

IWG-4/047  
July 30, 2002

**WRC-03 Advisory Committee  
IWG-4  
Fixed Service / Fixed-Satellite Service Sharing**

**MEETING MINUTES**

**Meeting:** Fifteenth Meeting of IWG-4

**Date/Time:** July 30, 2002, 2002 1:30 p.m.

**Location:** FCC, 6<sup>th</sup> Floor, South Conference Room

**Chairperson:** Jack Wengryniuk

**FCC Employees Present:** Alex Roytblat, Ron Netro, Scott Kotler

**Introduction of Participants:** Participants, including several participating by phone, introduced themselves (See Attachment 1)

**Approval of the Agenda:** No written agenda was provided.

**Approval of Minutes of June 27th, 2002 meeting (doc. IWG-4/035):** The minutes were approved without comment.

**Consideration of Potential New IWG-4 Draft WRC-03 Proposals:**

Several documents concerning a draft U.S. proposal on agenda item 1.13 (HAPS) and Resolution 122 were discussed extensively. The following documents were presented and discussed:

<b>Document No.</b>	<b>Title</b>	<b>Source</b>
IWG-4/19 (rev.1)	Draft U.S. Proposal on WRC-03 Agenda Item 1.13	Wengryniuk (Hughes Network Systems)
IWG-4/32	Draft U.S. Proposal on WRC-03 Agenda Item 1.13	Gould for SkyTower
IWG-4/36	Contribution of SkyTower	Gould for SkyTower
IWG-4/37	Draft Proposal on WRC-03 Agenda Item 1.13 (Resolution 122)	Gould for Skytower
IWG-4/38	Addendum to Working Document towards a PDNR on the Sharing between FS Using HAPS and FSS	Gould for SkyTower
IWG-4/39	Interference Impact of HAPS input upon Co-channel FS/FWA Usage	V. Shay, S. Torrico for SkyTower
IWG-4/40	SkyTower's Objections to Hughes Proposal (IWG-4/19 rev.1)	Gould for SkyTower
IWG-4/41	SkyTower Response to RF Development Comments	Gould for SkyTower
IWG-4/42	Agenda Item 1.13	Rappoport for Winstar
IWG-4/43	RF Development, LLC	Walters for RF Development
IWG-4/44	Comments of Mark Lewellen	Lewellen for SkyStation
IWG-4/45	E-mail Comments of Steve Baruch	Baruch for TRW

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Rick Gould presented the new proposals of SkyTower, which were also supported by Intelsat. These proposals argue for a U.S. proposal which would identify a specific band segment of 2 x 300 MHz in the Ka-band for HAPS. Gould explained that the new proposal eliminated the PFD limit on HAPS in this identified segment because, under the current construct of the proposal, it would not longer be needed to protect FSS.

Gould further described his proposed addendum to the Working Document towards a PDNR on the Sharing between FS using HAPS and FSS. This addendum, according to Gould, would take into account the concerns of co-frequency FS.

Gene Rappoport expressed the concern of Winstar that the approach proposed by SkyTower and supported by Sky Station, especially the proposed addendum to the Working Document, would make it appear that the ITU-R is encouraging the worldwide implementation of HAPS.

Steve Baruch stated that the approach taken by the U.S. HAPS representatives with regard to 47 GHz was not consistent with the agenda item. This inconsistency, he said, could hinder the U.S. in its efforts to promote other U.S. proposals and positions since the U.S. may seek to argue that proposals from other administrations are beyond the scope of the relevant agenda item.

Vishnu Sahay presented the results of SkyTower's study of the potential impact of HAPS on the Fixed Service. According to Mr. Sahay, the study showed that 0.06% of locations would suffer up to a -10 dB degradation in I/N.

It was observed that in the U.S., implementation of HAPS in the Ka-band would be subject to FCC policies and procedures and likely could only be in conjunction with licensed LMDS operators.

Because of the controversy of the various positions and proposals, a review of the history of the HAPS decisions at previous WRCs was described. Steve Doiron explained that RR 5.537A which provides a 300 x 850 MHz segment in the Ka-band for use by HAPS in several Asian administrations and Iran, originated from the concern of those countries about propagation in the 47 GHz band in which HAPS allocations exist. He explained that it wasn't possible to identify a specific 2 x 300 MHz segment at the conference but it was understood that only 300 MHz of the 850 MHz identified would be used.

Doiron explained that Intelsat was willing to go along with the SkyTower proposal because it would provide an identified 2 x 300 MHz allocation for HAPS (on a secondary basis) in the same identified countries. This would enable FSS systems to better plan their beam patterns in future satellite systems operating in these areas and bands. Doiron said that the identification of a specified allocation would be preferable to PFD limits on HAPS because such an approach would move towards quantifying "harmful interference."

Jack Wengryniuk pointed out the issues identified at the previous IWG-4 meeting which, he noted, did not appear to be resolved by the SkyTower input documents. He agreed with Doiron's description of the history of the allocation in the Ka-band. He also noted that if the U.S. feels it is in the interest of the U.S. to expand the agenda item, then it can do so. But he stated that it is the responsibility of the IWG to point out the issue regarding the agenda item so that the Advisory Committee can assess this concern.

Gould agreed that the need for the Ka-band spectrum (for HAPS) was not foreseen by most countries at WRC-00 but they might want to consider such an allocation at WRC-03.

Mr. Wengryniuk suggested that the best approach would be to solve the problem posed by WRC-00 in the agenda item and craft a new agenda item for consideration by the upcoming WRC-06 to resolve any additional requirements that may have emerged since WRC-00.

Gould said this would impact SkyTower, which wants to begin implementing its system in 2004. Furthermore, he said that expansion of the allocation to the Ka-band could help LMDS get going.

Lewellen agreed with the historical background of the issue but stated the view that the language in the agenda item is not so restrictive because it doesn't identify the 12 countries in the footnote.

Steve Baruch said TRW objected to all the V-band (47 GHz) aspects of the SkyTower proposals because this would perpetuate the freeze on the Radiocommunication Bureau's acceptance of FSS filings in this band. So, he could not support the proposed removal of the restriction to feeder links on HAPS in the 47 GHz. This subject, he stated, also was beyond the scope of the agenda item. Baruch also noted that the proposals of the "Skys" could potentially expand the HAPS allocation to countries other than those noted in 5.537A.

However, Baruch said he thought there could be a basis for resolving the differences in the proposals from the HAPS and the satellite community (documents 37 and 19). First, he noted that, using IWG-4/19 as a starting point, a reference could be added in footnotes 537A and 545A to a resolution. Then, he said there could be a clause added in Resolution HAPS 28-31 that would suspend the ability of administrations to raise RR 4.15A in 27.5-28.35 GHz between 2003 and 2006, pending conclusions of studies. Finally, he said that Resolution 122 could be suppressed, but the feeder links should not be addressed.

It was agreed that Baruch should prepare and circulate a new draft and there would have to be an additional meeting to discuss proposals on this issue from IWG-4.

#### Other WRC Issues

Alex Roytblat noted that the RCS had agreed to a proposal on Agenda Item 1.32 and that there was a substantial difference between its proposal and previous IWG-4 views. Baruch suggested that IWG-4 send a report to the Advisory Committee noting that Document 46 from the RCS materially differs from previous inputs of IWG-4 to the Advisory Committee, that IWG-4 had reviewed the RCS proposal, and reaffirmed its previous submission to the WAC. This was agreed by the group.

With regard to Agenda Item 1.32, Steve Doiron noted that there was a discrepancy between the statements of the Radioastronomy representatives and the history of allocations in the band. In fact, he pointed out that the BSS allocation was added in 1971 and the Radioastronomy allocation in 1979, not the reverse. He also pointed out that CORF does not identify the band for protection of spectral line observations.

The meeting was adjourned at 4:20 p.m.

**Minutes prepared by:** Leslie Taylor

# *Attachment 1*

## *WAC IWG 4 15<sup>th</sup> Meeting Attendees (7-30-02)*

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