

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 of	)	
Vehicular Repeater Units	)	RM-11635

**REPLY COMMENTS**

Pyramid Design & Manufacturing Inc., (“Pyramid”), through counsel and pursuant to Section 1.415 of the Commission’s Rules, 47 C.F.R. §1.415, hereby respectfully submits its Reply Comments in response to the comments submitted by various parties regarding the Commission’s Notice of Proposed Rulemaking (“NPRM”), which seeks to amend Sections 90.20(d)(24) and 90.65 of the Commission’s Rules to facilitate the use of Vehicular Repeater Units (“VRS”).

**I. COMMENTS SUBMITTED DEMONSTRATE VRS NEEDS**

Pyramid notes the significant support in submitted comments by a variety of entities demonstrating the usefulness of VRS units and the need for a specific set-aside of spectrum for its use. Particularly significant are the comments of Pericle Communications (“Pericle”), which demonstrate from a technical standpoint the inability to utilize currently assigned public safety spectrum.

Pyramid is also sensitive to the concerns of the utility industry. These concerns are primarily in two areas: (1) the continued availability of data spectrum; and (2) the ability of frequency coordinators, going forward, to prevent interference from VRS units to data systems. Pyramid will address each issue below.

## II. THE PROPOSED FREQUENCIES ARE UNDERUTILIZED

As pointed out in Pyramid's initial comments, the six frequencies requested are lightly used. Specifically, Pyramid noted that a search of the Commission's Universal Licensing System reveals that the current active user counts are as follows: 173.2375 MHz (267); 173.2625 MHz (260); 173.2875 MHz (236); 173.3125 MHz (223); 173.3375 MHz (223); and 173.3625 MHz (244). For example, in Wyoming there is one licensed user on 173.3625 MHz, BP America, at a single site in Table Rock (KNEX989). Pyramid stated that the existence of one licensee on the frequency at a single location should not keep this channel from being utilized in the entire state. Similarly, there are no licensees on this frequency in Montana.

Since the filing of its Comments, Pyramid has conducted additional spectrum utilization research. Specifically, Pyramid reviewed the availability of the six channels in a variety of cities across the country, large (city sizes 5-25) and small (city sizes 91-100). In the twenty large cities, at least one of the six channels is totally clear (Houston, Miami, San Diego, Denver and Buffalo). In fact, in Houston five of the six channels are totally clear. In the ten small cities, at least one channel is available in all but one city (Madison, Wisconsin). In nine of the ten cities, more than one channel is clear. Similarly, Pyramid reviewed four additional small cities where it presently has customers. In three of the cities, at least one channel is presently unused.<sup>1</sup>

The importance of this survey is critical. VHF VRS units are most often used in more rural areas. Larger urban areas tend to utilize 700 and 800 MHz spectrum for their public safety communications. Thus, the survey demonstrates that in the areas where VRS units are most likely to be utilized, the proposed spectrum is readily available. Frequency advisory committees can easily coordinate the correct frequency in the desired area without any concern on the part of data system licensees. The Commission should not allow this spectrum to remain fallow after

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<sup>1</sup> Pyramid's analysis is attached hereto.

decades of availability, when such an important need has been demonstrated, and for which no reasonable alternative is available.

Pyramid appreciates the comments of UTC, which suggests that users can simply use cross-band repeaters. Pyramid has as its customer numerous industrial users, some of which employ this methodology. While this may be useful in some situations,<sup>2</sup> the fact is that such arrangements are more expensive, and are not practical in many situations. Given the amount of unused spectrum on the six designated channels, there is simply no reason to artificially increase costs and spectrum issues. However, cross-band repeaters do represent a potential utilization in those areas where the six designated channels simply cannot be coordinated, and where other band channels are available (which is certainly not a given).

### **III. FACS ARE CAPABLE OF COORDINATING THESE CHANNELS**

As shown above, frequency coordination will be a relatively simple matter in most areas of the country where VRS units are utilized. However, Pyramid is surprised that UTC would claim that "... the Land Mobile Communications Council (LMCC) has yet to agree on a coordination procedure for adjacent channel interference involved trunked systems..."<sup>3</sup> In fact, LMCC submitted to the Commission on June 14, 2012 the LMCC agreement on adjacent channel coordination procedures.<sup>4</sup> UTC signed a Memorandum of Agreement, along with other LMCC members, that it would abide by these procedures. That Agreement was submitted to the Commission on August 12, 2012.<sup>5</sup>

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<sup>2</sup> The State of Virginia apparently uses such units.

<sup>3</sup> UTC Comments at 9.

<sup>4</sup> See, the Letter from Douglas Aiken, President, LMCC to the Commission in WP Docket No. 07-100, dated June 14, 2012.

<sup>5</sup> See, the Letter from Douglas Aiken, President, LMCC to the Commission in WP Docket No. 07-100, dated August 12, 2012.

The Commission should not be dissuaded from its core proposal in this proceeding, solving a practical public safety communications problem through the use of significantly underutilized spectrum. Given the abundant spectrum opportunities on these channels, Pyramid has no doubt that frequency coordinators can in most cases avoid any potential for interference, adjacent or co-channel. Even on a co-channel basis, Pyramid is confident that stations can easily be sufficiently spaced from the operational area of a VRS system, and Pyramid would support any further coordination modifications that LMCC may wish to undertake to ensure such interference-free operation.

It is also for this reason that Pyramid does not support the increase of VRS ERP limitations. While Pyramid appreciates the VRS use expressed by the State of Virginia in its Reply Comments, Pyramid does not believe that VRS units should be used to extend the operational area of a public safety system, beyond the geographic reach of that system's authorized parameters. Pyramid believes that 2 watt VRS units are sufficient for the intended purpose even in outdoor situations. However, if indeed the area which needs additional coverage is outside the area of operation of the licensed repeater system, it is the repeater system in question which should be expanded, and licensed.<sup>6</sup>

### **III. CONCLUSION**

The comments in this proceeding demonstrate that Vehicular Repeater Systems are an important part of the public safety community's arsenal of communication tools to ensure that police officers and firefighters do not lose communications once inside of buildings. There is ample spectrum opportunity on the proposed channels to satisfy VRS needs in most situations where such units can be expected to be deployed. The Commission should not allow VHF spectrum to lie fallow, when it can be utilized for life-saving purposes.

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<sup>6</sup> Pyramid would also support waivers in those specific situations where no other alternative can be found.

WHEREFORE, the premises considered, it is respectfully requested that the Commission act in accordance with the views expressed herein.

Respectfully submitted,

PYRAMID COMMUNICATIONS

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	At Least One Clear	173.2375	NOT CLEAR	CLEAR	173.2625	NOT CLEAR	173.2875	NOT CLEAR	CLEAR	173.3125	NOT CLEAR	CLEAR	173.3375	NOT CLEAR	CLEAR	173.3625	NOT CLEAR
DETROIT			X			X				173.3125	X		173.3375			173.3625	
BOSTON			X			X					X			X			X
SAN FRAN			X			X					X			X			X
DC			X			X					X			X			X
DALLAS			X			X					X			X			X
HOUSTON	X	X			X					X			X				X
ST LOUIS			X			X					X			X			X
MIAMI	X	X				X					X			X			X
PITTSBURGH			X			X					X			X			X
BALTIMORE			X			X				X				X			X
MINNEAPOLIS			X			X					X			X			X
CLEVELAND			X			X					X			X			X
ATLANTA			X			X					X			X			X
SAN DIEGO	X		X		X		X			X			X			X	
DENVER	X		X			X			X	X			X				X
SEATTLE			X			X					X			X			X
MILWAUKEE			X			X					X			X			X
TAMPA			X			X					X			X			X
CINNCINNATI			X			X					X			X			X
KANSAS CITY			X			X					X			X			X
BUFFALO	X		X		X						X			X		X	

AT LEAST ONE CLEAR		CLEAR	NOT CLEAR										
		173.2375		173.2625		173.2875		173.3125		173.3375		173.3625	
SHREVEPORT	X	X		X		X			X		X		X
DES MOINES	X	X		X		X			X				X
PEORIA	X		X				X	X		X			X
NEWPORT NEWS	X		X				X		X			X	
JACKSON	X		X				X	X		X		X	
AUGUSTA	X	X		X			X		X		X		X
SPOKANE	X		X				X		X				X
CORPUS CHRISTI	X	X		X		X		X		X		X	
MADISON			X				X		X		X		X
COLORADO SPRINGS	X	X				X		X		X			X

	AT LEAST ONE CLEAR	CLEAR	NOT CLEAR	CLEAR	NOT CLEAR	CLEAR										
		173.2375		173.2625		173.2875		173.3125		173.3375		173.3625				
WINDHAM, ME			X		X		X		X		X				X	
DONIPHAN, MO	X	X			X		X		X		X		X			X
GREENVILLE, TN	X		X		X	X			X		X		X			X
FLAGSTAFF, AZ	X	X			X	X			X	X		X		X		X