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

In the Matter of	)	
	)	
Amendment of Sections 90.20(d)(34) and 90.265	)	PS Docket No. 13-229
of the Commission's Rules to Facilitate the Use	)	RM-11635
of Vehicular Repeater Units	)	

To: The Commission

REPLY COMMENTS
OF THE
ENTERPRISE WIRELESS ALLIANCE

The Enterprise Wireless Alliance ("EWA" or "Alliance"), in accordance with Section 1.45 of the Federal Communications Commission ("FCC" or "Commission") rules, respectfully submits its Reply Comments in the above-entitled proceeding.[1] The Comments in the proceeding reflect general recognition of the important role vehicular repeater systems ("VRS") can play in meeting public safety ("PS"), as well as public service and other critical communications needs. The issue is not whether spectrum should be available for this purpose, but on what VHF spectrum can VRS use be authorized without compromising the reliability of other vital communications systems.[2]

In the NPRM, the Commission proposed to modify Sections 90.20 and 90.175 to permit low power voice operation on six 173 MHz remote control and telemetry channels that are

[1] In the Matter of Amendment of Sections 90.20(d)(34) and 90.265 of the Commission's Rules to Facilitate the Use of Vehicular Repeater Units, *Order and Notice of Proposed Rulemaking*, PS Docket No 13-229, RM-11635, 28 FCC Rcd 13544 (2013) ("NPRM").

[2] In addition to addressing VRS spectrum needs in the VHF band, the NPRM also asks whether other spectrum, including portions of the 700 MHz PS allocation, should be considered for VRS operations. EWA agrees with the Comments of the National Public Safety Telecommunications Council ("NPSTC") and the Association of Public-Safety Communications Officials-International, Inc. ("APCO") that VRS use should be permitted at 700 MHz. Indeed, as suggested in the Alliance's Comments in this proceeding, given the technical limitations of today's VRS equipment, cross-banded VRS operations, such as those conducted by the Commonwealth of Virginia, should be encouraged.

shared by Industrial/Business ("I/B") and Public Safety ("PS") licensees and interleaved between I/B frequencies.[3] The frequencies, 173.2375, 173.2625, 173.2875, 173.3125, 173.3375, and 173.3625, currently are limited to 6 kHz bandwidth and to non-voice operations.[4]

In its comments on the original Pyramid proposal[5] and in the instant proceeding, EWA acknowledged as real and serious the potential for interference between data telemetry systems and voice VRS operations that has been highlighted by the Utilities Telecom Council ("UTC"), the American Petroleum Institute ("API"), the Edison Electric Institute ("EEI"), and operators of telemetry systems since this spectrum sharing was originally proposed. These are not naturally compatible co-channel usages. Moreover, while the Commonwealth of Virginia referenced the "light use of these frequencies for telemetry monitoring" as a justification for allowing VRS operations,[6] the ULS database identifies approximately 2,400 active telemetry systems operating on these six frequencies throughout the United States. Some two-thirds of those systems are licensed as I/B users and one-third as PS, although a number of municipal entities such as water districts have dual I/B and PS eligibility and have elected to operate as I/B licensees.

The better solution would be for the FCC to allocate unused VHF spectrum for VRS service, but the Alliance recognizes that is not possible. It assumes the FCC has investigated that possibility thoroughly and has concluded that the six frequencies in question are the best,

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[3] The Order portion of the document rejected the proposal to expand VRS options by allowing such systems to be deployed on nine Federal and forest firefighting channels at 170-172 MHz. NPRM at ¶ 19.

[4] EWA believes NPSTC is mistaken in stating that these six channels already are allowed up to 11.25 kHz bandwidth, so the only rule change required would be to permit their use for voice transmissions. NPSTC Comments at 3. Rather, as detailed in the NPRM, because the adjacent I/B channels are now limited to 11.25 kHz bandwidth due to the FCC's narrowbanding requirement, it now is possible to allow up to 11.25 kHz bandwidth on these six interstitial channels as well without "mutual bandwidth overlap." NPRM at ¶ 27. While the FCC, of course, is correct that some I/B licensees may have met the narrowbanding requirement by meeting the efficiency standard, rather than by moving to a narrower bandwidth, EWA believes such instances are extremely rare and should be handled on a case-by-case basis. NPRM at ¶ 27-8.

[5] *See* Modification of Sections 90.20(d)(34) and 90.265 of the Commission's Rules to Facilitate the Use of Vehicular Repeater Units, Petition for Rule Making of Pyramid Communications, Inc. (filed Aug. 16, 2011); Petition to Supplement of Pyramid Communications (filed Aug. 16, 2011).

[6] Comments of the Commonwealth of Virginia, Department of State Police at 2.

although certainly not the optimal, solution despite the fact that, contrary to the Commonwealth's assessment, EWA considers an average of 400 systems per channel as far from light use. Moreover, this telemetry utilization is significant not only because of the number of systems potentially affected, but because the operations conducted on these frequencies serve some of the most critical needs of the American public. The telemetry facilities involved ensure that the public has safe water, working sewers, and reliable delivery of electric, oil and gas service.[7] It is essential that the operation of these systems not be compromised by expanding the permissible use of these frequencies to nomadic VRS voice operations, however important that capability might be. For the proposed sharing to work, the FCC rules and the frequency coordination process must establish clear standards that guard against the potential for interference for either usage category.[8]

The NPRM questioned whether the use of "exclusion zones" around telemetry systems would reduce the likelihood of interference since VRS systems are not fixed operations.[9] EWA agrees that establishing such zones is an appropriate way of minimizing interference to telemetry facilities. It has reviewed this approach with an independent engineering consultant and has reached the tentative recommendation, based on the technical parameters of Section 90.35(c)(39)-(42), that a zone defined by a 38 mile radius around each fixed location in a telemetry system should provide adequate protection. The Alliance recommends that the Land Mobile Communications Council ("LMCC"), an organization representing both I/B and PS interests, work collaboratively to consider the appropriate standard for protecting these facilities, as well as the protection criteria from future telemetry operations to authorized VRS systems

[7] NPRM at ¶ 23.
[8] Both NPSTC and APCO emphasized the need for appropriate frequency coordination standards in their comments, a position that reflects their commitment to protecting the operations of both existing telemetry and future VRS PS licensees.
[9] NPRM at ¶ 23.

given their inherently limited coverage.[10] The LMCC should be able to identify and unanimously endorse frequency coordination protocols within a relatively short period of time. Manufacturers of both data telemetry and VRS devices should be invited to participate as well, as they are uniquely qualified to provide equipment interference tolerance guidance.

Because the FCC is proposing to authorize two entirely disparate system types on these frequencies, EWA considers it imperative that all applications, whether for telemetry or VRS use, provide a fixed location(s) for purposes of assigning available frequencies in the coordination process.[11] It will not be possible to maintain the necessary level of protection if VRS applications propose an area of operation that is not tethered to a defined set of coordinates. Thus, applications that seek city-wide, county-wide, and, most critically, state-wide VRS operations, or any other area of operation not defined by coordinates, must not be permitted.

Finally, EWA welcomes the Commission's recognition that certain I/B entities have a need for VRS capability.[12] The requirement for more reliable coverage in hard to reach areas is not limited to PS licensees exclusively. The frequencies under consideration in the NPRM already are shared by I/B and PS users. The rule changes proposed in this proceeding should be expanded to include such modifications as are needed to permit I/B entities with access to these six frequencies for VRS operations, such as a change in Section 90.35(c)(39) to permit up to 11.25 kHz bandwidth usage. Further, all FCC-certified frequency advisory committees should

[10] As is the case in other Part 90 bands, licensees that are entitled to protection should be free to grant concurrence for operations that fall outside the standard protection criteria.

[11] In this respect, the Alliance strongly disagrees with the Commonwealth of Virginia's suggestion that because VRS systems are nomadic, coordination is not required. That approach might be viable for the VRS user, but could prove disastrous for a telemetry system whose functions are disrupted by interference from the VRS operation, even if of limited duration. The complexity of telemetry systems means that interference to even a single component can have a significantly adverse, cascading impact on the entire operation. Perhaps the Commonwealth of Virginia's recommendations were based on the erroneous assumption that only PS licensees would be using these channels in the future and that there were only a very limited number of incumbent data telemetry systems. In fact, there are 68 such systems licensed on these channels in the Commonwealth of Virginia alone.

[12] NPRM at ¶ 33.

be authorized to coordinate both telemetry and VRS applications for these frequencies, irrespective of the eligibility of the applicant.

The critical need for VRS capability in specific situations is beyond question. The NPRM offers a plan for addressing this issue in the VHF band in light of the technical limitations of today's VRS equipment. Implementing this plan without causing interference to incumbent telemetry systems or unnecessarily limiting the availability of these frequencies for future telemetry use will depend on well-designed frequency coordination standards. EWA is committed to working with the FCC and the LMCC to develop standards that will promote the deployment of both VRS and telemetry systems on this very limited amount of spectrum.

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