

**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20054**

In the Matter of)
)
Motorola, Inc. Request for Interpretation or Waiver) WT Docket No. 10-74
of Section 90.267 Regarding 450-470 MHz Band)
Low Power Operations)

To: Chief, Wireless Telecommunications Bureau

**COMMENTS OF THE
ENTERPRISE WIRELESS ALLIANCE**

The Enterprise Wireless Alliance (“EWA” or the “Alliance”) submits these comments in response to the Federal Communications Commission’s (“FCC” or “Commission”) Public Notice¹ seeking comment on a request (“Request”) from Motorola, Inc (“Motorola”) for clarification or a blanket waiver of the FCC rules to permit other than 5 MHz separation between paired base and mobile transmit frequencies for low power 450-470 MHz systems authorized pursuant to FCC Rule Section 90.267. Motorola argues that the deployment of low power repeaters using non-standard frequency pairs will prevent intra-system intermodulation interference when multiple low power channels must be operated in close physical proximity.² The Request states that the Commission historically did not require a standard 5 MHz separation for low power channels and has allowed them greater technical flexibility than full power channels in the same 450-470 MHz band.³

¹ *Wireless Telecommunications Bureau Seeks Comment on Motorola, Inc. Request for Interpretation or Waiver of Section 90.267 of the Commission's Rules Regarding 450-470 MHz Band Low Power Operations*, WT Docket No. 10-74, Public Notice (rel. March 29, 2010) (“Public Notice”).

² Request at 9.

³ Request at 5-7.

The Alliance supports Motorola's objective of making more effective use of the spectrum available to Part 90 licensees. EWA also agrees that there should be a regulatory solution to address the intra-system intermodulation problem described in the Request, a situation that the Alliance believes will arise in only a limited number of instances. As the Alliance understands the Request, the problem occurs only in those cases where multiple low power channels are needed in a service area that is small, but that still requires repeater coverage rather than direct unit-to-unit communications only. The optimal answer might be to use channels sufficiently widely spaced so that intermodulation does not occur, but there is not enough bandwidth in the Part 90 450-470 MHz band to make that a practical solution.

While the Alliance appreciates the real world situation that Motorola is attempting to address, EWA is concerned that the relief requested, without further refinement, might lead to interference problems that would be difficult to resolve. This is not simply a question of the increased complexity of making frequency assignments in the coordination process, although that is an issue that also needs to be considered. The FCC-authorized Frequency Advisory Committees ("FACs"), of which EWA is one, already face this situation in the VHF band, which historically did not have assigned frequency pairs. As more VHF users have elected to migrate from simplex base-mobile to repeater system configurations, the FACs have become familiar with the difficulty of identifying frequencies that can be assigned as a pair for that type of application. Those issues do not arise in the 450-470 MHz band, because the Commission adopted a band plan with a standard 5 MHz separation between transmit and receive frequencies. The increased complexity of recommending channel assignments from the Section 90.267 low power pools should non-standard frequency pairings be permitted routinely is not a bar to the relief sought in the Request, but is one factor that needs to be weighed in reaching a decision.

EWA also recommends that the FCC consider how to ensure that any non-standard frequency pairs are assigned only in situations where the intermodulation problems described in the Request dictate that the normal separations would not be usable. In particular, the Alliance is concerned about the potential impact should these "one off" channels be assigned for use in areas other than small, confined geographic locations such as mountaintop sites. The low power rules in Section 90.267 limit the use of most channels to an antenna height of no more than 7 meters (20 feet) above ground. However, a 7 meter antenna at the top of an 8,000 foot mountain will produce an expansive coverage area even if the repeater is limited to 20 ERP, or only the 6 ERP permitted on the high side of these frequency "pairs." Even with careful frequency coordination, the impact on co-channel systems, systems that would not typically be monitoring for other than the standard frequency pairings, could be significant.

The two waivers cited in the Request establish a useful template for situations where the relief sought could be permitted without fear of adverse impact in this heavily shared spectrum environment.⁴ Both involve enclosed facilities, one a sports arena and the other underground mines, where it is possible to confine radio transmission to the facilities themselves with little or no "leakage" to the outside. To the best of the Alliance's knowledge, neither licensee has caused interference to other users in its operating area or complained of interference from other systems. Allowing non-standard pairings in that type of situation presents none of the potential problems that otherwise could arise – even on Section 90.267 low power channels.

EWA supports flexibility in the FCC rules, provided it is coupled with provisions that protect against interference, particularly in the heavily congested Part 90 450-470 MHz band. The Alliance encourages Motorola to define in greater detail the factual circumstances in which

⁴ See *Cavalier Operating Co., Order*, 22 FCC Rcd 7322 (2007); see also *Vulcan Materials Company, Order*, 24 FCC Rcd 3239 (2009). As noted in the Order, both licensees are operating at low power on full power frequencies, a fact that may contribute to the absence of interference from their facilities to those of co-channel licensees.

it expects the need for non-standard low power channel pairing to arise so that the Commission and the industry can consider how best to address those requirements without compromising more traditional low power operations on these channels.

Respectfully submitted,

ENTERPRISE WIRELESS ALLIANCE

By: _____ /s/
Mark E. Crosby
President/CEO
8484 Westpark Drive, Suite 630
McLean, Virginia 22102
(703) 528-5115

Counsel:

Elizabeth R. Sachs
Lukas, Nace, Gutierrez & Sachs, LLP
8300 Greensboro Drive, Ste. 1200
McLean, VA 22102
(703) 584-8678

April 19, 2010