

FINAL MINUTES

**Minutes of the Second Meeting of the FCC Advisory Committee
for the
2011 World Radiocommunication Conference (WRC-11)**

Date/Time: March 31, 2009 at 11:00 a.m.

Location: Federal Communications Commission
Commission Meeting Room (TW-C305)
445 12th Street, S.W., Washington, D.C.

Committee Members Attending: See Appendix 1

Other Persons Attending: See Appendix 2

Meeting Summary:

1. Opening Remarks

WRC-11 Advisory Committee (Committee) Co-Chair Thomas Navin called the meeting to order at 11:10 a.m. and welcomed everyone to the Committee's second meeting. Co-Chair Paul Margie acknowledged the large amount of work that had been accomplished in a short amount of time, noting that there are over 20 documents on the agenda for the meeting.

Alexander Roytblat, Assistant Division Chief of FCC/IB/SAND responsible for WRC preparations and the Designated Federal Officer of the Committee, commented that the work thus far has been outstanding, and encouraged everyone to keep up the pace of work. Mr. Roytblat also reminded participants at the meeting that they needed to register their attendance on the sign-in sheets.

2. Approval of the Agenda

The agenda, Document **WAC /012(31.03.09)**, was approved without change.

3. Approval of Draft Minutes of the First Meeting

The minutes of the first meeting, Document **WAC/009(31.03.09)**, were approved without change.

4. Advisory Committee Structure

Mr. Navin introduced Document **WAC/003(Revised 31.03.09)** setting forth the structure of the Committee's four informal working groups and a list of the issues assigned to them. He explained that Jennifer Manner resigned as Chair of Informal Working Group (IWG) 3 due to a job change. Jack Wengryniuk of DirecTV (formerly the Vice Chair for IWG 3) now serves as the Chair and Donna Bethea-Murphy of Iridium has agreed to act as Vice Chair of IWG-3. Mr. Navin thanked Mr. Wengryniuk, Ms. Bethea-Murphy and Ms. Manner for their efforts and wished Ms. Manner well in her new endeavors.

Mr. Navin also announced that, following a request made at the first meeting of the Committee, WRC-11 Agenda Item 1.20 (HAPS) was moved from IWG-3, Space Services, to IWG-2, Terrestrial Services, and that this change was reflected in the revised structure document. Mr. Navin acknowledged that members of IWG-3 might be inconvenienced by this reassignment and to ameliorate inconvenience the Committee had asked that IWG-2 and IWG-3 hold their meetings consecutively and set aside a special time to consider Agenda Item 1.20. Mr. Navin reported that the arrangement had worked well thus far, and he thanked the leadership for their assistance.

Mr. David Weinrich of Globalstar commented that he had filed an opposition to this change, and that he would like WRC-11 Agenda Item 1.20 restored to IWG-3. Mr. Weinrich commented that the subject is more germane to IWG-3 and respectfully requested that the Agenda Item be transferred back to IWG-3. Mr. Don Jansky of SES Americom supported Mr. Weinrich's comments. Mr. Jansky indicated his surprise at the change of the item from IWG 3 to IWG 2 following the first meeting of the Committee. He also commented that WRC-11 Agenda Item 1.20 impacts satellite operations and further commented that the item be would better treated in IWG-3.

Mr. Rick Gould of Telecommunication Systems on behalf of Aerovironment, commented that the present arrangement has worked well, that representatives of the fixed satellite service and HAPs have met at every meeting or by teleconference, and that a preliminary view had been prepared in a timely manner, although differences of opinion exist. He further commented that WRC-11 Agenda Item 1.20 relates to the bands already identified for fixed service, that the International Telecommunication Union Radiocommunication sector (ITU-R) is considering Agenda Item 1.20 in Working Party 5C (fixed services), and that in the past WRC Advisory Committees have included the HAPs item in IWG-2. Mr. Navin indicated that the Committee would take the comments received under advisement.

4. NTIA Draft Preliminary Views

Mr. Margie stated that our Federal colleagues are making progress as well and that additional documents were received since the last meeting. Mr. Navin introduced Documents **WAC/010(31.03.09)** and **WAC/011(31.03.09)**, inputs from NTIA and indicated that the IWGs had already been considering these draft preliminary views. Mr. Margie introduced Darlene Drazenovich who leads NTIA's preparatory efforts for WRC-11. Dr. Drazenovich commented that the Committee's informal working group chairs, vice chairs, and members did a tremendous job. She remarked that she was happy with the outputs, and that many preliminary views are closer than she thought they would be; however, there are others where the IWGs and NTIA are not as close. Following the meeting, she will work with Mr. Roytblat to put the recommendations together.

The NTIA letters and enclosures were noted.

5. IWG Status reports and Consideration of Preliminary Views

IWG-1: Maritime, Aeronautical and Radar Services

Giselle Creeser, the Chair of IWG-1, reported that three meetings were held since the last meeting of the full committee, and that IWG-1 had six preliminary views for the Committee to consider.

Agenda Item 1.3: to consider spectrum requirements and possible regulatory actions, including

allocations, in order to support the safe operation of unmanned aircraft systems (UAS), based on the results of ITU-R studies, in accordance with Resolution **421 (WRC-07)** – Draft Preliminary View, Document **WAC/013(31.03.09)**, proposed modifications to NTIA’s draft preliminary view, was approved.

Agenda Item 1.4: to consider, based on the results of ITU-R studies, any further regulatory measures to facilitate introduction of new aeronautical mobile (R) service (AM(R)S) systems in the bands 112-117.975 MHz, 960-1 164 MHz and 5 000-5 030 MHz in accordance with Resolutions **413 (Rev.WRC-07)**, **417 (WRC-07)** and **420 (WRC-07)** – Document **WAC/014(31.03.09)**, a draft preliminary view, was approved.

Agenda Item 1.9: to revise frequencies and channeling arrangements of Appendix 17 to the Radio Regulations, in accordance with Resolution **351 (Rev. WRC-07)**, in order to implement new digital technologies for the maritime mobile service - **WAC/015(31.03.09)**, proposed modifications to NTIA’s draft preliminary view, was approved.

Agenda Item 1.12: to protect the primary services in the band 37-38 GHz from interference resulting from aeronautical mobile service operations, taking into account the results of ITU-R studies in accordance with Resolution **754 (WRC-07)** - **WAC/016(31.03.09)**, proposed modifications to NTIA’s draft preliminary view, was approved.

Agenda Item 1.14: to consider requirements for new applications in the radiolocation service and review allocations or regulatory provisions for implementation of the radiolocation service in the range 30-300 MHz, in accordance with Resolution **611 (WRC-07)** - Document **WAC/017(31.03.09)**, a draft preliminary view, was approved.

Agenda Item 1.15: to consider possible allocations in the range 3-50 MHz to the radiolocation service for oceanographic radar applications, taking into account the results of ITU-R studies, in the range 3-50 MHz, in accordance with Resolution **612 (WRC-07)** – Document **WAC/018(31.03.09)**, a draft preliminary view, was approved.

Ms. Creeser noted that IWG-1 also reviewed NTIA draft preliminary views on other WRC-11 agenda items assigned to IWG-1 and presented the following comments:

Agenda Item 1.21 contained in Document **WAC/006(13.01.09)**. IWG-1 agreed to support the NTIA Preliminary View without changes. Mr. Navin asked for comments on Agenda Item 1.21 as contained in Document **WAC/006(13.01.09)**, and hearing none the Preliminary View was approved.

Agenda Item 1.10: IWG-1 is continuing its review.

IWG-2 – Terrestrial

IWG-2 Chair Kim Baum reported that IWG-2 held four meetings since the last meeting of the full Committee and had made good progress.

Agenda Item 1.8: to consider the progress of ITU-R studies concerning the technical and

regulatory issues relative to the fixed service in the bands between 71 GHz and 238 GHz, taking into account Resolutions **731 (WRC-2000)** and **732 (WRC-2000)** - Document **WAC/024(31.03.09)**, proposed modifications to NTIA's draft preliminary view, was approved.

Agenda Item 1.17: to consider the results of sharing studies between the mobile service and other services in the band 790-862 MHz in Regions 1 and 3, in accordance with Resolution **749 (WRC-07)**, to ensure the adequate protection of services to which the frequency band is allocated, and to take appropriate action - Document **WAC/025(31.03.09)**, a draft preliminary view, was approved.

Agenda Item 1.19: to consider regulatory measures and their relevance, in order to enable the introduction of software-defined radio and cognitive radio systems, based on the results of ITU-R studies, in accordance with Resolution **956 (WRC-07)** - Document **WAC/026(31.03.09)**, proposed modifications to NTIA's draft preliminary view, was approved.

Agenda Item 1.20: to consider the results of ITU-R studies and spectrum identification for gateway links for high altitude platform stations (HAPS) in the range 5 850-7 075 MHz in order to support operations in the fixed and mobile services, in accordance with Resolution **734 (Rev.WRC-07)** - Document **WAC/027(31.03.09)**.

The Chair of IWG-2 reported that Agenda Item 1.20 had been a contentious item, but IWG-2 made every effort to accommodate all of the parties in the discussion. The Chair further reported that IWG-2 could not come to agreement regarding the existing U.S. Preliminary View found in Document **WAC/007(13.01.09)**. Instead, IWG-2 developed two separate views: View A, supported by a number of companies (attachment A to Document **WAC/027(31.03.09)**; and View B, supported by the companies identified in the cover letter to Document **WAC/027(31.03.09)**. Ms. Baum noted that the IWG as a whole did not review and approve the text of Attachment A or Attachment B, and that the attachments reflect the view of the companies identified in the cover letter to Document **WAC/027(31.03.09)**. In addition, the Chair reported that IWG-2 had two additional points it felt were important to pass along to the FCC through the Committee, as reflected in the penultimate paragraph of the first page of Document **WAC/027(31.03.09)**.

Mr. Rick Gould urged the FCC staff and the Committee co-chairs to review the views contained in the attachments with an open mind and to ignore the existing preliminary views. Mr. Gould commented that NTIA had supported a Preliminary View almost identical to the Preliminary View supported by the HAPS community. He further commented that the Department of State had accepted a preliminary view without having the technical support or analysis of the feasibility of sharing or the participation of HAPS proponents, and adopted a premature view on the future regulatory status of HAPS. Mr. Gould commented that prejudging the feasibility of sharing before sharing analysis has been completed is not good spectrum engineering, frequency, management or a reasoned FCC policy.

Mr. Margie called for other comments. Hearing none, the Committee approved the cover sheet (page one) of Document **WAC/027(31.03.09)**. The Committee also approved forwarding the remainder of Document **WAC/027(31.03.09)** to the FCC for its consideration.

Agenda Item 1.22: to examine the effect of emissions from short-range devices on radiocommunication services, in accordance with Resolution **953 (WRC-07)** - Document

WAC/028(31.03.09), proposed modifications to NTIA's draft preliminary view, was approved.

Agenda Item 1.23: to consider an allocation of about 15 kHz in parts of the band 415-526.5 kHz to the amateur service on a secondary basis, taking into account the need to protect existing services - Document **WAC/029(31.03.09)**, a draft preliminary view, was approved.

Ms. Baum noted that IWG-2 supports the U.S. Preliminary View on Agenda Item 1.5 set forth in Document **WAC/007(13.01.09)**. Mr. Margie asked for comments on Agenda Item 1.5 as contained in Document **WAC/007(13.01.09)**, and hearing none the Preliminary View was approved.

The Chair of IWG-2 noted that no work was underway in IWG-2 for Agenda Item 1.16 concerning lightning detection, but the IWG welcomes any future contributions.

The Chair also reported that IWG-2 had no suggestions at this time for Agenda Item 8.2, future WRC agenda items, and noted that work on future agenda items typically happens later in the process. Ms. Baum announced the next meeting for IWG-2 is tentatively scheduled for July 15 at 10 a.m.

IWG-3: Space Services

Jack Wengryniuk, the Chair of IWG-3, reported that IWG-3 held four meetings since the first meeting of the full Committee, and had preliminary views for five of the seven WRC-11 Agenda items assigned to IWG-3.

Agenda Item 1.7: to consider the results of ITU-R studies in accordance with Resolution **222 (Rev. WRC-07)** in order to ensure long-term spectrum availability and access to spectrum necessary to meet requirements for the aeronautical mobile-satellite (R) service and to take action on this subject, while retaining unchanged the generic allocation to the mobile-satellite service in the bands 1 525-1 559 MHz and 1 626.5-1 660.5 MHz service - Document **WAC/019(31.03.09)**, a draft preliminary view, was approved.

Agenda Item 1.11: to consider a primary allocation to the space research service (Earth-to-space) within the band 22.55-23.15 GHz, taking into account the results of ITU-R studies, in accordance with Resolution **753 (WRC-07)** - Document **WAC/020(31.03.09)**, proposed modifications to NTIA's draft preliminary view, was approved.

Agenda Item 1.13: to consider the results of ITU-R studies in accordance with Resolution **551 (WRC-07)** and decide on the spectrum usage of the 21.4-22 GHz band for the broadcasting-satellite service and the associated feederlink bands in Regions 1 and 3 – Document **WAC/021(31.03.09)**, a draft preliminary view, was approved.

Agenda Item 1.18: to consider extending the existing primary and secondary radiodetermination-satellite service (space-to-Earth) allocations in the band 2 483.5-2 500 MHz in order to make a global primary allocation, and to determine the necessary regulatory provisions based upon the results of ITU R studies, in accordance with Resolution **613 (WRC 07)** – Document **WAC/022(31.03.09)**, a draft preliminary view, was approved.

Agenda Item 1.25: to consider possible additional allocations to the mobile satellite service in accordance with Resolution **231 (WRC-07)**. Additional allocations in the mobile satellite service with focus on the bands between 4 GHz and 16 GHz service - Document **WAC/023(31.03.09)**.

Mr. Chris Murphy, INMARSAT, commended the Chairman for the work in IWG-3, and offered edits to paragraphs four and five of the Preliminary Views stated in Document **WAC/023(31.03.09)**. Mr. Murphy proposed deleting paragraph five and changing paragraph four to read as follows:

An MSS allocation could be accommodated in any of the bands of interest, where compatibility studies, agreed upon by the relevant working parties taking into account the applicable protection criteria of the existing services in the band, demonstrate that sharing would be feasible.

Mr. Murphy commented that the proposed changes will make reconciliation with the RCS preliminary view easier. Document **WAC/023(31.03.09)**, a draft preliminary view, was approved with the edits proposed by Mr. Murphy.

Mr. Wengryniuk noted that IWG-3 has reviewed the NTIA draft preliminary views on additional WRC-11 agenda items assigned to IWG-3 and presented the following comments:

Agenda Item 1.24: The bands involved are not commercial bands, so the IWG has no comment on the U.S. preliminary view found in Document **WAC/011(31.03.09)**.

Agenda Item 8.2: IWG-3 has no comments yet.

Mr. Wengryniuk thanked IWG-2 Chair Kim Baum for coordinating meetings of IWG-2 with meetings of IWG-3 to facilitate the work on Agenda Item 1.20.

IWG-4: Regulatory Issues

IWG-4 Chair Audrey Allison acknowledged her vice chair, Jose Albuquerque, and noted that IWG-4 had three preliminary views for the Committee to consider.

Agenda Item 1.6: to review No. **5.565** of the Radio Regulations in order to update the spectrum use by the passive services between 275 GHz and 3 000 GHz, in accordance with Resolution **950 (Rev.WRC-07)**, and to consider possible procedures for free-space optical-links, taking into account the results of ITU-R studies, in accordance with Resolution **955 (WRC-07)** - Document **WAC/030(31.03.09)**, proposed modifications to NTIA's draft preliminary view, was approved.

Agenda Item 7: to consider possible changes in response to Resolution 86 (Rev. Marrakesh, 2002) of the Plenipotentiary Conference: "Advance publication, coordination, notification and recording procedures for frequency assignments pertaining to satellite networks", in accordance with Resolution **86 (Rev.WRC-07)** - Documents **WAC/031(31.03.09)** and **WAC/032(31.03.09)**, draft preliminary views, were approved.

Ms. Allison noted that additional work remains on other aspects of Agenda Item 7. She also noted that IWG-4 is still considering Agenda Item 1.2.

6. Future Meetings

Mr. Navin introduced Document **WAC/004(31.03.09)**, a timeline setting forth the dates of national, regional, and international preparatory meetings leading up to WRC-11. Mr. Navin also announced the date for the third meeting of the Committee, September 1, 2009.

The timeline document was noted.

7. Other Business

The Co-Chairs recognized acting International Bureau Chief John Giusti, and stated that they look forward to working with him.

There being no new business, Mr. Margie adjourned the meeting at 11:55 a.m.

Documents Distributed:

WAC/003	WRC-11 Advisory Committee Structure (Revised 31.03.09)
WAC/004	WRC-11 Preparatory Timeline (Revised 31.03.09)
WAC/009	Draft Minutes of the First Meeting of the WRC-11 Advisory Committee, January 13, 2009
WAC/010	Letter, 21 January 2009, Draft Preliminary Views on Agenda Items 1.9 and 1.10
WAC/011	Letter, 23 February 2009, Draft Preliminary Views on Agenda Item 1.2 and 1.24
WAC/012	Agenda for the 2nd WRC-11 Advisory Committee Meeting
WAC/013	Draft Preliminary View on WRC-11 Agenda Item 1.3 (IWG-1)
WAC/014	Draft Preliminary View on WRC-11 Agenda Item 1.4 (IWG-1)
WAC/015	Draft Preliminary View on WRC-11 Agenda Item 1.9 (IWG-1)
WAC/016	Draft Preliminary View on WRC-11 Agenda Item 1.12 (IWG-1)
WAC/017	Draft Preliminary View on WRC-11 Agenda Item 1.14 (IWG-1)
WAC/018	Draft Preliminary View on WRC-11 Agenda Item 1.15 (IWG-1)
WAC/019	Draft Preliminary View on WRC-11 Agenda Item 1.7 (IWG-3)
WAC/020	Draft Preliminary View on WRC-11 Agenda Item 1.11 (IWG-3)
WAC/021	Draft Preliminary View on WRC-11 Agenda Item 1.13 (IWG-3)
WAC/022	Draft Preliminary View on WRC-11 Agenda Item 1.18 (IWG-3)
WAC/023	Draft Preliminary View on WRC-11 Agenda Item 1.25 (IWG-3)
WAC/024	Draft Preliminary View on WRC-11 Agenda Item 1.8 (IWG-2)
WAC/025	Draft Preliminary View on WRC-11 Agenda Item 1.17 (IWG-2)
WAC/026	Draft Preliminary View on WRC-11 Agenda Item 1.19 (IWG-2)
WAC/027	Draft Preliminary View on WRC-11 Agenda Item 1.20 (IWG-2)
WAC/028	Draft Preliminary View on WRC-11 Agenda Item 1.22 (IWG-2)
WAC/029	Draft Preliminary View on WRC-11 Agenda Item 1.23 (IWG-2)
WAC/030	Draft Preliminary View on WRC-11 Agenda Item 1.6 (IWG-4)
WAC/031	Draft Preliminary View on WRC-11 Agenda Item 7 (IWG-4)
WAC/032	Draft Preliminary View on WRC-11 Agenda Item 7 (IWG-4)

MINUTES
Appendix 1
WRC-11 Advisory Committee Attendance
Second Meeting – March 31, 2009

Last Name	First Name	Occupation or Affiliation	Address	City	State	ZIP	Phone Number	Fax Number	E-mail Address
Albuquerque	Jose	INTELSAT	3400 International Drive NW	Washington	DC	20008	202-944-6897		Jose.Albuquerque@intelsat.com
Allison	Audrey	The Boeing Company	1200 Wilson Blvd.	Arlington	VA	22209	(703) 465-3215	(703) 465-3448	audrey.allison@boeing.com
Baum	Kim	Motorola, Inc.					(202) 371-6868	(202) 286-6089	kimberly.baum@motorola.com
Creaser	Giselle	Lockheed Martin Corp.	1550 Crystal Drive, Suite 300	Arlington	VA	22202	(703) 413-6983		giselle.creaser@lmco.com
Gilsenan	John	Terrestar	206 Pond View Drive	Bethany Beach	DE	19930	(301) 526-0495		John.Gilsenan@IEEE.org
Gould	Richard	Telecom Systems for Aerovironment, Inc.	3643 Upton Street	Washington	DC	20008	(202) 362-2107		rickgould@verizon.net
Jansky	Don	Jansky-Barmat Telecommunications	1120 19th St., N.W., Suite 333	Washington	DC	20036	(202) 467-6400	(202) 296-6892	don@jansky-barmat.com
Keane	Ken	Duane Morris LLP	1667 K St., N.W., Suite 700	Washington	DC	20006-1608	(202) 776-5243	(202) 776-7801	kkeane@duanemorris.com
Khalilzadeh	Abdolmajid	INTELSAT	3400 International Drive, N.W.	Washington	DC	20008	(202) 944-7679	(202) 944-7870	adolmajid.khalilzadeh@intelsat.com
Lynch	Michael	Nortel	2221 Lakeside Blvd.	Richardson	TX	75082	(972) 684-7578	(972) 684-3775	mjlynch@nortel.com
Maimo	Angela	INTELSAT							angela.maimo@intelsat.com
Malloy	Suzanne H.	ICO Global Communications					(202) 330-4005	(202) 330-4008	suzanne.h.malloy@ico.com
Margie	Paul	Harris, Wiltshire & Grannis, LLP	1200 Eighteenth Street, N.W., 12th Floor	Washington	DC	20036	(202) 730-1352	(202) 730-1301	pmargie@harriswiltshire.com
Markle	Robert	Radio Technical Commission for Maritime Services	1800 N. Kent St., Suite 1060	Arlington	VA	22209	(703) 527-2000	(703) 351-9932	RMarkle@rtc.org
Martin	Kathryn	Access Partnership Ltd.	1050 Connecticut Ave., N.W.	Washington	DC	20036	(202) 772-1870	(202) 772-3360	kathryn@accesspartnership.com
Murphy	Chris	Inmarsat	1101 Connecticut Avenue, NW, Suite 1200	Washington	DC	20036	(202) 248-5158		chris_murphy@inmarsat.com
Nader	Gustavo	SkyTerra	10802 Parkridge Blvd.	Reston	VA		(703) 390-1562		gustavo.nader@skyterra.com

Navin	Thomas	Wiley Rein & Fielding LLP	1776 K Street, N.W.	Washington	DC	20006	(202) 719-7487	(202) 719-7049	tnavin@wrf.com
Price	Brennan	ARRL	3545 Chain Bridge Road, #209	Fairfax	VA	22030	(703) 934-2077	(703) 939-2079	bprice@arrl.org
Siverling	Jon	ARRL	3545 Chain Bridge Road, Suite 209	Fairfax	VA	22030	(703) 934-2066	(703) 934-2079	siverling@mindspring.com
Strassburger	Ray	LTS	2865 Pine Hill Road	Oakton	VA		(703) 264-5695		Rstrasss7@aol.com
Tycz	Thomas S.	Goldberg, Godles, Weiner & Wright	1229 19th Street, NW	Washington	DC	20036	(202) 429-4900		ttycz@g2w2.com
Weaver	Frank	Boeing	1200 Wilson Blvd.	Arlington	VA	22209	(703) 465-3448		Frank.C.Weaver@Boeing.com
Weinreich	David	Globalstar	10004 Lewisdale Rd.	Ijamesville	MD	21754	(301) 874-5521		david.weinreich@globalstar.com
Wengryniuk	Jack	DirecTV	6050 Elmer Derr Rd.	Frederick	MD	21703	(301) 663-0053	(240) 358-0569	jwengryniuk@directv.com
Wilson	Joanne	CompassRose International	1741 Holly St., N.W.	Washington	DC	20012	(202) 669-4006	(253) 484-0330	jwilson@compassroseintl.com

MINUTES
Appendix 2
WRC-11 Advisory Committee – Others in Attendance
Second Meeting – March 31, 2009

Last Name	First Name	Occupation or Affiliation	Address	City	State	ZIP	Phone Number	Fax Number	E-mail Address
Cacciatore	Lisa	ITT for DoD					(202)549-5486		Lisa.Cacciatore@itt.com
Christianson	Donna	FCC	445 12 th Street, SW	Washington	DC	20554	(202)418-7326	(202)418-0398	Donna.Christianson@fcc.gov
Connor	Jerry	ITT Corporation	1761 Business Center Dr., Suite 3100	Reston	VA	20190	(703)571-1422	(703)697-7836	jerry.conner@itt.com
Cressman	Brooks	ITT Corporation	12925 Worldgate Dr.	Herndon	VA	22170			Brooks.Cressman@itt.com
Delay	Deidre	FCC	445 12 th Street, SW	Washington	DC	20554	(202)418-0726	(202)418-0398	Deidre.Delay@fcc.gov
Dillon	George	ASRCMS	12021 Sunset Hills Rd, Suite 330	Reston	VA	20190	(571)262-3120		George.dillon@asrcms.com
Drazenovich	Darlene	NTIA	1401 Constitution Ave., NW	Washington	DC	20230	(202)482-3480	(202)501-8189	ddrazenovich@ntia.doc.gov
Dubroof	Linda	FCC	445 12 th Street, SW	Washington	DC	20554	(202)418-2335	(202)418-0398	Linda.Dubroof@fcc.gov
Epshteyn	Alexander	ASRC							Alexander.Epshteyn@asrcms.com
Giusti	John	FCC	445 12 th Street, SW	Washington	DC	20554	(202)418-1407	(202)418-0398	John.Giusti@fcc.gov
Hill	Joseph	FCC	445 12 th Street, SW	Washington	DC	20554	(202)418-2215	(202)418-0748	Joseph.Hill@fcc.gov
Hofer	Chris	Department of Defense	2461 Eisenhower Avenue, Ste. 1201-Hoffman Bldg.	Alexandria	VA	22331	(703)325-2876	(703)325-2617	Chris.Hofer@disa.mil
Ibarra	Dante	FCC	445 12 th Street, SW	Washington	DC	20554	(202)418-0610	(202)418-0398	Dante.Ibarra@fcc.gov
Joranceu	Steven	U.S. Army	2461 Eisenhower Avenue	Alexandria	VA	22331	(703)325-8202		Steven.Joranceu@us.army.mil
Kolb	Kim	ASRC Management Services	12021 Sunset Hills Rd	Reston	VA	20190	(571)262-3120		Kim.Kolb@asrcms.com
Lemke	Mike	ITT Corporation							mike.lemke@itt.com
Luther	William	ASRC Management Services	12021 Sunset Hills Rd, Suite 330	Reston	VA	20190	(571)262-3144	(571)203-1346	william.luther@asrcms.com
Nasser	Raafat	ITT for DoD	2461 Eisenhower Ave., Suite 1201	Alexandria	VA	22312	(703)325-2693		raafat.nasser@itt.com
Nellis	Donald	FAA							donald.nellis@faa.gov
Persaud	Sankar	FCC	445 12 th Street, SW	Washington	DC	20554	(202)418-2441	(202)418-0748	Sankar.Persaud@fcc.gov
Puckett	Ralph	Department of Defense					(703)325-2874		Ralph.Puckett@disa.mil

Roytblat	Alexander		445 12 th Street, SW	Washington	DC	20554	(202)418-7501	(202)418-0398	
Sung	Liching	NTIA	1401 Constitution Ave., NW	Washington	DC	20230	(202)482-3485	(202)501-8189	lsung@ntia.doc.gov
Ward	Stephen	MMI	11205 Lapham Drive	Oakton	VA	22124	(703)264-3906		Stephen.ward@mmiconnect.com
Williams	Jonathan	NTIA	1401 Constitution Ave., NW	Washington	DC	20230	(202)482-0675		jwilliams@ntia.doc.gov
Zoller	Julie	ITT Corporation	12975 Worldgate Drive	Herndon	VA	20170	(703)668-6348		julie.zoller@itt.com