

Before the
Federal Communications Commission
Washington DC 20554

In the Matter of)
)
Rechannelization of the 17.7-19.7 GHz) WT Docket No. 04-143
Frequency Band for Fixed Microwave Services)
under Part 101 of the Commission's Rules)

**COMMENTS OF THE
FIXED WIRELESS COMMUNICATIONS COALITION
AND THE
NATIONAL SPECTRUM MANAGERS ASSOCIATION**

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Pursuant to Section 1.415 of the Commission's Rules, the Fixed Wireless Communications Coalition (FWCC) and the National Spectrum Managers Association (NSMA) jointly file these Comments in response to the Notice in the above-captioned docket.¹

¹ *Rechannelization of the 17.7-19.7 GHz Frequency Band*, 19 FCC Rcd 7260 (2000) ("Notice").

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, 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, and/or their respective associations, landline and wireless, local, and interexchange 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.

The NSMA develops technical and procedural recommendations for coordination of wireless telecommunications systems and services; provides a linkage between government regulations and industry practice by developing recommendations that streamline and standardize procedures used by the frequency coordination community; and proactively advises regulatory bodies on matters affecting radio frequency spectrum policy pertaining to terrestrial microwave, satellite systems, and emerging technology radio services. Membership is open to any interested individuals.

A. The FWCC Strongly Supports Rechannelization of the 18 GHz Fixed Service Band.

Section 101.147(r) dictates the bandwidths available to Fixed Service ("FS") transmitters operating in the 18 GHz band. The rules formerly provided for bandwidths of 5, 6, 10, 20, 40, 80, and 220 MHz.

In 2000 the Commission amended the 18 GHz allocations, subdividing the band between the FS and the Fixed Satellite Service.² The reallocation eliminated FS access to the 5 MHz channels, and permits only shared access to the 6 MHz channels. The smallest channels now available for exclusive use by the FS are 10 MHz wide.

Many FS applications can manage with far less bandwidth. Some of those applications serve users with lower capacity needs, while others benefit from the industry's continuing advances in spectrum efficiency. Required use of 10 MHz channels by users who could get by with 5 or 2.5 MHz channels is extremely wasteful. The inefficiency will make it harder to accommodate users relocating out of the 18.58-18.82 and 18.92-19.16 GHz segments to create room for satellite earth stations, and those affected by other relocations necessitated by recent and ongoing reallocations from the FS to satellite services.

In addition, technological advances make it possible to operate high-capacity systems in channels that are either 30 or 50 MHz wide. Using high-order modulation, these systems can offer data rates of 155 and 311Mbits/second, respectively, equivalent to 5.1 and 6.2 bits/sec/Hz, which represent new highs in spectrum efficiency. Today these systems must license 40 and 80

² *Redesignation of the 17.7-19.7 GHz Frequency Band*, 15 FCC Rcd 13430 (2000) (Report and Order in IB Docket No. 98-172), *recon. granted in part*, First Order on Reconsideration, 16 FCC Rcd 19808 (2001), *Report and Order aff'd, Teledesic LLC v. FCC*, 275 F.3d 75 (D.C. Cir. 2001).

MHz channels, respectively. Again, this wastes large amounts of spectrum, and largely negates improvements in spectrum efficiency.

The FS community has repeatedly sought rechannelization of the 18 GHz FS spectrum to accommodate users who are able to meet their needs with less than 10 MHz.³ We welcome and support the present proposals to allow for narrower 18 GHz FS channels,⁴ and for increased flexibility in channel use.⁵ We likewise welcome the Commission's indication that it will entertain requests for waiver to provide relief during the pendency of the rulemaking.⁶

Adoption of the proposed rechannelization is in the public interest because it will increase spectrum efficiency, reduce spectrum waste, and accommodate more users in the same amount of spectrum. We cannot foresee any adverse effects to any person from adoption of the proposed rule or grant of waivers.

B. The FWCC Opposes Establishment of a New 220 MHz Channel Pair.

Noting that the 18 GHz reallocation eliminated portions of the three previously-existing 220 MHz channel pairs, the Commission proposes a new pair centered on 17810 and 19590

³ *E.g.*, Request for Blanket Waiver of the Fixed Wireless Communications Coalition and the National Spectrum Managers Association (filed May 29, 2002); Letter from Mitchell Lazarus to Magalie Salas, Secretary, FCC (IB Docket No. 98-172, May 4, 2001); Petition for Reconsideration of the Fixed Wireless Communications Coalition at 5-6 (IB Docket No. 98-172, filed Oct. 10, 2000); Letter from Leonard R. Raish to Magalie Roman Salas, Secretary, FCC (IB Docket No. 98-172, Feb. 22, 2000); Reply Comments of the Fixed Wireless Communications Coalition at 9-10 (IB Docket No. 98-172, filed Dec. 21, 1998); Comments of the Fixed Wireless Communications Coalition at 15 (IB Docket No. 98-172, filed Nov. 19, 1998).

⁴ Notice at paras. 6-7.

⁵ Notice at para. 9.

⁶ Notice at paras. 15-16.

MHz.⁷ As Alcatel points out in comments filed today, this assignment would effectively block the use of narrower channels for two-way links within the entire FS portion of the 18 GHz. The 17810 MHz side of the pair would occupy the lower half of the 17.7-18.14 GHz band, while the 19590 MHz channel occupies the upper half of the 19.3-19.7 GHz band. Thus, a single license for the proposed 220 MHz pair would preempt channel pairs for all narrower bandwidth applications, resulting in extremely inefficient use of the 18 GHz band for FS applications. We agree with Alcatel that advances in modulation have removed any practical need for 220 MHz channels. We ask the Commission to drop them from the rules.

C. The FWCC Opposes Expansion of 18 GHz Spectrum for Final RF Video Distribution.

For the reasons set out in Alcatel's comments, the FWCC opposes the proposed expansion of the 18 GHz sub-band that may be used for the final radio frequency link to distribute video from the present 438 megahertz (18.142-18.58 GHz) to 780 megahertz (17.8-18.58 GHz).⁸ As Alcatel explained, private cable operators ("PCOs") and other multichannel video programming distributors ("MVPDs") generally use multiple 6 MHz analog channels in a hub-and-spoke configuration.⁹ The combination of widespread geographic dispersion and high occupied bandwidth resulting from low-efficiency modulation (relative to other FS users) effectively rules out more efficient FS use of the band over a wide area.

⁷ Notice at para. 8 & 47 C.F.R. Sec. 101.147(r)(ix)(13) (proposed).

⁸ Notice at para. 11.

⁹ See *Eligibility Requirements in Part 78 Regarding 12 GHz Cable Television Relay Service*, 17 FCC Rcd 9930 at para. 6 (2002).

While we acknowledge that PCOs and MVPDs no longer have primary access to 18.3-18.58 GHz, the Commission recently made them eligible to use twice as much frequency in the CARS band at 12.7-13.2 GHz band,¹⁰ where video installations do not block FS deployment. It is not in the public interest to expand the spectrum available to less spectrum-efficient systems at the expense of more efficient technologies.

CONCLUSION

For the reasons set out above, the Commission should adopt its rechannelization plan to include narrower channels in 18 GHz FS spectrum, grant waivers as needed for narrowband use pending the rulemaking, abandon plans for a new 220 MHz pair, and decline to expand 18 GHz spectrum available for final video links,

Respectfully submitted,

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¹⁰ *Id.*

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