Before the
Federal Communications Commission
Washington, D.C. 20554

In the Matter of	)	
	)	
Wireless Telecommunications Bureau Seeks Comment on Petitions Regarding the use of Signal Boosters and Other Signal Amplification Techniques Used with Wireless Services	)	WT Docket No. 10-4

COMMENTS OF THE JOINT COUNCIL ON TRANSIT WIRELESS COMMUNICATIONS

The Joint Council On Transit Wireless Communications (the "Joint Council"), pursuant to Section 1.415 of the Federal Communication Commission ("FCC" or "Commission") Rules and Regulations, 47 C.F.R. § 1.415, respectfully submits these comments regarding Public Notice DA 10-14.[1]

1. INTRODUCTION

1.1 The Joint Council commends the FCC for opening a comment period to consider clarifying its rules regarding manufacturing, sale and installation of signal boosters for a variety of applications pertinent to Transport Providers and many other industrial sectors in the United States. It is our perspective that many surface land passenger transportation service operators currently use and wish to continue to use these devices for vital communications within tunnels, underground facilities, buildings and other areas needing supplemental radio signal strength. We therefore support efforts to

[1] *Wireless Telecommunications Bureau Seeks Comment on Petitions Regarding the use of Signal Boosters and Other Signal Amplification Techniques Used with Wireless Services*, Public Notice, Doc. No. 10-14 (released January 6, 2010 "*Public Notice*").

clarify rules which would allow the continued use of installed equipment and ability to make more effective use of current and future equipment.

2. THE JOINT COUNCIL ON TRANSIT WIRELESS COMMUNICATIONS

2.1 The Joint Council is a newly formed alliance of professionals and transportation organizations created to represent surface land passenger transportation service operators nationwide within the United States on matters of wireless voice and data communications. The Council membership is drawn from public agencies, private providers and industry serving road, water, and rail transit. The council seeks to educate and inform public and private transportation agencies and providers on issues relating to their use of wireless communications.

COMMENTS

3. Transport Operators Current Use

3.1 Signal Boosters, or Bi-Directional Amplifiers (BDA) as they are commonly referred to in the industry, are essential components to most transport operators nationwide. As such it is vital to our industry that the FCC considers in its deliberations, actions which would ensure continued use of non-interfering BDAs and improvements to rules to deal with the growing problem of improperly installed and configured BDA equipment causing interference to licensed operations.

3.2 Part 90 Underground Use: The most familiar application in our industry is to use BDAs certified by the FCC pursuant to 47 C.F.R. § 2.907 to repeat above ground private land mobile radio channels licensed under 47 C.F.R. § 90.20(a), 47 C.F.R. § 90.35(a) or other sections of Part 90 rules into underground transit tunnels to provide

radio communications for emergency coordination (e.g. mutual aid frequencies), operations and maintenance use. These BDAs are installed in accordance with 47 C.F.R. § 90.219(e), which allows for signal boosters to be installed without separate authorization. To ensure compliance with 47 C.F.R. § 90.219, BDA equipment is typically installed with some type of channelized and band specific filtering. Filtering equipment also improves the performance of the BDA and limits the potential for interference to the system's own users and to other adjacent channel users.

3.3 Part 20 Underground Use: Within these same tunnels referenced above, BDAs are also frequently installed by commercial cellular providers to extend coverage of their networks into tunnels and other underground facilities for the benefit of their subscribers and the transport provider. These BDAs are also provisioned with filtering which limits amplification to within their licensed spectrum band.

3.4 Above Ground Use: In a similar fashion described in paragraph 3.2 above, BDAs are installed to repeat licensed channels and commercial channels within facilities of all types that need signal boosting to overcome attenuation of signals by the building materials used or size and density of the building.

4. Broadband BDAs

4.1 Our users report that interference caused wideband BDA systems is occurring across the nation. These wideband systems are frequently installed by non-license holders or third parties and are commonly not provisioned with channel specific filtering, and such units cause interference to licensed operations. Significant resources have been spent by license holders tracking down the locations where these devices are causing

destructive interference to their operations. We further observe that broad-band re-amplification across an entire block of frequencies can create significant interference in localized areas and are frequently difficult to locate. We submit that long established RF engineering principals and laws of physics dictate that BDAs should be specifically band limited in their design and installation to not generate destructive interference.

5. **Authorization/Licensing**

5.1 A primary concern is BDA equipment installed by non-licensees, third parties and others not affiliated with the licensee. In this instance, equipment is installed without the knowledge or approval of the licensee and would seem to be in violation of FCC rules. While this may benefit the installer of the BDA and be done without malicious intent, if said equipment has the potential (e.g. due to its broadband design) to create interference to Part 90 license holders, this activity should be prohibited. The FCC should consider further clarifying its rules to prohibit non-license holders from installing equipment capable of amplification signals within a license holder's authorized spectrum without the consent of the licensee. Only licensees or those authorized by the licensee should be allowed to install BDA equipment for their frequencies and only within their licensed service area.

5.2 A recommendation to consider would be to restrict the sale of BDA equipment to license holders or specifically authorized representatives of the licensee only. This could be a solution to control the use of BDA equipment within licensed spectrum.

5.3 Sale of BDA equipment for use in unlicensed bands, if not already the case, should be emission limited by it's certification by the FCC to only be capable of amplifying unlicensed frequencies.

5.4 Another recommendation to consider is for the FCC to create a new station class code for signal boosters. As these are fixed location transmitters, it would be helpful to know where these devices are located by coordinate and the ERP and type/orientation of outdoor antennas. This could reduce time spent locating boosters. The Commission could easily create a notification system within ULS for licensees to be able to enter BDA location information which would not be onerous or time-consuming for the licensee.

6. CONCLUSION

6.1 The Joint Council is pleased to have the opportunity to present its comments to the Commission's Public Notice and urges consideration or our suggestions and welcomes further discussion on these issues to the benefit of our industry and other industries.

Respectfully submitted,

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