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Before the  
FEDERAL COMMUNICATIONS COMMISSION  
Washington, DC 20554

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FCC Mail Room

In the Matter of )  
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Petition for Declaratory Ruling Regarding the ) WT Docket No. \_\_  
Unlawful Sale and Use of Cellular Jammers )  
and Wireless Boosters and Repeaters )  
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**PETITION FOR RULEMAKING**

The DAS Forum, a membership section of PCIA-The Wireless Infrastructure Association (“PCIA”), hereby requests that the Federal Communications Commission (“Commission”) initiate a rulemaking proceeding to resolve outstanding questions concerning the manufacturing, sale and operation of boosters and repeaters used in the Cellular and Personal Communications Radio Services. The DAS Forum membership includes virtually every major neutral host outdoor and indoor distributed antenna system (“DAS”) provider, as well as manufacturers of equipment used in the wireless service sectors, several commercial mobile radio service (“CMRS”) carriers currently deploying DAS as part of their networks and many wireless industry infrastructure representatives.<sup>1</sup>

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<sup>1</sup> DAS is a network of spatially separated antenna nodes connected to a common source via a transport medium that provides wireless service within a geographic area or structure. DAS antenna elevations are generally at or below the clutter level and node installations are compact. See <http://thedasforum.org/>, last visited Oct. 6, 2009.

## BACKGROUND

On November 2, 2007, CTIA-The Wireless Association (“CTIA”), petitioned the Commission<sup>2</sup> to declare that: 1) the use of wireless jamming devices are prohibited, noting various instances of interference to Cellular and PCS Services; 2) the sale and operation of boosters and repeaters in the wireless services without licensee consent is prohibited.<sup>3</sup>

Although the *CTIA Petition* has not been formally accepted for comment, CTIA released it publicly and its mere filing has generated much interest.<sup>4</sup> The DAS Forum filed informal comments to the Office of Engineering and Technology (“OET”) and has met with the staffs of both OET and the Wireless Telecommunications Bureau. CTIA and its members have also had meetings with Commission staff in support of the *CTIA Petition*.<sup>5</sup>

At the same time, there have been several complaints filed with the Enforcement Bureau alleging interference from repeaters not authorized by cellular carriers and the Bureau has issued a Notice of Apparent Liability in one of those cases.<sup>6</sup> During the time the *CTIA Petition* has been pending and the Enforcement Bureau has pursued the complaints, the Commission has continued to certificate wireless repeaters without regard to licensee involvement in the marketing or installation of these devices.<sup>7</sup>

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<sup>2</sup> CTIA—The Wireless Association, *Petition for Declaratory Ruling Regarding the Unlawful Sale and Use of Cellular Jammers and Wireless Boosters and Repeaters*, Nov. 2, 2007 (“*CTIA Petition*”). This Petition has not yet received a docket number from the Wireless Bureau to which it was submitted.

<sup>3</sup> Although the DAS Forum’s filing is directed at Cellular and PCS, CTIA’s Petition would appear to apply to any of the licensed wireless radio services. The DAS Forum has given its support to a ruling that the use of jamming devices should be prohibited and has noted, in fact, that previous Commission policy statements as well as Section 333 of the Communications Act, make clear that the use of jamming devices is not permitted. Thus, the issue of jamming devices will not be discussed in this rulemaking petition.

<sup>4</sup> See, e.g., Lynette Luna, *FCC May Initiate Rulemaking on Cellular Amplifiers*, URGENT COMMUNICATIONS, Sep. 9, 2009 available at [http://urgentcomm.com/mobile\\_voice/news/fcc-rulemaking-cellular-amplifiers-20090909/](http://urgentcomm.com/mobile_voice/news/fcc-rulemaking-cellular-amplifiers-20090909/).

<sup>5</sup> See Letter from Brian M. Josef to Marlene H. Dortch, filed in WT Dkt. 09-51 (Jul. 28, 2009).

<sup>6</sup> *In re: Digital Antenna, Inc. Sunrise, Florida, Notice of Apparent Liability for Forfeiture and Order*, DA 08-1093, 23 FCC Red. 7600 (May 12, 2008).

<sup>7</sup> See, e.g., Grants of Equipment Authorization S3CDB6MR20 (February 18, 2009), E675JS0109 (November 24, 2008), NEOCSRCELLPCS2480 (July 23, 2009), RSNDUAL-60UNDER (August 28, 2009), and IWD-WINS-3900001 (November 19, 2008).

The DAS Forum respectfully submits that, because of the ubiquitous, long term deployment of repeaters in the Cellular and PCS Services by both private contractors and the carriers themselves, a Commission “declaration” as to the marketing and installation policies for these devices would be an inappropriate procedure. A better approach would be for the Commission to address the marketing and installation of repeaters in a public rulemaking proceeding to document existing industry practices, elicit all points of view and obtain comments on specific proposals to address the issues raised in the CTIA petition.

## **DISCUSSION**

Under the Commission’s rules, repeaters, like other transmitters, must be certificated for compliance with specific technical standards designed to reduce the possibility of harmful interference to licensed radio services.<sup>8</sup> Thus, the Commission already has in place a process for ensuring that, to a significant degree, certificated repeaters will not be a source of harmful interference. Under the Commission’s Part 2 rules, devices that have been certificated for licensed or unlicensed use may be manufactured and marketed without the prior consent of any third party (e.g. a licensee).<sup>9</sup> At issue, then, is whether the Commission should place restrictions on the operation of certificated repeaters and, if so, the appropriate role, if any, that licensees should have in authorizing such operation.

It has never been the practice for repeater manufacturers to obtain approval from carriers for the sale of these products to third parties because it is not required by law. As a practical

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<sup>8</sup> 47 C.F.R. § 1.903 (“Stations in the Wireless Radio Services must be used and operated only in accordance with the rules applicable to their particular service as set forth in this title and with a valid authorization granted by the Commission under the provisions of this part.”).

<sup>9</sup> 47 C.F.R. § 2.803(a) (“Except as provided elsewhere in this section, no person shall sell or lease, or offer for sale or lease (including advertising for sale or lease), or import, ship, or distribute for the purpose of selling or leasing or offering for sale or lease, any radio frequency device unless: (1) In the case of a device subject to certification, such device has been authorized by the Commission in accordance with the rules in this chapter and is properly identified and labeled as required by § 2.925 and other relevant sections in this chapter.”).

matter, requiring carrier approval prior to sale would not be feasible for a host of reasons. In many cases, a manufacturer sells repeater equipment to a neutral host provider without ever knowing the ultimate user of the equipment. In addition, in the highly competitive market for DAS, a neutral host provider forced to provide such information to its carrier competitors would be harming its own business. Further, neutral host providers or property developers often purchase DAS equipment for future use where it is not determined who the carrier will be until the time of installation. Finally, it would be virtually impossible to require advance consent from multiple carriers serving the community in which a DAS repeater was to be installed, where not all carriers will necessarily be targeted for interconnection. Such a requirement would significantly inhibit the ability of neutral host providers, property developers and the equipment manufacturers to deploy DAS networks cost-effectively and quickly for the benefit of end users.

Repeaters in the Cellular and PCS Services are deployed in a variety of “outdoor” settings, including on lighting structures and utility poles, to achieve visual or environmental unobtrusiveness, to increase network capacity, or to address terrain or technical constraints that make a multimodal system preferable. Repeaters are also deployed for indoor use particularly in arenas, hotels, transportation systems and large office buildings. Some campus applications (e.g. corporate headquarters, universities, etc.) deploy hybrid systems that consist of in-building and outdoor networks to provide solutions in environments where traditional “macro” sites (e.g., towers) are not feasible and signal strength may be poor.

Often manufacturers, integrators and neutral host providers deploy DAS networks under contract from one or more carriers and thus, “licensee consent,” as envisioned by the *CTIA Petition*, would be express or implied under the contract between the parties. Even where a DAS system is being installed for a non-carrier third party, it has always been industry practice to

coordinate repeater activation with the relevant carrier(s), prior to system operation. In this respect, coordination has always been presumed by the industry to constitute carrier consent to operate the DAS installation. Thus, whether consent of the carrier is formal or informal DAS systems are, in practice, never activated without carrier involvement and technical coordination.

Even with coordination, there is always the possibility that complex installations involving repeaters can, over time, be a source of interference. As new carrier base stations and DAS facilities are installed nearby, environmental conditions change and systems age, even a properly coordinated repeater installation may cause interference. Responsible installers, however, can be expected to work with carriers to resolve such interference problems in their own and their customer's self interest. Where actual or suspected DAS interference occurs, carriers would, as a result of the coordination process, be able to respond quickly to identify and address the source.

Nonetheless, the DAS Forum is cognizant of the fact that in some cases low cost or poorly manufactured repeaters, whether certificated by the Commission or not, are installed in households, small offices or vehicles without any coordination by local carriers. However one defines it, these devices are clearly operating without consent of the licensee whose service is being used. When such devices begin to cause interference, it often is necessary for a carrier to go to great lengths to locate the source and take steps to correct the problem. The DAS Forum submits that the Commission should explore the best methods of resolving this issue without resorting to blanket regulations that unnecessarily inhibit the sale and professional installation of repeaters and the benefits they provide.

## INDUSTRY CODE OF CONDUCT

To provide a reasonable structure for the development of rules that address the marketing and use of repeaters, the DAS Forum has drafted an Industry Code of Conduct (“Code”) to reflect the licensee coordination process that takes between licensees and DAS providers at each installation. The DAS Forum believes this Code addresses the key concerns set forth in the *CTIA Petition* and, therefore, can be easily incorporated in or cross-referenced by the relevant Commission’s rules.<sup>10</sup> More importantly, the Code is rooted in long-standing industry practices that can be implemented without resorting to a lengthy process of creating complex technical standards that will only further burden equipment manufacturers. Significantly, the Code is designed to apply to devices installed by professionals who routinely coordinate with carriers, as well as to devices sold directly to consumers that are often operated with or without the knowledge of a carrier. The DAS Forum believes adherence to a Code of Conduct will strike an appropriate balance between the carriers’ desire for interference free operation of repeaters and the public need for a continuing vibrant market for repeater sale and installation.

### DAS Industry Proposed Code of Conduct

The DAS Forum submits that Commission rules must be clear that there are no restrictions on, or prior licensee consent required for, the sale or installation of wireless boosters/repeaters. Rather, anyone selling or installing a booster/repeater should only be required to adhere to the following Code of Conduct:

**A. The sale of a booster/repeater (“equipment”) shall be accompanied by a notice stating that it is the responsibility of the owner/installer to coordinate with the appropriate local carrier(s) prior to operation in order to avoid harmful interference.** The DAS Forum believes that interference-free operation of repeaters is a joint responsibility of the

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<sup>10</sup> See Appendix A *infra*.

owner/installer and the local carrier. Although coordination is generally a routine process before the operation of repeater systems, the notice requirement would serve ultimately as a reminder to installers of repeaters of all sizes as to their responsibilities.<sup>11</sup>

**B. As part of the coordination process, the owner/installer of the equipment shall provide the carrier(s) with the FCC certification number or other information concerning the technical characteristics of the equipment and its location sufficient to demonstrate, by testing or otherwise, that it is unlikely to cause interference.** A carrier should be given evidence of any required Commission certifications as well as the equipment specifications. In addition, the operator of the repeater should provide the name and qualifications of the installer and evidence of a service contract with the installer or another qualified company. The DAS Forum understands that there is no certification process to attest to the competence of installers, but to the extent an installer is inexperienced, that fact will ultimately emerge in the coordination process.

**C. Coordination with the carrier(s) showing no likelihood of harmful interference shall be considered licensee consent to operate the equipment. The carrier(s) shall notify the owner/installer of the equipment in writing or by e-mail that the coordination has been successfully concluded. Such notification shall not be unreasonably withheld.** It is important to note that any written notification applies only to the authorization of the owner/installer to begin system operation. No notification or other type of consent with regard to equipment sale, selection, design or installation would be required until this point.

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<sup>11</sup> In addition, the DAS Forum proposes that each grant of certification have a condition that the repeater may not be used prior to coordination with the appropriate licensee. Such a condition would be a variation of previous conditions imposed by the Commission. For instance, the Certification Grant for the Samsung AirWave (FCC ID: A32SCS-62U2), requires "registration" with a carrier before use. In this case the carrier has approved the device and has determined that its use can be authorized under the carrier's license. Registration is to identify the location. Information as to location would be only part of the information provided to the carrier during the coordination process.

**D. If at any time, the equipment is found to cause harmful interference, it shall be the responsibility of the owner to take whatever steps are required to eliminate the interference.** Under this procedure, the carrier would notify the owner who would then, under its service contract, be responsible for making whatever adjustments are required. Based on the initial coordination process, carriers would be expected to keep a record or data base of coordinated repeaters.

### **CONCLUSION**

Commission regulation of wireless repeaters should further the overarching policy goals of wireless deployment through a vibrant private-sector spirit of innovation.<sup>12</sup> The DAS Forum respectfully urges the Commission to initiate a rulemaking to obtain public comment on the issues discussed herein; and incorporate both the Industry Code of Conduct in any regulations developed in such a proceeding. We look forward to working with you and your colleagues on these issues.

Respectfully Submitted

\_\_\_\_\_/s/\_\_\_\_\_  
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<sup>12</sup> *Fostering Innovation and Investment in the Wireless Communications Market; A National Broadband Plan for Our Future*; GN Docket Nos. 09-157; 09-51, *Notice of Inquiry*, FCC 09-66 (rel. Aug. 27, 2009) at ¶ 1 (“We seek to understand better the factors that encourage innovation and investment in wireless and to identify concrete steps the Commission can take to support and encourage further innovation and investment in this area.”).

## Appendix A

### Part 2—FREQUENCY ALLOCATIONS AND RADIO TREATY MATTERS; GENERAL RULES AND REGULATIONS

1. The authority citation for part 2 continues to read as follows:  
**AUTHORITY:** 47 U.S.C. 154, 302a, 303, and 336, unless otherwise noted.

2. Amend § 2.815 by adding new paragraph (c) to read as follows:

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(c) Every grant of equipment certification for a booster/repeater to be used in any of the wireless radio services must contain the following condition for operation stated on the face of the grant: “This device may not be operated until the user/installer has coordinated with the licensee of the radio service on which the device is designed to operate in accordance with the Code of Conduct set forth in Section 2.815(c) of the Commission’s rules.” The Code of Conduct required for such coordination is set forth as follows:

**A. The sale of a booster/repeater (“equipment”) shall be accompanied by a notice stating that it is the responsibility of the owner/installer to coordinate with the appropriate local carrier(s) prior to operation in order to avoid harmful interference.**

**B. As part of the coordination process, the owner/installer of the equipment shall provide the carrier(s) with the FCC certification number or other information concerning the technical characteristics of the equipment and its location sufficient to demonstrate, by testing or otherwise, that it is unlikely to cause interference.**

**C. Coordination with the carrier(s) showing no likelihood of harmful interference shall be considered licensee consent to operate the equipment. The carrier(s) shall notify the owner/installer of the equipment in writing or by e-mail that the**

**coordination has been successfully concluded. Such notification shall not be unreasonably withheld.**

**D. If at any time, the equipment is found to cause harmful interference, it shall be the responsibility of the owner to take whatever steps are required to eliminate the interference.**