

**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington D.C. 20554**

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In the Matter of)	
)	
Modification of Parts 2 and 15 of the)	ET Docket No. 03-201
Commission's Rules for Unlicensed)	
Devices and Equipment Approval)	
)	

**REPLY COMMENTS OF
POLYCOM, INC.**

Polycom, Inc. (“Polycom”), by its attorneys, respectfully submits these Reply Comments in connection with the Commission’s Notice of Proposed Rulemaking (“NPRM”) in the above-captioned matter proposing revisions to Sections 15.247 and 15.249 of the Commission’s Rules to impose spectrum etiquette requirements on unlicensed transmitters operating in the 915 MHz band.¹ Polycom is the world’s premier provider of collaborative communications solutions and systems. Polycom’s product portfolio encompasses voice and video systems including a high-fidelity spread spectrum wireless telephone system that operates under Part 15 in the unlicensed 902 to 928 MHz (“915 MHz”) band and is in use by commercial businesses, hospitals, and government agencies throughout the country.

Many commenting parties shared Polycom’s opposition to the NPRM’s spectrum etiquette proposal; the Commission should not force current users of the 915 MHz band either to significantly reduce their power levels or to be subject to constant transmission interruptions due to required silent intervals. These requirements, if adopted, would seriously impair many existing products and their users (including Polycom’s products and customers), significantly

¹ *In the Matter of Modification of Parts 2 and 15 of the Commission’s Rules for Unlicensed Devices and Equipment Approval*, Memorandum Opinion and Order and Further Notice of Proposed Rule Making, FCC 07-117, rel. June 22, 2007 (“NPRM”).

reduce the utility of the 915 MHz band, and deter innovation and unlicensed product development without any counterbalancing public benefit.

I. No Compelling Reason Exists To Change the Commission's Rules

The comments to the NPRM produced absolutely no consensus in support of establishing a spectrum etiquette in this band. Multiple parties including wireless internet service providers, manufacturers producing a broad variety of equipment making use of the 915 MHz band, such as Cisco, Motorola, Harris Stratex, Shure and the members of Consumer Electronics Association, as well as respected engineering and technical groups, including the IEEE 802.18, EPC Global, and the Bluetooth SIG Regulatory Council, all filed comments opposing the proposed etiquette. In many cases, these parties opposed any new restrictions on Part 15 operations. Many parties explained that imposition of the proposed etiquette would severely limit the utility of the 915 MHz band for their existing uses and would potentially force these users to abandon operation in the 915 MHz band altogether.²

Like Polycom, the many parties voicing opposition to the proposed etiquette believe that the proposed new rules are unnecessary, harmful to existing services and continued innovation in the unlicensed bands, and incongruous with the Commission's successful Part 15 program.³ The comments clearly demonstrate that the etiquette rules are simply not necessary. Part 15 devices

² See Blaze Broadband, filed in ET Docket No. 03-201 on Oct. 15, 2007, at p. 1 ("Blaze Comments") ("Reducing the range of our 900 MHz equipment would significantly increase the cost of the system deployment and make it difficult, and in many cases, impossible for us to reach our customers."); Comments of Exalt Communications, filed in ET Docket No. 03-201 on Oct. 15, 2007, at p. 1 ("Exalt Comments") ("[A]ny reduction in transmit power, whether it be automatically controlled or based upon the parameters of silent time, would make most of these PTP [point-to-point] applications obsolete."); Comments of Lectrosonics, Inc., filed in ET Docket No. 03-201 on Oct. 15, 2007, at p. 1 ("The tradeoff between power and duty cycle, as proposed, limits devices with a 100% duty cycle to an unrealistically low power level (0 dBm), making common audio streaming devices like wireless microphone systems unfeasible because of the resulting reduction of range.").

³ See, e.g., Blaze Comments; Comments of Consumer Electronics Association, filed in ET Docket No. 03-201 on Oct. 15, 2007; Exalt Comments; Comments of IEEE 802.18, filed in ET Docket 03-201 on Oct. 4, 2007 ("IEEE Comments"); Comments of Motorola, Inc., filed in ET Docket No. 03-201 on Oct. 15, 2007 ("Motorola Comments"); Comment of Vecima Networks Inc., filed in ET Docket No. 03-201 on Oct. 15, 2007; Comments of Wireless Communications Association International, Inc., filed in ET Docket No. 03-201 on Oct. 15, 2007.

continue to successfully operate in the 915 MHz band, as they have for years, with few if any interference problems. Even Cellnet Technology, Inc. (“Cellnet”), the original proponent of spectrum etiquette, admits that “until very recently there have been relatively few incidents of harmful interference among unlicensed devices operating in this band.”⁴

Clearly, concerns about massive interference disrupting essential operations are based on little more than fear of future interference and are not predicated on current facts. The Association of American Railroads based its support of the proposal on the “*possibility* that some unlicensed devices” may block other users.⁵ PECO Energy also supports the proposal because of “the *potential* impact that interference from other unlicensed users of the 915 MHz band can have on the effectiveness of the AMR network” and then immediately goes on to state that “[t]here have been relatively few such situations to date, and all that have been identified have been quickly resolved.”⁶ Polycom submits that even the recent interference issues are *de minimis* and that when an interference situation has arisen, operators and users of the impeding devices have successfully worked together to resolve any problems. In many cases, manufacturers and operators of Part 15 devices operating in this band have successfully worked together to self-correct any perceived problems. In fact, one supporter of the spectrum etiquette proposal acknowledged that they were able to resolve interference problems through negotiations and technical adjustments.⁷

Additionally, supporters of the proposal failed to account for the millions of currently operating Part 15 devices that would need to be grandfathered. Even if their concerns about

⁴ Joint Comments of Cellnet Technology, Inc. and Hunt Technologies, LLC, filed in ET Docket No. 03-201 on Oct. 15, 2005, at p. 3 (“Cellnet Comments”).

⁵ Comments of The Association of American Railroads, filed in ET Docket No. 03-201 on Oct. 15, 2007, at p. 5 (emphasis added).

⁶ PECO Comments, at p. 2 (emphasis added).

⁷ See Comments of We Energies, filed in ET Docket No. 03-201 on Oct. 15, 2007, at p. 3 (“We Energies worked cooperatively with the WISP to change the center frequency of the WISP’s device to allow for co-existence.”).

future interference were warranted, which Polycom strongly disputes, this intrusive and unnecessary spectrum etiquette procedure will do little or nothing to resolve those concerns as current devices will continue to operate for years or possibly decades.⁸

Many parties agree that the Commission should not impose dramatic changes for unlicensed operations in the 915 MHz band, particularly those that are highly disruptive to the many varied existing operations currently using the band absent a compelling reason to do so. Given that unlicensed devices have successfully operated in the 915 MHz band for over a decade, the burden is on Cellnet and other spectrum etiquette proponents to clearly demonstrate that such a draconian and massive revision to the rules is necessary and that the resulting theoretical benefits will outweigh the certainty of harm. They have failed to do so and instead repeatedly argued for adoption of the rules based on conjecture.

Given the ever changing and evolving technological innovations in the low power device market, the FCC should not impose harmful requirements today to prevent theoretical and unproven harm that may not ever happen in the future. Instead, the Commission should monitor the nature and extent of interference problems and if it appears that such problems are actually developing, the Commission should then investigate and consider less severe solutions that would not disrupt current uses.⁹

II. The Commission Should Not Adopt Rules That Would Create Advantages for a Limited Group of Users to the Detriment of Many Other Existing Part 15 Uses

The majority of parties supporting the spectrum etiquette proposal are utility providers and related companies that manufacture and operate automatic meter readers (“AMR”) for use in

⁸ See e.g. Motorola Comments, at p. 6 (“[I]mposing an etiquette on devices in the 902-918 MHz band, including the spectrum etiquette proposed by Cellnet, would have little impact on unlicensed operations in what is already a heavily used and heavily encumbered band.”).

⁹ IEEE suggested that there are simple technological techniques that would resolve interference concerns without resorting to a massive change in the rules. They recommend the use of frequency hopping, migration to a different unlicensed band or use of a different channel center frequency as simple solutions to avoid interference. See IEEE Comments at p. 5.

the utility industry.¹⁰ Polycom does not dispute that those companies operating in the 915 MHz band are performing an important function; however, many other uses of the 915 MHz spectrum currently provide important public benefits and, in fact, do so to a broader cross-section of the consuming public. Commenters opposing the spectrum etiquette proposal have provided ample evidence and examples of the significant harm that would result from its adoption.

By asking the FCC to impose these burdensome technical requirement on 915 MHz devices, Cellnet would have the Commission establish a policy preference for AMRs and related equipment above all other Part 15 uses that have developed under the Commission's unlicensed rules.¹¹ Cellnet alleged that if its proposal is adopted then “[n]o uses - AMR or internet access - are foreclosed, only the commercial costs of implementing them” and that it simply proposes a trade off between power and range.¹² This view reflects a dangerous misunderstanding of the wireless products operating in the 915 MHz band. Wireless systems such as those developed by Polycom are not designed to operate with silent intervals, which could have adverse effects on the voice quality, capacity, and reliability of real-time wireless telephone communications. Such rules would not make modified operation just a matter of absorbing the “commercial cost” of implementation; rather, the rules would essentially render products and current operations useless in many instances. Contrary to Cellnet's assertions, adoption of the spectrum etiquette rules would effectively result in a choice by the Commission to protect and favor AMR operations above all other current users of the 915 MHz band including wireless broadband,

¹⁰ See e.g. Joint Comments of American Petroleum Institute and the Utilities Telecom Counsel, filed in ET Docket No. 03-201 on Oct. 15, 2007 (“API Comments”); Joint Comments of GE MDS LLC, Freewave Technologies, Inc. and Dataradio, Inc., filed in ET Docket No. 03-201 on Oct. 15, 2007; Comments of Intron, Inc., filed in ET Docket No. 03-201 on Oct. 15, 2007; Comments of PECO Energy, filed in ET Docket No. 03-201 on Oct. 15, 2007 (“PECO Comments”).

¹¹ Cellnet Comments, at p. 15.

¹² *Id.*

wireless audio services and the millions of devices and uses that have peacefully coexisted in the band for over 15 years.

Alternatively, some commenters have suggested that broadband and other users of the 915 MHz band can easily vacate the spectrum and operate somewhere else if the new rules are harmful. While the Joint Comments of the American Petroleum Institute and the Utilities Telecom Counsel admit that “Spectrum Etiquette imposed on Digitally Modulated devices could negatively impact such systems,” they go on to argue that “the effect will be less severe due to the abundance of licensed ... and license-exempt spectrum available....”¹³ The suggestion that millions of current users of the 915 MHz band could simply pick up and move to another area of spectrum demonstrates a deep and flawed misunderstanding of Polycom and other providers’ operations and continues to portray the AMR operation as a Commission-sanctioned preference over all other uses. While some commenters have argued that their AMR and similar technology is essential to public safety and that the slightest interference will cause chaos, they failed to provide evidence of interference concerns that could not be resolved. In addition, they have failed to consider that other 915 MHz users are also providing important technological solutions that support vital and necessary services to the public.¹⁴ Further, the proponents of the etiquette should be reminded that AMR manufacturers and their customers have selected this band with full knowledge of the Commission’s Part 15 Rules and the historical proliferation of other devices innovating on this spectrum. There are other spectrum and technology choices operating under different terms and conditions that, arguably, are more suitable for uses deemed to be critical to the National security or public safety.

¹³ API Comments, at p. 9.

¹⁴ One example is Polycom’s wireless telephone systems operating in over 1,000 hospitals nationwide.

