

BEFORE THE
Federal Communications Commission
WASHINGTON, D.C. 20554

In the Matter of)	
)	
Utilities Telecom Council and Winchester)	RM-11429
Cator, LLC)	
)	
Petition for Rule Making to Establish Rules)	
Governing Critical Infrastructure Industry)	
Fixed Service Operations in the 14.0–14.5)	
GHz Band)	

To: The Commission

OPPOSITION OF ROW 44, INC.

Row 44, Inc. (“Row 44”), by counsel and pursuant to Section 1.405(a) of the Commission’s Rules (47 C.F.R. § 1.405(a)), hereby opposes the above-captioned Petition for Rule Making (“Petition”)¹ submitted by the Utilities Telecom Council (“UTC”) and Winchester Cator, LLC (“Winchester”) (collectively, the “Petitioners”). Petitioners have requested that the Commission initiate a rulemaking proceeding to amend the Commission’s Rules to allow shared, secondary operation of terrestrial fixed service transmitters in the 14.0-14.5 GHz Fixed-Satellite Service (“FSS”) band for the purpose of providing what the Petitioners characterize as “critical infrastructure industry” communications.

The Petitioners’ proposal suffers from multiple defects that should prompt the Commission to dismiss it without further action. First, of greatest importance to Row 44, the

¹ “Utilities Telecom Council and Winchester Cator, LLC Petition for Rulemaking to Establish Rules Governing Critical Infrastructure Industry Fixed Service Operations in the 14.0-14.5 GHz Band,” Petition for Rulemaking, RM-11429, filed May 6, 2008.

Petition fails to consider the potential impact of the proposal on the development of new mobile-satellite service (“MSS”) communications applications that are now beginning to be deployed in the Ku-band. Second, the Petition fails to demonstrate how the proposed “secondary” spectrum use for the purpose of providing “critical communications” is either feasible in the first instance, or sustainable in the long-term, given the potential introduction of large numbers of fixed service users. Third, the Petition fails to explain why a new fixed service allocation in the 14.0-14.5 GHz FSS uplink band is necessary to accommodate the specific types of uses contemplated given the fact that existing allocations for the fixed service are underutilized. Finally, the Petition does not adequately consider the impact of already pending rulemaking proceedings affecting the Ku-band, which must be resolved -- and the results of any changes fully taken into consideration -- before any further rule modifications are considered.

I. Row 44’s Interest in This Proceeding.

Row 44 is a start-up venture headquartered in Westlake Village, California that is poised to provide in-flight broadband connectivity and entertainment services, primarily to passengers and flight crews aboard commercial aircraft. Row 44 recently filed an application with the FCC for the blanket Earth station license necessary to deploy multiple aircraft-mounted aeronautical-mobile satellite service (“AMSS”) Earth stations. These remote units will operate in conjunction with an existing VSAT Hub licensed to HNS License Sub, LLC. The high-speed Internet access offered using these links is expected to be comparable to the service passengers currently enjoy in their homes and offices from traditional internet service providers. Passenger use of the service will allow in-flight, real-time access to email, the Internet and virtual private networks.

Row 44's application is premised, in substantial part, on the Commission's rulemaking proceeding, initiated more than three years ago, looking to the establishment of specific service rules to govern the provision of AMSS service in the Ku-band.² *See Service Rules and Procedures to Govern the Use of Aeronautical Mobile Satellite Service Earth Stations in Frequency Bands Allocated to the Fixed Satellite Service*, IB Docket No. 05-20, 20 FCC Rcd 2906 (2005) ("AMSS Rulemaking"). The AMSS Rulemaking was initiated in January 2005 in response to a Petition for Rule Making filed by the Boeing Company eighteen months earlier (July 2003) ("Boeing Petition"). The Boeing Petition sought to implement the secondary allocation for AMSS in the Ku-band Fixed-Satellite Service spectrum that is permitted by the international allocation table. Boeing's proposal was submitted concurrently with the adoption, at the International Telecommunication Union's 2003 Radiocommunication Assembly, of ITU-R Recommendation M.1643, which provides specific technical guidelines for the introduction of additional service in the Ku-band FSS spectrum, including the 14.0-14.5 GHz uplink band at issue here. These technical conditions were incorporated into the ITU's International Table of Frequency Allocations at the 2003 World Radio-Communication Conference.

II. The Petition Fails to Consider the Potential Impact of the Proposed Fixed Service Use on the Development of New Ku-Band Mobile-Satellite Service Applications, Such As Row 44's Planned AMSS Service.

Although the Petitioners note that other burgeoning services are already operating in the Ku-band,³ they do not honor their obligation to consider how the additional, and ultimately conflicting, spectrum use that they propose would impact the future development and growth

² See ITU Radio Regulations, Article 5 and No. 5.504A.

³ Petition at 11-12 & 15.

of these existing and planned operations.⁴ This omission ignores the substantial degree to which the 14.0-14.5 GHz band, and its companion downlink band at 11.7-12.2 GHz, have been a growth area for new and innovative satellite services, including Row 44's planned in-flight broadband service.⁵ The American public has benefited substantially from the evolution over the past two decades of these small-terminal Ku-band services. Row 44's new service, among others, promises to increase these benefits significantly in the coming years. The extreme complication of the spectrum sharing environment that the proposed new terrestrial fixed service use would engender, if authorized, would likely stifle these developments. As a new service provider poised to launch service that will potentially benefit thousands of air travelers each day, Row 44 is very concerned about any further consideration at this time of Petitioners' proposal, which has not been justified from either a technical or a practical standpoint.

III. Petitioners' Proposed "Secondary" Use of Ku-Band Frequencies for "Critical Communications" is Neither Practical Nor Feasible.

In the technical annex filed in support of the Petition, it is asserted that harmful interference can be avoided to existing FSS users of the band by adhering to a series of operational constraints. *See* Petition, Attachment, "Sharing Frequencies for FSS and FS Services in the 14.0-14.5 GHz Band" at § 2. This assertion, however, is premised on the inaccurate assumption that fixed service users may employ the same interference measurement

⁴ "Stations of a secondary service shall not cause harmful interference to stations of primary services to which frequencies are already assigned or to which frequencies may be assigned at a later date." 47 C.F.R. § 2.105(c)(2)(i).

⁵ In addition to the long-term growth of VSATs, which have dramatically changed the landscape of the band in terms of antenna size and distribution, in more recent years, the band has seen the introduction of non-geostationary satellite proposals, earth stations on vessels ("ESVs"), AMSS and land-mobile satellite systems that operate over FSS spacecraft, and most recently vehicle-mounted earth stations ("VMESs").

criteria as would apply to a co-primary user of the band.⁶ In addition, the showing erroneously relies upon the doubtful assertion that the number of fixed service transmitters would be low in any given area.

With respect to the first point, it is clearly not appropriate for potential users seeking secondary status to employ an interference measurement approach applicable only to primary band users. A secondary service, as proposed here, would be entitled to make a much smaller interference contribution to a network in the primary service than primary networks would, and primary services do not budget for such substantial interference contributions from secondary users when designing their links.⁷ Indeed, based on Petitioners' own showing, it is clear that the fixed service use being proposed dramatically exceeds the level of interference that FSS systems assign to all non-primary sources. This is unsurprising as a practical matter, as the rain fade characteristics in this band limit long-distance terrestrial communications, making it difficult to support reliable point-to-point communications without transmit powers higher than those used for the fixed service in lower frequency bands.

With respect to the second point, Petitioners' assumption that the number of terminals would be relatively low with a fairly even geographic distribution is also unrealistic. In this frequency band, because transmission range is limited, large numbers of transmitting stations are needed to provide broad coverage. Moreover, given the Petitioners' claim that these links would be used primarily in connection with critical infrastructure, it also seems apparent that their use would be more concentrated in urban areas. The total interference of so many transmitters would clearly be observable by FSS and MSS users, particularly in times of

⁶ Petition, Attachment at § 2, n.2. The criterion is referred to as 6% $\Delta T/T$.

⁷ Any interference contribution that has to be ascribed to a secondary user is interference that cannot be accommodated from a co-primary network. This itself represents a constraint on future FCC applications.

emergency when both terrestrial and satellite use of links in the band from a particular geographic region would be likely to be at a peak.

Petitioners' also maintain that fixed service users will be able to accept interference from FSS systems, but this claim is dubious, as the very name given to the planned new service anticipates critical operations requiring high reliability.⁸ It is not customary for such types of service to operate on a secondary basis; therefore, it appears quite likely that, if such links were to be introduced in the band, those operating these links would later seek to leverage the asserted critical nature of the links to achieve additional interference protection. Such a change would have significant adverse impact on the existing use of the band.

Finally, Petitioners' inappropriately assume that frequency coordination with primary services in the band would be available to address and mitigate these issues.⁹ Frequency coordination, however, is a concept rooted in cooperation between users with equal access rights to spectrum, and is not typically employed to address issues arising between primary and secondary service users. Moreover, the large number of ubiquitously-deployed VSAT terminals in this band makes frequency coordination between a satellite and terrestrial service so daunting as to be unrealistic. Such an approach would entail unreasonable burdens on existing spectrum users.

IV. The Petition Fails to Explain Why a New Fixed Service Allocation is Either Necessary or Appropriately Located in the 14.0-14.5 GHz Band.

In addition to the technical defects in the Petitioners proposal, they also fail to justify their focus on the Ku-band, as opposed to other bands currently allocated to and available for

⁸ Petition, Attachment at § 2.

⁹ Petition at 3, 14-15, 17, 19-20.

fixed service use. Petitioners do not make any showing that currently allocated bands are unsuitable to meet future needs.¹⁰ Generalized statements concerning need are inadequate to satisfy this requirement. Primary fixed service spectrum in other frequency bands currently appear to be underutilized and C-band spectrum is also available for wireless point-to-point applications.

V. No Action Should Be Taken To Initiate Another Rule Making Impacting the 14.0-14.5 GHz Band Until Currently Pending Rule Makings Have Been Completed, And the Results Evaluated.

Finally, while Petitioners note briefly that the FCC already has pending the VMES rule making that will affect the use of the 14.0-14.5 GHz band,¹¹ they fail to acknowledge the significant relevance of this fact to their own proposal. Moreover, Petitioners fail even to mention the continued pendency of the *AMSS Rulemaking* noted above. In fact, both of these proceedings are expected to establish service rules for new and expanded MSS use in the band -- types of use that Petitioners admit will pose significant challenges to the type of operations they propose.¹² Given this reality, even if the Commission does not dismiss the Petition outright, it would be premature for it to initiate at this time yet another proceeding affecting the Ku-band FSS frequencies. The FCC should first resolve both the *AMSS Rulemaking* and VMES rulemaking, and then allow these new service offerings to develop over a period of years before moving to consider any other rule changes that could substantially alter the interference environment in this band.

¹⁰ Petition at 8.

¹¹ See Petition at 15 and n. 24, citing *NPRM in IB Dkt. No. 07-101*, FCC 07-86 (released May 15, 2007).

¹² See Petition at 15 (noting that mobile terminals would require Petitioners proposed terminals "to adapt quickly to a dynamically changing interference environment").

VI. Conclusion

For all of the foregoing reasons, Row 44 urges the Commission to dismiss without further action the Petition filed by UTC and Winchester. At a minimum, no further action should be taken on the Petition until other pending rulemakings concerning AMSS and VMES use of the 14.0-14.5 GHz band have been completed and there has been time to evaluate the impact and growth of these new services.

Respectfully submitted,

ROW 44, INC.

By: _____

A handwritten signature in black ink, appearing to read "David B. Keir", is written over a horizontal line. The signature is stylized and cursive.

David B. Keir

Leventhal Senter & Lerman PLLC
2000 K Street, NW, Suite 600
Washington, DC 20006-1809
(202) 429-8970

June 26, 2008

Its Attorney

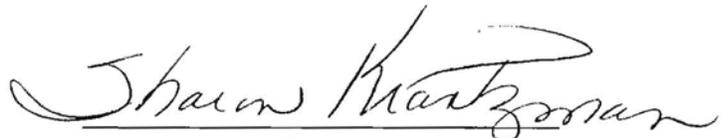
CERTIFICATE OF SERVICE

I, Sharon Krantzman, do hereby certify that on this 26th day of June, 2008, I sent by first-class, postage prepaid mail, a copy of the foregoing "Opposition of Row 44, Inc." to the following:

Henry Goldberg, Esquire
Jonathan Wiener, Esquire
Devendra T. Kumar, Esquire
Goldberg, Godles, Wiener & Wright
1229 19th Street, NW
Washington, DC 20036

Thomas S. Tycz, Esquire
Senior Policy Advisor
Goldberg, Godles, Wiener & Wright
1229 19th Street, NW
Washington, DC 20036

Jill M. Lyon, Esquire
Vice President and General Counsel
Utilities Telecom Council
1901 Pennsylvania Avenue, NW
Fifth Floor
Washington, DC 20006

A handwritten signature in cursive script that reads "Sharon Krantzman". The signature is written in black ink and is positioned above the printed name.

Sharon Krantzman