**Meeting Minutes**

Meeting: IWG-3 (Meeting 18)

Date/Time: Thursday, November 1, 2018 13:00-15:00 PM EDT

Location: Conference call

Committee Members & Observers Present: See attached Appendix A.

FCC Employees Present:

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

Meeting Summary:

1. Opening Remarks, Introductions, Identification of DFO, volunteer to take minutes

Zach Rosenbaum, Co-Chair of IWG-3, opened the meeting with a statement of objectives for the meeting and asked all participants to introduce themselves. Participation of a DFO was confirmed. As no participant was willing to volunteer to take minutes, the Chairman resigned himself to this task.

1. Approval of Agenda

The agenda in DocumentIWG-3/060r1 was approved with the amendment of the three additional documents to be considered. It was also requested and agreed to consider Agenda item 10 documents first to accommodate participants having conflicting meetings.

1. Approval of minutes from seventeenth IWG-3 meeting:

The minutes of the previous meeting as contained in IWG-3/058r1 were approved without comment.

1. Other meetings of interest since last meeting of IWG-3

Don Jansky noted upcoming CITEL meeting and ongoing preparations as well as the Plenipotentiary meeting occurring in the UAE.

1. Current status of WRC-19 AIs under IWG-3 and discussion of draft proposals
2. Agenda Item 1.2: The NTIA provided a proposal contained in document IWG-3/059. George John, Spire, submitted a document (IWG-3/061) proposing edits to the NTIA draft to primarily increase the enforcement date of the maximum e.i.r.p. transmission from earth stations in the MSS. Mr. John indicated the edits also amended the frequency range to allow for 30 kHz of spectrum for telecommand operations without the proposed e.i.r.p. limits. Kellen Gibson, NTIA, observed that the FCC and NTIA are presently working on reconciled text for this agenda item.
3. Agenda Item 1.3: The NTIA provided a proposal contained in document IWG-3/059. Mr. Charles Rush, GSA, identified a number of concerns with the proposal. The primary concern was that the studies to upgrade the meteorological-satellite and earth exploration-satellite services do not appear to have considered the impact on the current and future use and development of the fixed and mobile allocations in co-frequency and adjacent frequency bands. Mr. Rush indicated this was a fundamental component of the Resolution 766 (WRC-15) and proposed that footnote **5.A103** be amended accordingly. Mr. Rush also noted that *considering* *e*) in the proposed Draft New Resolution [B103] (WRC-19) should include the global IMT identification and should have a new considering that fixed and mobile development shall not be limited. Mr. Rush finally noted that current studies do not appear to have considered the fixed and mobile transmissions interfering with meteorological-satellite or earth exploration-satellite service earth stations.

Mr. Michael Mullinix, FCC, noted that the proposal appears to have errors and suggested the meeting postpone consideration of the proposal until a corrected version is provided. For example, the footnotes **5.B103** and **5.C103** are cited in the Article 5 modifications but not included in the proposal.

Mr. Kellen Gibson, NTIA, observed that the GSO limits being proposed were the more conservative limits with the intent being to protect the primary services. Mr. Gibson took due note of the comments from Mr. Mullinix and agreed to work with government agencies to supply a corrected version of the proposal.

A participant noted that field tests were ongoing to determine the impact of satellite transmissions into terrestrial. This work has been submitted to ITU-R Working Party 5C.

The meeting agreed to postpone consideration of this proposal and to resume discussions at a future IWG-3 meeting.

1. Agenda Item 1.5: The Chair noted that a proposal with three views was sent to the WAC and is currently in the reconciliation process.

Mr. Gerry Shewan, OneWeb, requested an update on the status of the proposal to which Mr. Mullinix, FCC, responded that a version of the proposal was in the reconciliation process with an aim to submit a document to CITEL by November 12th. Mr. Stephen Baruch sought details of the version submitted to the reconciliation process. Mr. Mullinix indicated that this version cannot be shared but that the FCC has worked with the authors of the views to consolidate a single view for the reconciliation process.

1. Agenda item 1.6: The Chair noted that there was a consensus proposal submitted to the WAC and it is going through the reconciliation process.
2. Agenda item 1.7: The Chair noted the updated preliminary view submitted to the WAC and going through the reconciliation process.
3. Agenda item 9.1 (Issue 9.1.9): The NTIA provided a proposal in document IWG-3/059. Mr. Alex Epshteyn, Boeing, stated that they are reviewing the document and will likely have proposed edits for consideration at a future IWG-3 meeting.

Ms. Veena Rawat indicated that there is overlap in frequency bands with this issue and Agenda item 1.13 which requires consideration.

1. Agenda item 9.1 (Issue (9.1.7): The Chair noted no change in status.
2. Agenda item 10: Mr. Mullinix, FCC, noted one Agenda item 10 proposal sent to the WAC in document WAC/061 from NTIA relevant to the meeting related to the 40-50 MHz frequency band for the earth exploration-satellite service. Mr. Mullinix noted that IWG-3 has not previously considered this proposal but the FCC is currently working this proposal in the reconciliation process.
3. Agenda item 10: Mr. Fernando Carrillo, EchoStar/HNS, introduced document IWG-3/062 regarding the use of the 27.5-30 GHz band for satellite-to-satellite communications within the FSS Earth-to-space allocation, citing the work that has been conducted at recent Working Party 4A meetings. Mr. Carrillo further stated that this type of operation is being done today which demonstrates some urgency to clarify this use for administrations and the Bureau.

Mr. Don Jansky, Jansky-Barmat, noted that this subject may be something that is addressed under Agenda item 9.2, the Director’s Report. Ms. Jayne Stancavage, Intel, indicated concerns with the proposal as being an expansion of the definition for FSS and would like to discuss this document further with the authors. Ms. Rawat stated concerns that the primary services sharing this band do not have appropriate mention in terms of protecting their use and development. Mr. Baruch sought clarification about the proposal being too prescriptive for the type of operation as being FSS and whether or not inter-satellite links could be considered under this proposal.

Mr. Carrillo appreciated the comments and questions and proposed to schedule off-line discussions with interested parties before the next IWG-3 meeting. The Chair agreed to support Mr. Carrillo in organizing such a meeting.

Mr. Carrillo introduced his second document, IWG-3/063, regarding the use of 37.5-39.5 GHz frequencies for Earth-to-space FSS transmissions. Mr. Carrillo noted the origins of this document go back to WRC-15 where it was placed on the draft agenda for WRC-23. Mr. Carrillo further stated the nature of the FSS allocation being sought is primarily for gateway operations.

Ms. Stancavage identified concerns that allocations or identifications in this frequency band may change at WRC-19 and that these changes should be duly considered if or when this Agenda item is adopted. Mr. Mullinix sought clarification if the frequency bands being proposed were still the most appropriate frequencies when considering the recent domestic proceedings conducted in the United States. Mr. Mullinix also suggested more text may be needed in the event new services are added by WRC-19.

Mr. Carrillo appreciated the comments and questions and similarly proposed to schedule off-line discussions with interested parties before the next IWG-3 meeting. The Chair agreed to support Mr. Carrillo in organizing such a meeting.

6. Future Meetings

The Chair suggested that the next meeting be held in one month from now. The meeting noted the CITEL meeting and other conflicting meetings around that time. It was agreed to work offline with the FCC and Chair of IWG-4 to schedule an appropriate date and time for the next IWG-3 meeting.

7. Other Business

Mr. Mullinix noted two very important items for the IWG-3 membership considering proposals under Agenda item 10:

1. The deadline for new proposals for future Agenda items is **April 1st, 2019**. Consequential agenda items are acceptable.
2. No future agenda item may have frequency overlap with any other future agenda item. This is to avoid the challenges experienced with the current WRC Agenda.

Documents Distributed:

IWG-3/058r1 Minutes of the 17th meeting of IWG-3

IWG-3/059 NTIA proposals to WRC-19

IWG-3/060r1 Meeting 18 Agenda

IWG-3/061 AI 1.2 draft proposal from Spire

IWG-3/062 AI 10 draft proposal from EchoStar/HNS: Ka satellite-to-satellite links

IWG-3/063 AI 10 draft proposal from EchoStar/HNS: 38 GHz FSS Earth-to-space

Public Participation Statement:

Meeting IWG-3/18 (1 November 2018) was open to the public ([DA 18-979](https://docs.fcc.gov/public/attachments/DA-18-979A1.pdf)) and had 16 members, 18 observers, and 2 FCC representatives participating.

Author:

Zach Rosenbaum, Vice-Chair IWG-3, prepared these minutes.

**Appendix A: Attendees at November 1, 2018** **meeting of IWG-3**

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| Members | |
| Name | Company |
| Don Jansky | Jansky-Barmat |
| Stephen Baruch | New Wave Spectrum Partners |
| Fernando Carrillo | EchoStar |
| Lou Fiore | AICC |
| Alex Epshteyn | Boeing |
| Veena Rawat | GSMA |
| Damon Ladson | Iridium |
| George John | Spire |
| Giselle Creeser | Inmarsat |
| Pat Amodio | Thales |
| Charles Rush | GSA |
| Donna Wang | SES |
| Matt Botwin | SpaceX |
| Rob Briskman | Sirius XM |
| Jen Oberhausen | CTIA |
| Kyle Entz | Sprint |
| Jayne Stancavage | INTEL |
| Michael Lewis | Motorola |
| Gerry Shewan | Telecomm Strategies |
| Hastyar Barvar | Intelsat |
| David Marshack | RKF for Loon |
|  |  |
| Observers | |
| Name | Company |
| Amy Sanders | NTIA |
| Lauren Crean | TMG |
| Larry Reed | ARTS for NASA |
| Scott Billquist | World Radiocommunication Week |
| Alex Guerin | Thales |
| Clifford Gonsalves | Thales |
| James Higgins | NASA |
| David Eierman | Motorola |
| Julie Kearney | Loon |
| Kellen Gibson | NTIA |
| William Tranavitch | DOD |
| Brandon Hinton | Wiley Rein |
| Shelli Rose Haskins | USCG |
| Collin Alberts | DOD |
|  |  |
| FCC Representatives | |
| Michael Mullinix | |
| Larry Olson | |