

Before the
Federal Communications Commission
Washington DC 20554

In the Matter of

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

RM-11429

**COMMENTS OF THE
FIXED WIRELESS COMMUNICATIONS COALITION**

The Fixed Wireless Communications Coalition files these comments in support of the above-captioned Petition for Rulemaking.¹

The Utilities Telecom Council (UTC) seeks rules that permit point-to-point and point-to-multipoint services for fixed and temporary stations in the 14–14.5 GHz band for use by electric, gas, and water utilities, pipeline companies, and other critical infrastructure industries (CII).²

The FWCC agrees with UTC on the need for dedicated CII frequencies. Fixed service spectrum is in chronically short supply, especially in the more heavily populated parts of the

¹ The FWCC is a coalition of companies, associations, and individuals interested in the fixed service -- i.e., in terrestrial fixed microwave communications. Our membership includes manufacturers of microwave equipment, fixed microwave engineering firms, licensees of terrestrial fixed microwave systems and their associations, and communications service providers and their associations. The membership also includes railroads, public utilities, petroleum and pipeline entities, public safety agencies, cable TV and private cable providers, backhaul providers, and/or their respective associations, communications carriers, and telecommunications attorneys and engineers. Our members build, install, and use both licensed and unlicensed point-to-point, point-to-multipoint, and other fixed wireless systems, in frequency bands from 900 MHz to 95 GHz. For more information, see www.fwcc.us.

² Utilities Telecom Council Petition for Rulemaking, RM-11429 (filed May 6, 2008). *See also* Report No. 2868, Public Notice (released May 27, 2008).

country. In recent years, the Commission has reallocated large amounts of fixed service bandwidth to other services. The entire 2 GHz band, once the mainstay of long-haul fixed service microwave, is now allocated to PCS, AWS, and mobile satellite services.³ Many former 2 GHz users have tried to relocate to the 4 GHz and 6 GHz bands, the next-best options for long links. But satellite earth stations, which are routinely coordinated and licensed for the entire band and satellite arc, block many coordination efforts in those bands. Fixed service coordination at 4 GHz has become all but impossible nationwide, due to the proliferation of registered receive-only satellite dishes. Uplink earth station congestion has made the lower 6 GHz band largely unavailable in and near major population centers, where the need for fixed service communications is greatest. The upper 6 GHz has no satellite blockage, but does have a bandwidth limitation of 10 MHz.⁴ Ongoing international negotiations threaten to impair fixed service operation at 10 GHz. New rules allowing smaller antennas in the 11 GHz band, while very welcome, will greatly increase usage over the next few years.⁵ There is little 18 GHz spectrum left for the fixed service, following reallocations to satellite operations.⁶

³ See 47 C.F.R. Sec. 101.69 (preamble) (reallocation of 1850–1990, 2110–2150, 2160–2200 MHz to PCS, AWS, MSS).

⁴ 47 C.F.R. Secs. 101.109(c), 101.147(l). The FWCC has filed a petition for rulemaking to increase the bandwidth to 30 MHz. See Fixed Wireless Communications Coalition, Amendment of Sections 101.109 and 101.147 of the Commission's Rules to Accommodate 30 MHz Channels in the 6525-6875 MHz Band, RM-11417 (filed Feb. 4, 2008).

⁵ *Antenna Requirements for the 10.7–11.7 GHz Band*, 22 FCC Rcd 17153 (2007).

⁶ *Redesignation of the 17.7-19.7 GHz Frequency Band*, 15 FCC Rcd 13430 (2000).

Another cause of the fixed service spectrum shortage is the continually increasing demand. Greater backhaul capacity is needed to serve proliferating high-bandwidth mobile devices.⁷ Other demand comes from public safety, CII, and general business applications. All of these compete for access to the same half-dozen frequency bands. CII users get no special priority, despite the importance of their mission and their sharply increasing needs.⁸ In short, CII providers are having trouble meeting their communications requirements.

The benefits flowing from a grant of the UTC request are in the public interest. The proposal would have a downside only if the operations threaten harmful interference to the incumbent services.

The primary incumbents are fixed satellite service uplinks, including conventional earth stations, VSATs, and earth stations on vessels (ESVs) accessing both geosynchronous and non-geosynchronous satellites. Secondary incumbents include Government and non-Government radionavigation at 14–14.2 GHz, mobile satellite uplinks, space research, Government fixed and mobile at 14.4–14.5 GHz, and radio astronomy at 14.47–14.5 GHz at six locations.⁹

⁷ In this context, backhaul is the transport of customer communications between the carrier's central network facilities and the towers that send radio signals to and from customer handsets.

⁸ UTC Petition at 5-8.

⁹ *See generally* 47 C.F.R. Sec. 2.106. Although the allocation table appears to indicate that radionavigation is co-primary, footnote US292 designates it as secondary to FSS.

UTC undertakes to protect the primary service and pre-existing secondary users,¹⁰ including radio astronomy operations.¹¹ The FWCC's support is conditioned on the new service's meeting those obligations.

UTC has addressed the protection issues in detail, as summarized in its Petition and spelled out in the accompanying report.¹² The analysis sets out the case that the new service can be implemented without causing harmful interference to the FSS. The FSS uses the band exclusively for uplinks. The CII service thus must protect the satellites, which are relatively few in number and in known orbits. UTC proposes that the new service be fully frequency coordinated as to all links -- point-to-point and point-to-multipoint, fixed and temporary. Knowing where the satellites are, the frequency coordinator can block the construction of any link that threatens harmful interference. If interference does occur, the frequency coordinator can serve as a single point of contact to quickly pinpoint the link responsible and shut it down.

The satellite industry has already visited the Commission several times to express its concerns about interference and, on at least one such visit, to urge that the Commission not issue an NPRM.¹³ This is premature. Denser use of the spectrum and dedicated CII spectrum are both in the public interest, if interference with satellite operations can be avoided. UTC has made a *prima facie*

¹⁰ UTC Petition at 12-13.

¹¹ RKF Engineering, LLC, "Sharing Frequencies for FSS and FS Services in the 14.0–14.5 GHz Band" at para. 1.3 (14.4–14.5 GHz) (May 2008) (filed as an attachment to the UTC Petition).

¹² RKF Engineering, LLC, cited above.

¹³ Letter from Bruce A. Olcott, counsel to the Global VSAT Forum, to Marlene H. Dortch, Secretary, FCC (filed June 12, 2008).

case. Before the satellite industry further engages its lawyers, it should instead engage its engineers, evaluate the UTC technical proposal, and present an opposing case, if appropriate. The Commission will then have a record on which to make an informed decision as to the merits of UTC's plan.

An NPRM is needed to develop the record.¹⁴ The UTC petition proposal is well thought out, addresses critical needs, and provides for detailed mechanisms to protect co-frequency operations. The Commission should give it every consideration.

CONCLUSION

The Commission should promptly issue an NPRM based on UTC's proposals.

Respectfully submitted,

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¹⁴ Although the rules provide for dismissal of rulemaking petitions that are "moot, premature, repetitive, frivolous, or which plainly do not warrant consideration by the Commission," 47 C.F.R. Sec.1.401(e), the UTC petition is none of these.

CERTIFICATE OF SERVICE

I, Deborah N. Lunt, a secretary with the law firm of Fletcher, Heald & Hildreth, PLC, state that true copies of the foregoing "Comments of the Fixed Wireless Communications Coalition" were mailed, postage prepaid, this 26th day of June, 2008, to the following:

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