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FEDERAL COMMUNICATIONS COMMISSION
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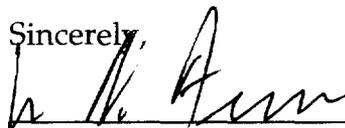
William F. Caton
Acting Secretary
Federal Communications Commission
Washington, D.C. 20554

Re: Amendment of Parts 2 and 15 of the
Commission's Rules to Permit Use of Radio
Frequencies Above 40 GHz for new Radio
Applications, ET Docket No. 94-124.

Dear Mr. Caton:

On July 27, 1995, the attached comments of the Part 15 Coalition regarding the Notice of Proposed Rulemaking in Amendment of Parts 2 and 15 of the Commission's Rules to Permit Use of Radio Frequencies Above 40 GHz for new Radio Applications, ET Docket No. 94-124 (rel. Nov. 8, 1994) were sent to those persons listed below. In accordance with Section 1.1206(a)(1) of the Commission's Rules, two copies of this letter, along with the attached comments, are being filed with the Secretary's Office.

Sincerely,



W. Kenneth Ferree

cc: Michael J. Marcus
Blair Levin, Esq.
Lauren J. Belvin, Esq.
Rudolfo M. Baca, Esq.
James R. Coltharp
David R. Siddall, Esq.
Richard K. Welch, Esq.
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Michael J. Marcus
Office of Engineering and Technology
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Washington, D.C. 20554

Re: Amendment of Parts 2 and 15 of the
Commission's Rules to Permit Use of Radio
Frequencies Above 40 GHz for new Radio
Applications, ET Docket No. 94-124.

Dear Mr. Marcus:

The Part 15 Coalition ("the Coalition") submits these *ex parte* comments in response to the Notice of Proposed Rulemaking ("NPRM") in the above-referenced proceeding. The Coalition represents a group of companies that manufacture and market radio technologies designed to operate on an unlicensed basis in compliance with the Commission's Part 15 rules. The Coalition has participated in a number of Commission proceedings in which the interests of manufacturers and users of unlicensed technologies have been implicated and has served as the principal industry spokesman for those interests.⁰

In the NPRM, the Commission requests comment on its proposal to open for commercial development several of the frequency bands above 40 GHz. For the reasons detailed herein, the Coalition supports the Commission's proposal and urges the Commission to move quickly to dedicate a significant portion of this spectrum exclusively for unlicensed use.

⁰ See Amendment of Part 90 of the Commission's Rules to Adopt Regulations for Automatic Vehicle Monitoring Systems, PR Docket No. 93-61 (rel. Feb. 6, 1995); See Allocation of Spectrum Below 5 GHz Transferred from Federal Government Use, ET-94-32, (rel. Nov. 8, 1994).

I. The Coalition Supports the Commission's Proposal To Dedicate Spectrum Exclusively For Unlicensed Use.

As the Coalition has noted on several occasions, unlicensed technologies operating under the Part 15 rules are constrained from satisfying the growing need for wireless communications. First, under Part 15, unlicensed technologies receive no protection from interference from other non-Part 15 users of the spectrum. As unlicensed technologies become more sophisticated and ubiquitous, this lack of interference protection will become more critical.

Second, the development of unlicensed radio technologies under Part 15 is inhibited by increasing congestion and interference. For instance, the Commission recently allocated the 902-928 MHz band for Location and Monitoring Services,¹ which will render operation of unlicensed technologies in this band increasingly difficult. Similarly, use of the 2400-2483.5 MHz band is becoming more problematic for developers of unlicensed technologies due to the presence in the band of millions of microwave ovens and to the growing use of the band by other ISM devices, as new applications are discovered and exploited.²

For these reasons, the Coalition long has advocated the allocation of dedicated spectrum for unlicensed communications technologies and the creation of "Part 16" rules to govern operations in the proposed unlicensed band.³ As with Part 15, there would be no licensing under Part 16 and access to the Part 16 spectrum for both entrepreneurs and the public would be uncomplicated and inexpensive. Unlike Part 15, however, Part 16 would offer protection to unlicensed technologies operating in the Part 16 band from interference from licensed radio services and ISM devices.

Only if dedicated spectrum is available for unlicensed use will wireless technologies be able to provide the kind of broadband, high speed, highly reliable communications services necessary for the development of the NII. The

¹ Amendment of Part 90 of the Commission's Rules to Adopt Regulations for Automatic Vehicle Monitoring Systems, Report and Order, PR Docket No. 93-61 (rel. Feb. 6, 1995).

² See Allocation of Spectrum Below 5 GHz Transferred from Federal Government Use, NPRM, ET-94-32, Comments of International Microwave Power Institute at 2 (rel. Nov. 8, 1994) (listing new ISM applications in the 2.4 GHz band).

³ See, e.g., Allocation of Spectrum Below 5 GHz Transferred from Federal Government Use, ET-94-32, Comments of the Part 15 Coalition (filed Mar. 20, 1995).

8.5 GHz above 40 GHz that the Commission has proposed to allocate for unlicensed uses, offers a significant opportunity to develop Part 16 rules for shared use of this spectrum by a wide variety of unlicensed technologies.

As the NPRM correctly notes, the propagation characteristics of radio waves above 40 GHz makes this portion of the spectrum particularly attractive for short-range, high-bandwidth transmissions.⁴ Technologies operating in these frequencies could provide valuable services such as wireless access to the NII.⁵ Moreover, these bands of spectrum are ideal for unlicensed radio services, which, as experience in the Part 15 bands teaches, are well suited for delivery of innovative new services using short-range transmission.

Thus, the Coalition strongly supports the Commission's proposal to set aside at least 8.5 GHz of spectrum above 40 GHz for "general, unlicensed device bands."⁶ In particular, the Coalition is encouraged by the Commission's recognition that unlicensed technologies should be permitted to develop in these bands free from interference from licensed services.⁷ The Proposals made in the NPRM suggest a promising future for unlicensed technologies.

II. The Coalition Supports The Comments And Proposals Made By The Hewlett-Packard Company In This Proceeding.

Having had the opportunity to review the comments and reply comments filed in this proceeding, the Coalition supports the views of the Hewlett-Packard Co. ("HP"). As HP points out, "two major information industry [needs] — wireless interconnects and high bandwidth data delivery — could be addressed by high-bandwidth millimeter wave technology."⁸ The Coalition agrees and supports, in particular, HP's proposal for the oxygen absorption band, which calls for swift adoption of the allocation of 59 - 64 GHz as a contiguous, general unlicensed band and a designation of 56 - 58.2 GHz as a licensed band, because, as HP explains,

"there may well be, in the future, applications which require both the attenuation characteristics of the O₂ band and the absolute protection from

⁴ NPRM ¶ 8.

⁵ Id. ¶ 9.

⁶ Id. ¶¶ 18-19.

⁷ Id. ¶ 19.

⁸ HP Comments at 2.

interference that licensing affords. Such an application could be for short range point-to-point broadband links, where the ability to re-use a frequency on a distance scale of ~ 1km could be extremely desirable and spectrally efficient.”⁹

By allocating spectrum in the lower portions of the oxygen absorption frequencies for licensed services, the Commission will be better able to preserve the integrity of the unlicensed bands.

HP also has suggested that the Commission allocate additional frequencies for unlicensed use below the oxygen absorption band.¹⁰ In its reply comments, HP further advocated that this additional unlicensed band should be dedicated exclusively for spread spectrum devices.¹¹ The Coalition supports these proposals. The allocation of additional frequencies at the lower end of the millimeter wave bands for spread spectrum unlicensed technologies will facilitate the roll-out of broadband unlicensed services using technologies that are, or soon will be, available.

Finally, the Coalition supports HP’s suggestion that both unlicensed vehicular radars and licensed services in the millimeter wave frequencies be restricted to their assigned bands.¹² As the Commission’s recent AVM proceeding has amply demonstrated, licensed and unlicensed services cannot easily share spectrum within a narrow band of frequencies. Like licensed services, “[v]ehicular radars would...have great capacity to do harm to the integrity of communications in the general unlicensed bands.”¹³ Conversely, the function of vehicle radar systems will be undermined if they are forced to operate in a band that contains a significant amount of radio noise.¹⁴

⁹ Id. at 2.

¹⁰ Id. at 5 (new unlicensed band at 47.4 - 48.2); HP Reply Comments at Table 1 (new unlicensed band at 46 - 47 GHz).

¹¹ See HP Reply Comments at Table 1. Both HP and the Coalition oppose mandatory spread spectrum transmission in the general unlicensed band (59-64 GHz).

¹² Id. at 1-2; HP Comments at 6-7.

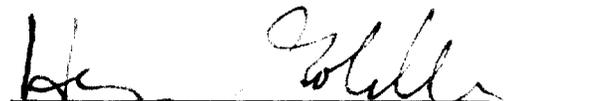
¹³ HP Comments at 6.

¹⁴ HP Reply Comments at 1.

Conclusion

In sum, the Coalition supports the proposals outlined in the NPRM and adds its voice to HP's in urging the establishment of dedicated frequency bands for licensed and unlicensed services above 40 GHz.

Sincerely,


Henry Goldberg