to see how the ITP could be improved. One of the controller issues was the simultaneous trials of the ADS-C CDP and ADS-B ITP manual procedures causing confusion among controllers. Upon initiation of the new ITP trial, controllers will be retrained on the procedure and the overriding of the conflict probe. For the pilots, it was stated that though there had been online training, the pilots themselves wanted more hands on training which will lead to more requests of this procedure. ADS-B ITP is currently a manual checklist but is moving to becoming an automated procedure. John Moore from FAA HQ stated that the current software is scheduled to be delivered on June 2015 and that the NEXTGEN goal is for one of the three sites (ZAN, ZOA and ZNY) to have it running by August 2015.

Fiji is currently beginning an ADS-B ITP trial as of September 19, 2013. New Zealand is looking to start a trial in November 2013. Japan is considering a trial, but no date yet.

- Dennis then started the discussion on DARP's. He showed a graph that depicts the number of DARP requests and number of requests granted. Most requests are granted and Dennis reiterated that DARP reroutes have been proven to save fuel burn. Other facilities that have AIDC interface with Oakland Center will accept DARP reroutes include Tahiti, Brisbane and FAA Domestic Centers. Japan will accept DARPS reroutes with pre coordination of trial flights. Auckland and Nadi both issue DARP reroutes as well. Japan has implemented new software which gives them the ability to issue DARP reroutes and is starting a trial for DARPing to Hawaii. DARP flights from Japan to Hawaii need to be pre-coordinated with Japan. The trial requires CPDLC (as per GOLD), must be requested prior to 145 east, 20 minutes before divergence point, and one hour prior to crossing the FIR boundary. DARP requests in Oakland occasionally include the entire route of flight beginning at departure point. Oakland is able to modify the uplink DARP request and remove the points that the aircraft has already passed, but Fukuoka's system does not allow modification and therefore if the request includes points behind the aircraft, the DARP request will be denied. AIDC interface is required for facilities along route of flight in a DARP request. Dennis reminded users not to request DARP reroutes into FIR's that do not support AIDC or DARP reroutes.

- The next topic covered by Dennis was the OCAT Trial. The current OCAT trial is set to expire in November 2013. OCAT is a component of Trajectory Based Operations which allows partner airlines to see if desired flight plan amendments are conflict free. Current partners include Delta, United, UPS, Qantas, All Nippon, Air New Zealand and Virgin Australia. Dennis discussed that participation and usage of this system was strong in the first few weeks of the trial, but has dropped off and been uneven since. The most probed element has been vertical altitude change. Dennis also discussed the limitations of this system being that it is only available in Oakland FIR, limited usage, dispatcher issues with the number of screens utilized in the probe and the lack of performance information in OCAT; i.e. The system doesn't know if an aircraft is capable of the profile change, only if it is conflict free. When opened up to discussion,

Gene Cameron stated that one of the things he would like to see change with the system is the opportunity to see WHO the conflict is with and whether that aircraft in conflict is converging, diverging, lateral or longitudinal on the same track so that the pilot can make a determination on whether the profile change might be available soon. Currently there is not a plan to implement this. January 2016 is the timeframe for looking at the cost/benefit of the system and subsequently 2017 or 2018 before implementation at Anchorage and New York.

- UPR's were the next topic opened by Dennis starting off with the benefit of UPR's in fuel savings. Thus far, a potential annual UPR savings of 32.8 million kg of fuel have been identified and are available. For eastbound PACOTS UPR's, there are currently UPR trials ongoing for tracks 1, 3, 11, 12, 14 and 15. Track 2 is the only eastbound track not being trialed at this time.

- Dennis moved the PACOTS UPR's into the discussion on merging PACOTS tracks C and E westbound. The paper trial conducted on this showed an average of only 2.5 conflicts and of those conflicts, most (50 out of 58) could be solved using a 1000 foot altitude change and 8 of 58 required a 2000 foot altitude change. March 2013 was the start of the operational trial for the merging of the two tracks but during the first 38 days the tracks were merged 14 times. In April of 2013 difficulties with the trial were encountered with the Track Advisory requested reservations, and several traffic conflicts that required Oakland to negotiate with Anchorage Center and Fukuoka ACC for the use of non-standard altitude assignments for the increased traffic on the tracks. Had the non-standard altitudes not been accommodated, several large altitude adjustments for several aircraft would have been affected. The data collected in April between the 22<sup>nd</sup> and 25<sup>th</sup> (before the trial was suspended on the 26<sup>th</sup>) showed that the gateway times were missed by much more than the 5 minute window and aircraft not having Track Advisory Gateway Reservations. There is currently no date for resumption of the trial. Gene Cameron added that he sees UPR's as being more advantageous than filing along the tracks even when merged. Gene asked if there was any way that the dispatchers could see "early intent" lists of the number of aircraft that submit flight plans along the tracks before the Track Advisory list is compiled at 1650Z so that a determination could be made before that time whether or not to file on the tracks if traffic is too high or whether a UPR would be more cost effective in allowing the flight to get to higher requested altitudes. For the future, if Oakland can coordinate the use of non-standard altitudes for aircraft filed on the merged track, then the tracks can merge in the Oakland FIR, if not then they can possibly be merged in Anchorage FIR or not be merged at all.

- Dennis next talked about Oceanic Equipage and Separation Standards. This discussion revolved mostly around the RNP-10/RNP-4 FANS aircraft and how the greater number of FANS equipped aircraft help lead to greater efficiency for the users. Several slides depicted different graphs showing the number of a/c in the pacific with RNP-10 and RNP-4 in relation to type of a/c, altitude change requests and the percentage of those requests granted by ATC to aircraft that are HF versus a/c that are FANS and the fuel burn of differing a/c types extrapolated against optimum altitudes that were denied due to distance based separation not being applied over varying distances. Again, this was to show the airlines that the money invested in equipping/certifying FANS aircraft as RNP-4 is a money saver in the long term. The studies taken over a year long term, show data relating to the excess fuel burn of over 1.5 million pounds per year and almost 5 million pounds of CO2 emissions over a year. This data relates only to the Oakland FIR, it is not tracked for other FIR's where the overall savings would be even greater if more aircraft were equipped with FANS and RNP-4. The conclusion reached by Dennis was for the users to consider certifying FANS equipped aircraft for RNP-4 and to have airlines consider equipping aircraft with satellite FANS and RNP-4 certification. Currently, most adjoining FIR's accept D50 separation and many accept D30. An exception is Anchorage sectors 68 and 69 which utilize FDP 2000 and currently do not accepting any distance based

separation. There is an LOA change being negotiated currently between Oakland and Anchorage which would allow D50/30 into sector 69 and D50 into sector 68 and a hopeful 6 months timeframe for implementation of the LOA.

- Mach Speed Variation was next to be discussed by Dennis. Previous IPACG and ISPACG meetings have shown how un-announced Mach Speed changes can be dangerous, and a global solution needs to be developed. An ICAO Annex 2 change touched on but does not fully address the changes needed.

Aircrews do not actively monitor flown airspeed versus the flight planned airspeed. Currently, a variation of up to 48 knots is acceptable per Annex 2 guidelines and this can lead to loss of separation very quickly. Dennis proposed the following change: Procedurally when an aircraft wanted to change by .01 Mach number, they could downlink DM18 with the requested speed (Mach number). If ATC required a speed assignment for separation, an appropriate speed assignment would be assigned ie UM106 MAINTAIN *Speed*. If ATC did not require a speed assignment, the following could be Uplinked: UM169 Speed change to M0.84 approved UM222 NO SPEED RESTRICTION. This advises the aircraft that the requested speed change is approved and UM222 should close the DM message sequence.

- Dennis then discussed Pacific Island Traffic, addressing how the published waypoints can be used to apply the Dead Reckoning separation rule to reduce delays between successive departures. Oakland began tracking island airport delays in October 2010 as best possible, there are some difficulties in the tracking process. However, the data has shown that there are not many significant delays with only .0006% of departures being delayed in 2013 and an average of 11.1 minutes per delay when one is encountered.

Oakland is currently looking into adding ADS-B sites at Koror, Yap and Majuro to assist in further reducing delays at these airports. The FAA is also investigating the feasibility of Space Based ADS-B Surveillance in conjunction with CPDLC the possibility exists to reduce separation standards.

- Dennis then talked about the Proposed 30nm CEP Route Structure. It makes sense to eventually move to a 30nm separated route structure to accommodate the increase in traffic and allow for greater efficiency in the CEP. The operators have not voiced support for this proposal.

- Dennis discussed the use of Tailored Arrivals next, starting with a graph showing that the Pacific 2 TA into SFO is used quite frequently, whereas the Catalina 1 into LAX is seldom used. This is due in part to RNAV BUFFY arrival. SFO finished the Runway Safety Area construction in August and ILS28L/R approaches were resumed. There is a new RNAV STAR developed called the PIRAT 1 which mimics the Pacific 2 TA for non FANS aircraft and implementation is planned for February 2014.

Dennis discussed future plans to use Time Based Metering into SFO from the Oceanic FIR and the Pacific 2 TA together to support greater efficiency. By adding waypoints before the TOD that aircraft would be routed over and using speed control on the TA, a more efficient arrival could be achieved that incorporated arrival delays when they are required.

- Dennis then gave a status update on the ADS-C CDP trial. The procedure is based on DME rules found in ICAO 4444. It allows for near simultaneous ADS-C demand reports and allows an aircraft to climb/descend through the altitude of a blocking aircraft. The manual trial yielded only 8 clearances given due to the manual checklist that ATC had to go through. The checklist is

similar to the checklist being utilized for the ADS-B ITP manual trial. Software is being developed for the Ocean21 system which will automate the controller process. The ADS-C CDP trial is planned to resume when the procedure has been automated. January 2015 is the target date for the ADS-C CDP procedure to become automated.

- Dennis then noted that the Port Moresby FIR will implement 50nm RNP-10 lateral and longitudinal separation rules beginning November 14, 2013. New ATS route are being coordinated to take advantage of the separation standard.
- Dennis also briefly talked about the Mazatlan ACC AIDC interface with Oakland that is being developed and a test plan built to allow for the testing phase to begin with Mazatlan. Mazatlan also announced that they are working on turning their Class G airspace into controlled airspace.
- Dennis then turned the floor over to Keith Dutch and Steve Pinkerton from FAA AJE-32 Oceanic and Offshore Office.

## **FAA HQ Oceanic and Offshore**

### **Keith Dutch**

- Keith Dutch started off for the Oceanic and Offshore office by talking about the Communication Failure Coordination Group. This work group was set up to discuss two proposals to ICAO HQ regarding lost communications with aircraft and the regional and state differences in handling such situations. The two proposals, one from the European and North Atlantic region and one from the North American and Caribbean, take differing views on how to handle lost communications. ICAO set up a work group which met in October 2012 at ICAO HQ in Montreal to review and analyze both proposals. Thus far, there is no conclusion or resolution and there have been monthly teleconferences held to continue the discussion.

### **Steve Pinkerton**

- NextGen Oceanic Operational Development still ongoing. The FAA is looking for operator input and participation.
- Steve discussed the personnel changes to the AJE-32 office.
- Cross Polar Working Group is December 3-6 in Ottawa

## **Anchorage ARTCC Update**

### **Steve Kessler**

- Steve started off discussing the NOTAM change in the Arctic. Ten different NOTAMS were consolidated down to one NOTAM with an added communications section. Anchorage NOTAM A0158 lists together the navigation and communications pieces. It outlines the requirement for HF position reports when entering and exiting the FIR regardless of CPDLC equipage. Gene asked about whether mandatory HF position reports make sense in today's environment and whether it applies to Canada and Russia. Steve Kessler stated that it applies whenever entering Anchorage FIR or leaving. Gene Cameron asked whether there is widespread compliance with this procedure since many aircraft are FANS equipped. Steve replied that this is in effort to get everyone on the same page and that it is not necessarily a long term solution. CPDLC north of 74 degrees latitude is unreliable.

- Routing issues are still the same as in the past. DEVIT and DECMO are the two waypoints across the northernmost part for transitioning. Russia will be adding more fixes. Anchorage is working on getting Sector 64 (ARCTIC airspace, using FDP2000 and Micro-EARTS) adaptation completed so the airspace can be upgraded to ATOP. An implementation is yet to be determined. The earliest would be possibly mid-2015, optimistically. Once the adaptation is built for ZAN sector 64 into ATOP and testing scenarios are built, the site will complete the necessary testing.
- A NOPAC UPR paper trial started in July with 5 dates and 4 dates left for December. Controllers will be looking at data in October from the July dates.
- Alaska Red Flag exercises, 2014. 2 of 3 of the exercises in 2013 were cancelled due to sequestration. Red Flag is airspace blocked up to F600 along the Canadian border for several hundred miles for the military activity. It is also blocked on the Canadian side for joint military activities.

### **OWG Action Items**

Dennis covered the OWG Action Items all of the Action Items had been covered in the meeting except the Island ETOP alternate airports. Dennis showed some slides which highlighted the importance of the Island airports as ETOP alternates. There was discussion of the recent Midway NDB outage and how it affected PMDY's suitability as an ETOP alternate airport.

Dennis thanked ARINC for their hospitality and support of the OWG meeting. There were no other topics that were opened for discussion, so Dennis thanked everyone for their participation and the meeting was adjourned. The next OWG meeting was scheduled for January 22, 2014 at SFO ARINC.

### **Future Meetings**

IPACG 39: October 28-November 1 in Fukuoka, Japan.

ISPACG 28: March 3-7 2014 in Tahiti.

OWG: January 22, 2014 at SFO ARINC.

## September 18, 2013 OWG Attendance Sheet

Attended	Name	Organization	E-mail Address	Phone Number
√	Dennis Addison	FAA/ZOA	dennis.addison@faa.gov	510-745-3258
	Raul Aguirre	AMX	aguirrehug@yahoo.com	
	Dan Allen	FedEx	daniel.allen@fedex.com	901-224-5114
	Steve Altus	Jeppesen Tech Svc.	steve.altus@jeppesen.com	408-961-2260
	Mark Anderson	HAL	mark.anderson@hawaiianair.com	360-402-8960 (c) 360-456-3448
√	Byung Ho Ban	Korean Air	<a href="mailto:banbh@koreanair.com">banbh@koreanair.com</a>	310-417-5264
√	Steve Baker	Alaska Airlines	Steve.Baker@AlaskaAir.com	206-392-6204
√	Michael Belt	ARINC	<a href="mailto:mbelt@arinc.com">mbelt@arinc.com</a>	410-279-2275
	Mike Birdsong	HQ AMC/A3V	michael.birdsong@scott.af.mil	618-229-3626
	Jonathan Bonds	UPS	jbonds@ups.com	
√	Dustin Byerly	FAA/ZOA	<a href="mailto:Dustin.M.Byerly@faa.gov">Dustin.M.Byerly@faa.gov</a>	510-648-8891
	James Brown	FAA	James.d.brown@faa.gov	916-715-7557
√	Gene Cameron	UAL	gene.cameron@united.com	530-878-8791
√	Eddie Castillo	Pacific Aviation Corp.	ecastillo@pacificaviation.com	650-821-1190
	Jeff Cerasoli	SWA	jeffrey.cerasoli@wnco.com	480-652-1976
	Patricia Chavez	MITRE/CAASD	pchavez@mitre.org	703-983-5245
	Karen Chiodini	FAA/AJE-32	karen.l.chiodini@faa.gov	202-493-5248
	Dave Cobb	618 TACC/XOCZF	william.cobb@scott.af.mil	618-229-4977
	Jack Copeland	USAF/Vandenberg	jack.copeland@vandenberg.af.mil	805-606-5744
	Bradley Cornell	Boeing	bradley.d.cornell@boeing.com	425-280-5603
	Robert Cust	18th AF TACC/XOCZF	robert.cust@scott.af.mil	618-229-4977
√	Greg Dale	UAL	greg.dale@united.com	812-825-5095
T	Greg Dansereau	NAV Canada/YVR ACC	<a href="mailto:DanserGr@navcanada.ca">DanserGr@navcanada.ca</a>	604-598-4850
	Jason Davidson		jdavidson@univ-wea.com	
	Richard Davy	ACA Flight Dispatch	Richard.Davy@aircanada.ca	905-676-2948
	Jim Dees	AAL Fleet Captain		
	Jeff Dibler	Point Mugu	jeffrey.dibler@navy.mil	
	Masakazu Douglas	JAL	masakazu.douglas@jal.com	310-606-6558
√	Wayne Duren	FAA/ZOA	<a href="mailto:Wayne.Duren@faa.gov">Wayne.Duren@faa.gov</a>	510-745-3860

Attended	Name	Organization	E-mail Address	Phone Number
√	Keith Dutch	FAA/AJE-32	<a href="mailto:Keith.Dutch@faa.gov">Keith.Dutch@faa.gov</a>	202-385-8459
	Don Elson	AMC TACC/XOCM	Donald.elson@scott.af.mil	618-229-0635
	Christine Falk	FAA Tech Center	Christine.falk@faa.gov	609-485-6877
	Brian Flynn	FAA Tech Center	brian.e.flynn@faa.gov	609-485-7877
	Ken Foster	UPS/Flt Control Stds.	kffoster@ups.com	502-359-5155
	Ted Fudge	NAV Canada	fudget@navcanada.ca	613-563-5651
	Frank Fujii	JAL	frank.fujii@jal.com	310-646-4640
	Julia Fuller	FAA/ZOA	Julia.fuller@faa.gov	510-745-3823
	Brian Gaffney	ARINC	beg@arinc.com	410-266-4266
	Murray Giesbrecht	NAV Canada-YVR	giesbrm@navcanada.ca	604-908-6462
	Aaron Glorioso	Alaska Airlines	Aaron.glorioso@alaskaair.com	206-392-6340
	JP Gonzales	FACSFAC San Diego	Joseph.p.gonzales@navy.mil	619-545-1745
	Tom Graff	FAA/L-3	tomjgraff@gmail.com	970-988-3633
	Masashi Hamada	ANA	m_hamada@fly-ana.com	650-821-0310
√	Lynne Hamrick	MITRE/CAASD	lhamrick@mitre.org	703-983-5441
	John Hardy	American Airlines		
	Steven Harris	618 TACC/XOCZF	steven.harris-02@scott.af.mil	618-229-4977
√	Dustin Hegland	FAA/ZOA	Dustin.Hegland@faa.gov	510-745-3320
	Michael Hollman	618 TACC/XOCM	michael.hollman@scott.af.mil	618-256-3691
	Melissa Holmes	FAA/Oakland ARTCC	melissa.holmes@faa.gov	510-745-3545
	Robert Hong	FAA/HCF	robert.hong@faa.gov	808-840-6100
	Ray Howland	AAL	ray.howland@aa.com	817-967-8343
	Jay Hoyer	AAL	Jay.hoyer@aa.com	817-967-
	Jim Jansen	FAA/SJC FSDO	james.c.jansen@faa.gov	408-291-7681
	Kenneth Jones	FAA/NASA	kenneth.m.jones@nasa.gov	757-864-5013
	Kathleen Kearns	SITA	Kathleen.kearns@sit.aero	
√	Steve Kessler	FAA/ZAN/TMO	Steve.Kessler@faa.gov	907-269-1220
	Gene Kim	TRS/SWA	Gene.kim@wnco.com	214-792-3242
	Kevin Kong	KAL	kjkong@koreanair.com	310-417-5261
	Mike Lavery	NAV Canada-YVR	laverym@navcanada.ca	604-586-4550

Attended	Name	Organization	E-mail Address	Phone Number
√	Jumper Leggio	ARINC	gleggio@arinc.com	925-294-8400
T	Scott Luka	Regulus Group	sluka@regulus-group.com	516-840-0187
	Vince Macdonald	NAV Canada – YVR	macdonv@navcanada.ca	604-787-8716
√	Mary Anne Mancillas	ARINC	mm@arinc.com	410-266-4242
	John Metzger	ARINC	jbm@arinc.com	410-266-4238
T	John Moore	FAA	john.f.moore@faa.gov	202-385-8443
	Grant Morris	SWA	grant.morris2@wnco.com	
	Allan Nakai	JAL		
	Yasuo Nishiyama	NCA	yasuo.nishiyama@nca.aero	773-894-8250
	David Oliver	QANTAS	doliver@qantas.com.au	011-612-9691-1158
√	Al Parris	ARINC	aparris@arinc.com	571-246-4365
	Robert Phillips	FedEx	Robert.phillips@fedex.com	901-224-5150
√	Steve Pinkerton	FAA/AJE-32	<a href="mailto:Steve.Pinkerton@faa.gov">Steve.Pinkerton@faa.gov</a>	202-385-8384
	Dave Poe	JAL		
	Mike Quinn	Asia Pacific Airlines	mikequinn1@earthlink.net	925-362-4430
	Bob Raney	ZOA STMC	bob.raney@faa.gov	510-745-3332
	Mike Robbins	FAA/ZOA TMU	Michael.robbins@faa.gov	510-745-3332
	Michael Rogerson	NAV Canada-YVR	rogersm@navcanada.ca	
	Marc Romero	Point Mugu		
	Paul Rumberger	FAA/ZLA MOS	Paul.m.rumberger@faa.gov	661-265-8249
	Lynn Sallady	ARINC	csallady@arinc.com	925-294-8400
	Chris Schmidt	SWA/US Navy	chris.schmidt@wnco.com	817-201-9443
T	Walter Schobel	USAF	<a href="mailto:Walter.Schobel@us.af.mil">Walter.Schobel@us.af.mil</a>	805-606-3602
√	Gregg Scott	DAL	gregg.scott@delta.com	678-823-2892
	Vivek Sharma	The Boeing Company	vivek.sharma2@boeing.com	253-657-6339
√	Kent Sharrar	HAL	Kent.Sharrar@hawaiianair.com	808-783.3510
	Mark Spence	HAL	mark.spence@hawaiianair.com	808-838-5519
T	Bill Sperandio	SWA	william.sperandio@wnco.com	214-792-7939
	Aubrey Stevens	Delta Air Lines	aubrey.l.stevens@delta.com	404-715-1712
	ChengYeow Tan	Singapore Airlines	chengyeow_tan@singaporeair.com.sg	(65) 6540-2913

<b>Attended</b>	<b>Name</b>	<b>Organization</b>	<b>E-mail Address</b>	<b>Phone Number</b>
	Chuck Taylor	Jeppesen	Chuck.taylor@jeppesen.com	408-961-3871
	Dick Van Aernum	DAL	richard.vanaernum@delta.com	404-715-0019
	Peter Vogt	FAA/HQ	peter.vogt@faa.gov	202-385-8506
	Michael Ward	USAF AMC	michael.ward.51@us.af.mil	618-224-4977
	Don Willems	USAF 12RS/Beale	Donald.willems@beale.af.mil	352-255-3116
	Wayne Winningham	FAA/Oakland Oceanic	wayne.winningham@faa.gov	510-745-3548
	Steve Wolford	AAL/Sys Ops Control	Steve.wolford@aa.com	817-967-8892
	Shumei Yamaguchi	NCA		
	Dan Yanagihara	JAL	dan.yanagihara@jal.com	310-606-6555
	Mitsuhiro Yoshizaki	NCA	mitsuhiro.yoshizaki@nca.aero	773-551-0803