DRAFT MINUTES[[1]](#footnote-1)

**Minutes of the Sixth Meeting of the FCC**

**World Radiocommunication Conference Advisory Committee (WRC-19)**

Date/Time: October 1st, 2018, 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**

Mr. Power welcomed everyone to the sixth meeting of the Committee. He thanked the members for their work and the progress made to date considering the WAC has made proposals on most Agenda Items. Mr. Power noted we are now addressing some of the more challenging items that include multiple views, and in many instances, the WAC proposals are not aligning with the proposals sent to the FCC by NTIA and the RCS subcommittee. Mr. Power urged all members to redouble their efforts to reach consensus as we move forward as we approach the Conference Preparatory Meeting and CITEL.

Mr. Power noted this is the WAC’s first paperless meeting, noting all the items under consideration at today’s meeting have been emailed to members prior to the meeting and are available on the FCC’s WAC webpage. In addition, a few copies of reference materials are available in the room for those wishing to make comments on any of the proposals.

Mr. Power indicated that the Committee would be considering ten new proposals and an updated preliminary view, in addition to comments on contributions from NTIA/RCS.

**2. Approval of the Agenda**

The agenda, Document **WAC/060 (01.10.18)** was approved without change.

1. **Minutes of the Fifth Meeting**

The minutes of the fifth meeting, Document **WAC/059 (01.05.18)**, were approved.

1. **NTIA Draft Preliminary Views and Proposals**

Mr. Murphy invited Dr. Brian Patton, the NTIA representative, to update the Committee on the Interdepartment Radio Advisory Committee (IRAC) process. Dr. Patton introduced three inputs from the RCS process:

* Letter, 16 August 2018, Draft Proposals for WRC-19 Agenda Items 1.16, Agenda Item 9, Issue 9.1.5, Agenda Item 10, Document **WAC/061 (16.08.18)**
* Letter, 6 September 2018, Draft Proposals for WRC-19 Agenda Items 1.13, Agenda Item 9, Issue 9.1.6, Document **WAC/062 (06.09.18)**
* Letter, 21 September 2018, Draft Proposals for WRC-19 Agenda Items 1.2, 1.3, 1.6, 1.13, 1.14, 4, 7, 9.1 (Issues 9.1.4, 9.1.9), and Agenda Item 10, Document **WAC/074 (21.09.18)**

Dr. Patton noted these documents represented 24 individual proposals on 12 different Agenda Items, representing the federal agency perspective on these WRC-19 Agenda Items.

Mr. Murphy noted Documents **WAC/061, WAC/062** and **WAC/074** as these documents have been submitted to the IWGs for consideration.

Ms. Manner (Echostar) inquired if the new proposals received by NTIA would be put on Public Notice for further comment or would they only be on the Public Notice after the IWGs have reviewed them. Mr. Mullinix indicated that following each WAC meeting the FCC issues a Public Notice that includes all documents considered at the WAC meeting. This Public Notice contains two Annexes; Annex A includes all of the IWG/WAC proposals and Annex B includes all of the NTIA/RCS proposals received. Mr. Mullinix noted that IWG-4 members requested the urgent review of the proposal for Agenda Item 7, Issue A, in order to reconcile for the upcoming CITEL PCC.II meeting in Brasilia. Mr. Mullinix requested all members review this proposal in Document **WAC/074 (21.09.18)** and provide comments through the Public Notice process. Based on the comments received, the FCC would consider whether to reconcile with NTIA to formulate a USA position or request further consideration by the WAC.

1. **IWG Status reports and Consideration of Preliminary Views**

**IWG-1: Maritime, Aeronautical and Radar Services**

Mr. Murphy introduced Mr. Cramer, Chair of IWG-1. Mr. Cramer outlined the issues that are under the purview of IWG-1 and reported that IWG-1 held one meeting since the last meeting of the Committee. Mr. Cramer noted that based on the most recent input from NTIA/RCS, he expects several proposals before the next WAC meeting. Mr. Cramer outlined the accomplishments thus far in IWG-1, and focused further work on the remaining maritime and aeronautical issues. Mr. Cramer urged participants to start considering further WRC Agenda Items under Agenda Item 10 as soon as possible.

**IWG-2: Terrestrial Services**

Mr. Power recognized Ms. Stancavage, Vice Chair of IWG-2, which covers terrestrial issues, to present the report. She noted IWG-2 has met four times since the last WAC meeting. She noted that IWG-2 has five documents for consideration today, including two with multiple views and one with an unprecedented four views. In addition, Ms. Stancavage provided views on documents provided by NTIA. On Issue 9.1.5, given the FCC has already reconciled on a proposal, that issue was noted. In respect to Document **WAC/062** and the proposal for Agenda Item 1.13 (31.8-33.4 GHz), T-Mobile did express their interest in using the band for 5G, however they were willing to let the “no change” proposal go forward to the FCC for reconciliation. Regarding Agenda Item 1.13 (45.5-47.2 GHz), IWG-2 is not in a position to endorse the RCS proposal at this time and will have further deliberations on the matter. Ms. Stancavage noted that Document **WAC/074** was received just before the WAC meeting and IWG-2 will consider those documents under the purview of IWG-2 before the next WAC meeting.

Agenda Item 1.13: to consider identification of frequency bands for the future development of International Mobile Telecommunications (IMT), including possible additional allocations to the mobile service on a primary basis, in accordance with Resolution **238 (WRC- 15)**

* Draft Proposal (View A/View B), Document **WAC/063 (01.10.18)**
* Draft Proposal, Document **WAC/064 (01.10.18)**

Ms. Stancavage introduced Documents **WAC/063** and **WAC/064.** The documents were approved.

Agenda Item 1.14: to consider, on the basis of ITU-R studies in accordance with Resolution **160** **(WRC-15)**, appropriate regulatory actions for high-altitude platform stations (HAPS), within existing fixed-service allocations -- Draft Proposal (View A/View B/View C/View D), Document **WAC/065 (01.10.18)**

Ms. Stancavage introduced Document **WAC/065.** The documents were approved. Mr. Mullinix thanked IWG-2 and the WAC for this proposal noting the FCC’s numerous requests for a proposal before the upcoming CITEL meeting given the USA’s interest in the Agenda Item. Mr. Mullinix noted that typically when there is this much disagreement at the WAC level, we would send the document back down to the IWG level for more deliberations. Given the RCS has provided its proposals on this Agenda Item, it is felt that the FCC has enough of a foundation based on the interests of the proponents and the incumbent users of this spectrum, to formulate a proposal for reconciliation. Mr. Mullinix remarked that while four views are presented, when you look at the proposals band-by-band, we see more consensus than opposition.

WRC Agenda Item 1.16: to consider issues related to wireless access systems, including radio local area networks (WAS/RLAN), in the frequency bands between 5 150 MHz and 5 925 MHz, and take the appropriate regulatory actions, including additional spectrum allocations to the mobile service, in accordance with Resolution **239** **(WRC-15)**

- Draft Proposal (View A/View B), Document **WAC/066 (01.10.18)**

**-** Draft Proposal, Document **WAC/067 (01.10.18)**

Ms. Stancavage introduced Documents **WAC/066** and **WAC/067.** The documents were approved.

Ms. Stancavage highlighted her appreciation to the membership of IWG-2 for their significant amount of work, offline discussions and effort to put forward all the proposals. She noted all of the discussions have been respectful and while views can differ, the spirit of the deliberations have always been civil. Largely, all of the issues under IWG-2’s purview are now complete and all that remains are a few of the bands under consideration for Agenda Item 1.13.

**IWG-3: Space Services**

Mr. Murphy introduced Mr. Zach Rosenbaum, Vice Chair of IWG-3, space services. He reported that IWG-3 held four meetings since the last meeting of the Committee. He noted three documents are up for consideration at this meeting and that IWG-3 will consider 1.2 and 1.3 at a future WAC meeting. On Agenda Item 1.6, Mr. Rosenbaum noted while he is presenting a consensus proposal, there is an outstanding concern from Viasat about the aggregate protection of the GSO and the consultation approach and this concern is captured in the meeting minutes of the most recent IWG-3 meeting.

Agenda Item 1.5: to consider the use of the frequency bands 17.7-19.7 GHz (space-to-Earth) and 27.5-29.5 GHz (Earth-to-space) by earth stations in motion communicating with geostationary space stations in the fixed-satellite service and take appropriate action, in accordance with Resolution **158 (WRC-15)**, Draft Proposal (View A/View B/View C), Document **WAC/068 (01.10.18)**

Mr. Rosenbaum introduced Document **WAC/068.** Mr. Damon Ladson (Iridium) noted that it is premature to adopt a proposal for Agenda Item 1.5 as Resolution 158 calls for complete and agreed studies which have not been closed. The document was approved.

Agenda Item 1.6: to consider the development of a regulatory framework for non-GSO FSS satellite systems that may operate in the frequency bands 37.5-39.5 GHz (space-to-Earth), 39.5-42.5 GHz (space-to-Earth), 47.2-50.2 GHz (Earth-to-space) and 50.4-51.4 GHz (Earth-to-space), in accordance with Resolution **159 (WRC-15)**, Draft Proposal, Document **WAC/069 (01.10.18)**

Mr. Rosenbaum introduced Document **WAC/069.** The document was approved.

Agenda Item 1.7: to study the spectrum needs for telemetry, tracking and command in the space operation service for non-GSO satellites with short duration missions, to assess the suitability of existing allocations to the space operation service and, if necessary, to consider new allocations, in accordance with Resolution **659 (WRC-15)**, Draft Preliminary View, Document **WAC/070 (01.10.18)**

Mr. Rosenbaum introduced Document **WAC/070.** The document was approved. Mr. Rosenbaum noted that IWG-3 also supports the “no change” proposal submitted by NTIA on Agenda Item 1.7.

**IWG-4: Regulatory Issues**

Mr. Power introduced the IWG-4 Chair, Ms. Manner. Ms. Manner indicated that IWG-4 has met four times since that last WAC. Ms. Manner highlighted that Agenda Item 7, Issue A is of particular interest to her members and that she would relay the urgency to reconcile this proposal, if possible. In addition, IWG-4 members have endorsed the RCS proposal on Issue 9.1.6 but request the FCC make editorial modifications to improve the changes proposed to Resolution 958.

Agenda Item 7, Issue B: Application of coordination arc in the Ka-band, to determine coordination requirements between the FSS and other satellite services – Draft Proposal, Document **WAC/071 (01.10.18)**

Ms. Manner introduced Document **WAC/071.** The document was approved.

Agenda Item 7, Issue C5: Bureau reminder to notifying administrations per **footnote 11.46**– Draft Proposal, Document **WAC/072 (01.10.18)**

Ms. Manner introduced Document **WAC/072.** The document was approved.

Agenda Item 7, Issue D: Identification of those specific satellite networks and systems with which coordination needs to be effected under RR **Nos. 9.12, 9.12A and 9.13** – Draft Proposal, Document **WAC/073 (01.10.18)**

Ms. Manner introduced Document **WAC/073.** The document was approved.

Mr. Power thanked the Chairs and Vice Chairs for their presentations.

1. **Future Meetings**

Mr. Power referred to Document **WAC/004(rev.01.10.18)**, the timeline for the Committee’s work, and announced March 11th, 2019 at 11 a.m., as the date of the seventh meeting of the Committee.

**8. Other Business**

Mr. Power asked if there were any additional comments.

Mr. Murphy noted the passing of our dear friend and colleague, Mr. Alexander Gerdenitsch. Mr. Mullinix, on behalf of the FCC, shared his appreciation for all of Alexander’s work and contributions in the WAC and for the United States at the ITU. The meeting was invited to share in the remembrance of Alexander’s friendship after the WAC meeting concludes.

Mr. Mullinix noted that the March 11th meeting would be the final WAC meeting in preparation for WRC-19 and the focus should start to turn to Agenda Item 10 and future conference agenda items for WRC-23.

Mr. Murphy asked if there were any other comments or any other business.

There being no other business, the meeting was adjourned at 11:40 a.m.

Documents Distributed:

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| WAC/059 | Draft Minutes of the Fifth WAC Meeting |
| WAC/060 | Agend of the Sixth Meeting 01.10.18 |
| WAC/061 | NTIA Draft Proposals 1.16, 9.1.5, 10 |
| WAC/062 | NTIA Draft Proposals 1.13, 9.1.6 |
| WAC/063 | IWG-2 Draft Proposal Agenda Item 1.13 (47 GHz) |
| WAC/064 | IWG-2 Draft Proposal Agenda Item 1.13 (66 GHz) |
| WAC/065 | IWG-2 Draft Proposal Agenda Item 1.14 |
| WAC/066 | IWG-2 Draft Proposal Agenda Item 1.16 (5150) |
| WAC/067 | IWG-2 Draft Proposal Agenda Item 1.16 (< 5250) |
| WAC/068 | IWG-3 Draft Proposal Agenda Item 1.5 |
| WAC/069 | IWG-3 Draft Proposal Agenda Item 1.6 |
| WAC/070 | IWG-3 Draft Preliminary View Agenda Item 1.7 |
| WAC/071 | IWG-4 Draft Proposal Agenda Item 7, Issue B |
| WAC/072 | IWG-4 Draft Proposal Agenda Item 7, Issue C5 |
| WAC/073 | IWG-4 Draft Proposal Agenda Item 7, Issue D |
| WAC/074 | NTIA Draft Proposals 1.2, 1.3, 1.6, 1.13, 1.14, 4, 7, 9.1.4, 9.1.9, 10 |

MINUTES

**Appendix 1**

**World Radiocommunication Conference Advisory Committee Attendance**

**Sixth Meeting – October 1st, 2018**

* Joe Ciaduelli, Sennheiser
* Oscar DeGuzman, Intelsat
* David Marshack, Loon
* Veena Rawat, GSMA
* Cody Hogan, T-Mobile
* Julie Zoller, Omnispace
* Kris Hutchinson, Aviation Spectrum Resources, Inc.
* Michael Tseytlin, Facebook, Inc.
* Michael A. Lewis, Motorola Solutions, Inc.
* Joe Cramer, Boeing
* Robert Weller, NAB
* Brennan Price, EchoStar
* Zachary Rosenbaum, SES Americom, Inc.
* Fernando Carrillo, EchoStar
* Jennifer Miller, Loon
* Hazem Moakkit, Intelsat
* Andrew Roy, Aviation Spectrum Resources, Inc.
* John Prendergast, TMA
* Jayne Stancavage, Intel
* Jen Oberhausen, CTIA
* Tom Power, CTIA
* Joseph R. Dockemeyer, APTIV
* Kathryn Martin, Facebook, inc.
* Dave Case, CISCO
* Kyle Entz, Sprint
* Leslie Martinkovics, Verizon
* Giselle Creeser, Inmarsat
* Alexandre Guerin, Thales
* Amy Alvarez, AT&T
* Philippe Secher, SES
* Lauren Crean, TMG INC Observer
* Tom Hastings, Omnispace
* Damon Ladson, Iridium
* Alex Epshteyn, Boeing
* Scott Kotler, Lockheed Martin
* Greg Baker, Aviation Spectrum Resources, Inc.
* Pasquale Amodio, Thales
* Andy Scott, National Cable & Telecommunications Association (NCTA)
* Chris Murphy, ViaSat
* Jennifer Manner, EchoStar
* Don Jansky, SpaceBelt
* Hastyar Barvar, Intelsat

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**Appendix 2**

**World Radiocommunication Conference Advisory Committee Attendance**

**Sixth Meeting – October 1, 2018**

**FCC Representatives:**

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| * Michael Mullinix, FCC * Ron Marcelo, FCC * Thomas Sullivan, FCC * Jose Albuquerque, FCC * Allen Yang, FCC * Dante Ibarra, FCC * Kelly O’Keefe, FCC * Olga Madruga-Forti, FCC * Louis Bell, FCC |
|  |

**Observers:**

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| --- |
| * Joanne Wilson, ASTS * Brian Patten, NTIA * Chip Yorkgitis, Elefante Group * Amy L. Sanders, NTIA |

1. To be considered and approved at the 7th WAC meeting on March 11th, 2019. [↑](#footnote-ref-1)