**Meeting Minutes**

Meeting: IWG-2 (Meeting 23)

Date/Time: Friday, September 7, 2018 11:00 a.m.-1:00 p.m. EDT

Location: Conference call

Committee Members & Observers Present:

Chair: Jayne Stancavage (Intel Corporation)

For additional members and observers present, see attached Appendix A.

FCC Employees Present:

Michael Mullinix, Designated Federal Official (DFO) for WAC-19

Larry Olson.

Meeting Summary:

1. Approval of Agenda:

Jayne Stancavage introduced the agenda in Document **IWG-2/081 (07.09.18)**.The agenda was approved.

1. FCC Reps, Opening Remarks and Introductions:

Michael Mullinix, DFO for WAC-19 confirmed his presence on the call. Following roll call, participants were asked to email the chair confirming their presence on the call.

1. Approval of minutes from previous IWG-2 meeting:

The minutes of the previous meeting contained in **IWG-2/080 (07.09.18)** were approved.

1. Discussion of Draft IWG-2 Preliminary Proposals:
2. Agenda Item 1.13 re: 48.2-50.2 GHz: Document **IWG-2/072 (10.04.18)** was previously introduced. Offline discussions were unable to be scheduled due to ITU meetings, holiday, and vacation schedules.
3. Agenda Item 1.13 re: 47.2-50.2 GHz:Dr. Veena Rawat, GSMA, introduced document **IWG-2/083 (07.09.18)**. Questions and concerns raised included the need for some constraints on IMT due to interference into IMT, the deletion of 5.2238A, and a difference of opinion over IMT/ubiquitous or HDFSS is a national or international issue. There was also a question about how to accommodate a small number of earth stations in 47.2-48.2 GHz but another member mentioned that their satellite operations are similar throughout the entire 47.2-50.2 GHz band.

An offline discussion regarding documents **IWG-2/072** and **IWG-2/083** will be held on Monday September 10th from 1:30-3:30 pm Eastern- interested parties should contact Brennan Price.

1. Agenda Item 1.13 re: 66-71 GHz: Alex Roytblat, Wi-Fi Alliance, introduced the revisions in Document **IWG-2/077r1 (07.09.18):** one additional paragraph was added.Several members expressed their support. The document was approved for submission to the upcoming WAC meeting on October 1st.
2. Agenda Item 1.13 re: 31.8-33.4 GHz and 45.5-47.2 GHz- Dr. Brian Patten, NTIA, introduced document **IWG-2/084 (07.09.18)** which includes a group of three draft proposals on agenda item 1.13 (31.8-33.4 GHz, 45.5-47 GHz, and 47-47.2 GHz) and one on Agenda Item 9.1/ Issue 9.1.6 (which is outside the scope of IWG-2). Due to limited time to review the document, the Chair asked if there were any initial questions or comments. Questions and concerns included whether the proposal also intended to include 47.2-47.5 GHz: Dr. Patten confirmed the upper bound should be 47.2 GHz, as well as comments about the text that there is no interest.
3. Agenda Item 1.14: Michael Tseytlin, Facebook, introduced the revisions in Document **IWG-2/078r1**. Questions and comments included the following: 26 GHz resolves 1 and 2 may apply to other bands as well, 26 GHz pfd limits still to be discussed, whether to start with “In Region 2” for proposal 2, text re: lack of deployment in 22 GHz, FS deployments within Region 2, footnote G.114 doesn’t have the text about not having priority over other services, Resolution for 47 GHz re: ubiquitous deployment of HAPS, IMT, and FSS terminals, protection values still needed, resolves 3bis for 26 GHz and 47 GHz, lack of a Resolution for 38 GHz, rain fade, Resolution 122 resolves 2 and recognizing b, protection of non-HAPS Fixed Service and Mobile Service pfd limits, how to deal with interference in cases with pfd limits, and compliance mask. Multiple offline discussions are planned for next week: Monday (mobile protection), Tuesday (satellite), and Wednesday (Res. 122 and other issues). Interested parties are asked to contact Michael Tseytlin of Facebook.
4. Agenda Item 1.16 re: 5150-5250 MHz: Mr. Roytblat introduced the revision in document **IWG-2/076r1 (07.09.18)** which addressed the request to fix the language in the thirdbullet. Dave Weinreich, Globalstar, introduced document **IWG-2/082 (07.09.18).** Questions and concerns regarding these documents included the following: whether there was a preliminary view on this topic, rise in noise floor, and petition for NOI. An offline discussion may be held: interested parties are asked to contact Jayne Stancavage.
5. **A**genda Item 1.16 re: 5250-5925 GHz:Mr. Roytblat introduced revisions to the RCS proposal in document **IWG-2/079r1 (07.09.18).** Questions and comments included whether it should be proposed as a no change without the underline and how to display Region 1 proposal for 5725-5850 MHz: a clean version will be provided in an annex so it is clear what is being proposed. Members with any other concerns are asked to contact Mr. Roytblat.
6. Update on Current Status:

There were no updates on current status.

1. The next IWG-2 meeting will be held on Tuesday September 18th at 2-4 pm EDT. The next WAC meeting will be held on Monday, Oct. 1st.

Documents Distributed:

IWG-2/072 AI 1.13 draft proposal on 48.2-50.2 GHz

IWG-2/076r1 AI 1.16 draft proposal on 5150-5250 MHz

IWG-2/077r1 AI 1.13 draft proposal on 66-71 GHz

IWG-2/078r1 AI 1.14 draft proposal

IWG-2/079r1 AI 1.16 draft proposal on 5250-5925 MHz (revisions to RCS)

IWG-2/080 Meeting 22 minutes

IWG-2/081 Meeting 23 agenda

IWG-2/082 AI 1.16 draft proposal on 5150-5250 MHz

IWG-2/083 AI 1.13 draft proposal on 47.2-50.2 GHz

IWG-2/084 Draft proposals from RCS (AI 1.13 on 31.8-33.4 GHz & 45.5-47.2 GHz and Issue 9.1.6)

Public Participation Statement:

Meeting IWG-2/23 (07.09.2018) was open to the public ([DA 18-804](https://www.fcc.gov/document/wrc-19-advisory-committee-meetings-iwg-2)) and had 30 members, 4 alternate members, 20 observers, 1 IWG-2 official and 2 FCC employees in attendance.

Author:

Jayne Stancavage, Intel Corporation, prepared these minutes.

**Appendix A: Additional Attendees at September 7, 2018** **meeting of IWG-2**

**Members**

| **Organization** | **Member Name** |
| --- | --- |
| Aerospace and Flight Test Radio Coordinating Council | Ken Keane |
| Apple | Mark Neumann |
| ARRL | Jonathan Siverling |
| AT&T | Stephen Blust |
| Boeing Company | Alex Epshteyn |
| Comcast | Bruce Kostreski |
| CTIA | Jen Oberhausen |
| EchoStar Corporation | Brennan Price |
| Ericsson | Mark Racek |
| Facebook | Michael Tseytlin |
| Globalstar | David Weinreich |
| GPS Innovation Alliance | Stephen Baruch |
| GSA | Dr. Charles Rush |
| GSMA | Dr. Veena Rawat |
| Inmarsat | Giselle Creeser |
| Lockheed Martin | Scott Kotler |
| Microsoft | Micahel Daum |
| Motorola | Michael Lewis |
| NAB | Bob Weller |
| NCTA | Andy Scott |
| Samsung Electronics America | Rob Kubik |
| Sennheiser | Joe Ciaudelli |
| SES Americom, Inc. | Philippe Secher |
| Thales | Alexandre Guerin |
| 21st Century Fox | Winston Caldwell |
| T-Mobile | Cody Hogan |
| Verizon | Leslie Martinkovics |
| ViaSat, Inc. | Chris Hofer |
| Wi-Fi Alliance Association | Alexander Roytblat |
| Ygomi, LLC | Russ Shields |

**Observers**

1. Colin Alberts, Freedom Technologies
2. Amy Alvarez, Alternate for AT&T
3. Scott Bilquist, World Radiocommunication Week
4. Christine DiLapi, Peraton for DoD
5. Ed Ehrlich, Interdigital
6. David W. Eierman, Motorola Solutions
7. Kevin Eisenhauer, Access Partnership
8. Andy Feltman, Peraton for DoD
9. Tom Hastings, Omnispace
10. Ryan Henry, Alternate for SES
11. James Higgins, ASRC Federal Technical Services for NASA
12. Dan Jablonski, Alternate for AFTRCC
13. Bruce Lamb, NTIA
14. Giadira Leon, S3 for AFSMO
15. Kathryn Martin, Access Partnership (Alternate for Facebook)
16. Tricia Paoletta, HWG
17. Brian Patten, NTIA
18. Carl Povelites, AT&T
19. Vishnu Sahay, ASRC Federal Technical Services for NASA
20. Amy Sanders, NTIA
21. Raj Sengupta, CTIA
22. Brandy Sykes, Alternate for Apple
23. Joanne Wilson, ASRC Federal Technical Services for NASA
24. Chip Yorkgitis, Kelley Drye