



Squire Sanders (US) LLP
1200 19th Street, NW
Suite 300
Washington, DC 20036

O +1 202 626 6600
F +1 202 626 6780
squiresanders.com

Bruce A. Olcott
T +1.202.626.6615
bruce.olcott@squiresanders.com

February 11, 2013

VIA ELECTRONIC FILING

Marlene H. Dortch
Secretary
Federal Communications Commission
445 12th Street, S.W.
Washington, DC 20554

**Re: Cellphone-Mate Inc.
Permitted Oral *Ex Parte* Presentation
WT Docket No. 10-4**

Dear Ms. Dortch:

On February 7 and 8, 2013, Hongtao Zhan, Chairman and CEO of Cellphone-Mate and the undersigned participated in several meetings with representatives of the Commission to discuss the above referenced proceeding. On February 7th, separate meetings were held with Matthew Berry, Chief of Staff to Commissioner Pai and with Erin McGrath, Legal Advisor to Commissioner McDowell. An additional meeting was held with representatives of the Wireless Telecommunications Bureau, which included Roger Noel, Chief of the Mobility Division; Becky Schwartz, Attorney-Advisor; and Maria Kirby, Attorney-Advisor. On February 8th, a meeting was held with Commissioner Mignon Clyburn, her Legal Advisor Louis Peraertz, and intern, Brian Indovina. A separate meeting was held with Renee Gregory, Legal Advisor to Chairman Genachowski, and a third meeting was held with David Goldman, Legal Advisor to Commissioner Rosenworcel and Alex Hoehn-Saric, Policy Director to Commissioner Rosenworcel.

The focus of the meetings was the Commission's rules for signal boosters used by consumers and small businesses to enable wireless broadband access in homes and commercial establishments for the benefit of consumers and employees. Many businesses upon discovering that they lack reliable wireless service inside their facilities seek the installation of a signal booster system in order to remedy the problem as quickly as possible. Further, such businesses invariably seek the installation of a wideband signal booster system to enable access to all wireless networks that may be used by employees and customers in the building.

The needs of the small business community for access to affordable wideband signal booster products have been well documented in this proceeding. In urban areas, a major provider of lottery services reports that thousands of small businesses such as convenience stores and gas stations have use boosters to enable in-store lottery machines to communicate with the state lottery agency.¹ Boosters are also critical to reliable service for customers in rural areas. For example, in rural Alaska, particularly on the fishing fleets of the Prince William Sound, customers rely on cellphones for safety, information, and basic communications.² The switch from analog service to digital significantly reduced coverage, and boosters are employed to make up the difference and maintain connectivity for crews that would otherwise be isolate for potentially months at a time.³ In national parks and wilderness areas, hospitality businesses rely on boosters to stay connected to their workers and their customers.⁴ Petroleum drilling often takes crews “out in the middle of nowhere”⁵ far beyond the coverage area of any carrier, making boosters essential to maintaining communications and operations.⁶ Indeed, even rural public safety entities rely on signal boosters to communicate, the public, and keep their personnel safe.⁷

Despite the critical importance of signal boosters to ensure wireless broadband connectivity for consumers and businesses, the major wireless carriers have not embraced signal boosters as beneficial to their services or to their customers. Instead, the major carriers often object to the sale and installation of such systems by independent companies, or are extremely slow in providing approval for such installations, if such approval is provided at all. In our experience, the carriers only approve installations of narrowband booster equipment designed to operate with a single wireless service, even though small business customers routinely desire and require wideband capabilities supporting each of the major wireless carriers.

¹ Comments of GTECH Corporation, WT Docket No. 10-4 (July 25, 2011).

² See e.g. Comments of Devren Bennett, WT Docket No. 10-4 (Aug. 22, 2011), Comments of Renee Ernster, WT Docket No. 10-4 (filed Aug. 22, 2011).

³ Comments of Richard Gustin, WT Docket No. 10-4 (Aug. 29, 2011).

⁴ Comments of Wayne Grosz, WT Docket No. 10-4 (Aug. 23, 2011); Comments of Edward Stiglitz, Photo Adventure Tours, Las Vegas, Nevada, WT Docket No. 10-4 (Aug. 24, 2011).

⁵ Comments of Wilson Electronics, WT. Docket No. 10-4 at 8 (July 26, 2012) (remarks of Jose Blanco) (“*Wilson Comments*”).

⁶ See e.g. *id.*; Comments of Chad Carter, WT Docket No. 10-4 (Jan. 25, 2010); Comments of Richard Breininger, WT Docket No. 10-4 (Jan. 19, 2010); Comments of Dawn J. Smith, WT Docket No. 10-4 (Jan. 15, 2010).

⁷ See e.g. Comments of Karen Kemperty, Cavalier County, WT Docket No. 10-4 (Aug. 22, 2012); Comments of Scott Hamilton, WT Docket No. 10-4 (Aug. 23, 2012); *Wilson Comments* at 5-6, 8-9 (providing testimonials from rural fire and sheriff departments regarding the necessity of boosters).

Certain of the wireless carriers offer their own signal booster solutions for use by the business community, but these systems are designed to boost the signals of only one wireless carrier and routinely cost significantly more than wideband systems made available by independent manufacturers. The high costs of carrier sponsored systems normally exceed what most businesses are able to afford, greatly limiting the use of such systems to enable wireless broadband connectivity.

Given these factors, the Cellphone-Mate urged the Commission to act with restraint in adopting new rules for the installation and use of signal boosters. We understand that the Commission is considering adopting Network Protection Standards that would establish a baseline for the design of consumer signal boosters approved for marketing in the United States. Elements of these Network Protection Standards (such as the intermodulation and out-of-band emission limits) significantly exceed what is necessary or appropriate to protect adequately carrier networks. These and other restrictions could double the cost of a consumer signal booster, making them unaffordable for many, if not most, consumers.

The draft Network Protection Standards also includes many restrictions that are entirely unrelated to the goal of protecting carrier networks. For example, the Standards would restrict the downlink power of a signal booster (the link between the booster and the consumer handset) to just 0.05 watts. This will unnecessarily limit the coverage area of a consumer booster, meaning that many users may be forced to purchase multiple boosters in order to provide reliable coverage of a large home or small business establishment.

Of further concern is the possibility that the Commission might require both consumers and small businesses to secure the express consent of wireless carriers before installing and using signal boosters. Given the restrictive nature of the above discussed Network Protection Standards, an additional carrier consent requirement would appear wholly unnecessary. Instead, such a compelled interaction between consumers and wireless carriers would appear to serve no purpose but to provide carriers an opportunity to dissuade consumers for purchasing such beneficial devices, or redirect such consumers to the carrier's own retail booster products.

Large carriers would also have a strong incentive to withhold consent for the installation of wideband signal booster systems in order to disadvantage small competitive wireless carriers that may have less robust network resources and, as a result, could benefit the most from professionally provided signal booster solutions. For this reason, at least some rural carriers have expressed support for the use of appropriately manufactured signal boosters without express carrier approval. For example, the Rural Telecommunications Group ("RTG") has concluded that safe harbor provisions make explicit carrier consent unnecessary, and cautions that "require[ing] carrier consent before the deployment and activation of Consumer Boosters would be tantamount to a prohibition."⁸

⁸ Ex Parte Letter of the Rural Telecommunications Group, WT Docket. 10-4, at 2 (Aug. 1, 2012).

The Commission has ample legal authority to authorize the use of signal boosters in wireless spectrum without the express consent of the major wireless carriers. Wireless carriers' use of the spectrum is subject to the Commission's authority to "[p]rescribe the nature of service to be rendered by each class of licensed stations"⁹ which empowers the Commission, subject to the demands of the public interest, to "[m]ake such rules and regulations and prescribe such restrictions and conditions not inconsistent with law, as may be necessary to carry out the provisions of this chapter."¹⁰ The Commission's Data Roaming Order, recently upheld in the D.C. Circuit, provides ample precedent for the authorization of signal boosters.¹¹ Cellphone-Mate is preparing a further *ex parte* letter analyzing the applicability of the recent decision to cell phone boosters, and will file it in the docket tomorrow.

The attached presentation was distributed during the meeting and served as the basis for the discussion. Please contact the undersigned if you have any questions.

Sincerely,



Bruce A. Olcott

⁹ 47 U.S.C. § 303(b).

¹⁰ 47 U.S.C. § 303(r).

¹¹ *Reexamination of Roaming Obligations of Commercial Mobile Radio Service Providers and Other Providers of Mobile Data Services*, WT Docket No. 05-265, Second Report and Order (rel. Apr. 7, 2011); *CELLCO Partnership v. Federal Communications Commission*, No. 11-1135 (D.C. Cir., Dec. 4, 2012).



Cellphone-Mate, Fremont, California





Introduction

- Cellphone-Mate is a technology leader and innovator in the wireless broadband industry
- First to make available 4G LTE broadband signal boosters for each wireless carrier
- The signal booster industry is an important contributor to the universal availability of wireless broadband for consumers





Our Industry Is Small But Important

- Even if carriers claim 99% coverage nationwide, that is outdoors
- At least 70% of wireless calls are initiated indoors
- 30% of consumers report they regularly have mobile coverage issues
- Wireless signals have difficulty penetrating buildings (particularly newer “green” buildings) making indoor coverage very challenging
- Our industry is an important part of the last mile mobile broadband connection by bringing wireless voice and 3G and 4G Internet into homes, small business and offices





Flexible Regulations for Signal Booster

- When properly designed and manufactured, signal boosters will not interfere with wireless networks
 - At least one million signal boosters are currently in use in the United States
 - Despite significant numbers, very few incidents of interference to wireless networks exist and such cases are diminishing rapidly
 - The fact that interference complaints are few and diminishing demonstrates that signal boosters can operate reliably and safely
- Any problems that do exist can be resolved through basic technical requirements
- Imposition of carrier consent rules would eliminate signal booster industry





Safe Harbor for Consumer Signal Booster

- Representatives of wireless carriers and the booster industry negotiated safe harbor technical rules for consumer signal boosters
 - The rules are significantly more restrictive than is necessary and could double the cost of consumer signal boosters
 - Cellphone-Mate is willing to support them in the interest of compromise and to assuage the wireless carriers
 - Once these restrictions are adopted, no need exists for carriers to approve individual consumer installations of technically compliant signal boosters





Dangers of Carrier Consent Requirement

- Consumers will be reluctant to purchase signal boosters if they are required to seek out consent of wireless carriers
- Carriers are likely to use these calls either to dissuade consumers from purchasing, or directing them to purchase at carriers' retail stores
- A far better approach is an Internet registration process in which consumers identify the location of their booster
- At the very least, the Commission should prohibit carriers from unreasonably withholding consent, and from using the consent process to steer sales to its own retail outlets
 - The prohibition on unreasonably withholding consent should apply to all boosters – consumer and enterprise



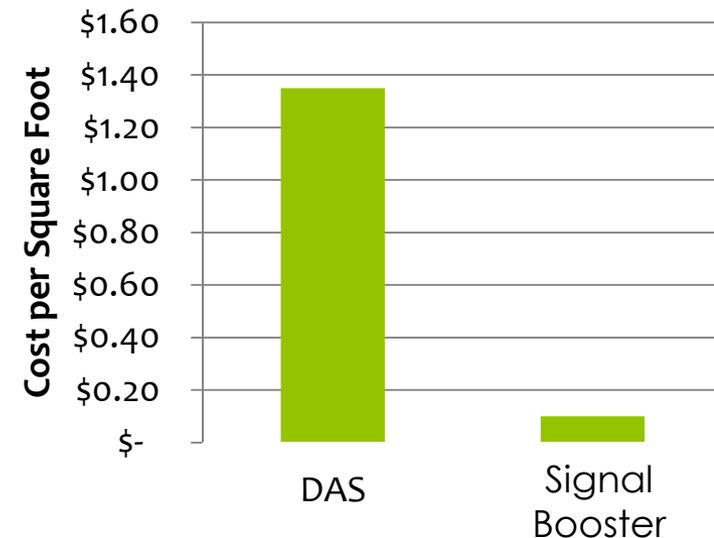
Importance of Enterprise Signal Boosters

- Signal boosters are used by countless small businesses to enable wireless broadband access for customers and staff
- Consumers desire broadband access in any commercial establishment where they spend significant time
 - Grocery stores, restaurants, department stores, medical office, auto repair, beauty salons, to name but a few
- Employees require mobile broadband access in small offices in order to use smart phones to conduct business
 - Real estate agents, automobile and other sales staffs, support staff, financial advisors, to name but a few
- The proposed rules could prevent small businesses from using small affordable boosters to ensure access



Restrictions on Enterprise Booster Use

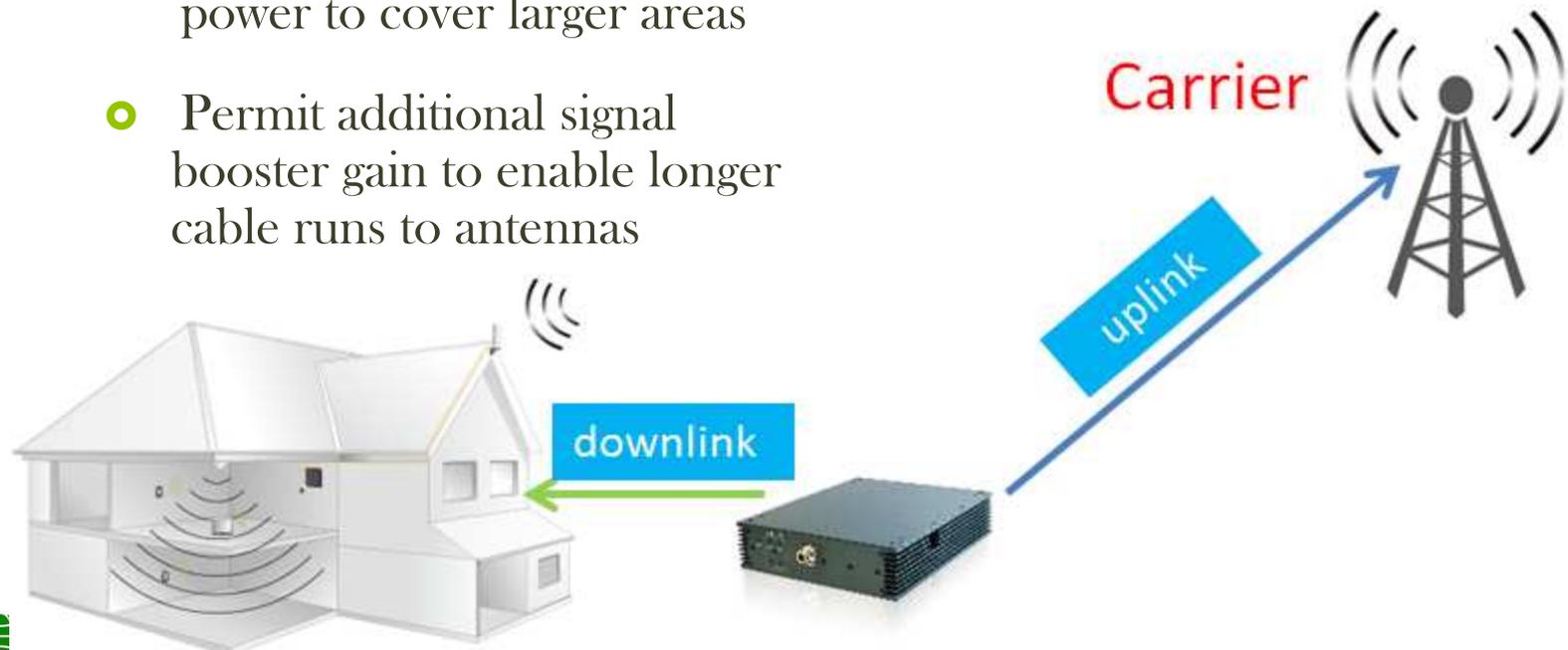
- Proposed restrictions on consumer boosters will make them inadequate for use in most small commercial settings
- Small business may also need to secure consent from every wireless carrier, which would be extremely burdensome
 - Carriers are unlikely to provide consent to businesses seeking to install boosters that are not their own subscribers
 - Carrier-approved Distributed Antenna Systems can cost ten times as much as smaller enterprise signal boosters
 - A better approach is a safe harbor – technical rules that ensure that boosters designed for small businesses are just as safe as consumer boosters





Enterprise Booster Safe Harbor

- Technical restrictions on enterprise boosters could be identical to the rules for consumer boosters with two small changes:
 - Permit additional downlink power to cover larger areas
 - Permit additional signal booster gain to enable longer cable runs to antennas





Enterprise Booster Safe Harbor

- Enterprise boosters need additional downlink power to provide service in a slightly larger indoor area
 - Consumer boosters are limited to 0.05 watts (17 dBm), allowing coverage of a residential house
 - A composite downlink power of 1.0 watt (30 dBm) would be sufficient for most small businesses
- Such a change would have no impact on the wireless carrier networks because it is downstream only
- Alternative is to force business owners to purchase multiple boosters, which is expensive and often infeasible





Enterprise Booster Safe Harbor

- Enterprise boosters need increased gain to enable use of longer cable runs between booster and antennas
 - Small business may need multiple indoor antennas for coverage
 - Small businesses also often need external antennas that can be placed on a rooftop to communicate with carrier networks
 - Cabling and splitters between booster and antennas will attenuate boosted signal, eliminating the benefit of the booster
- Output gain can be precisely matched to cable length so the resulting power toward carrier networks is identical to the power from a consumer booster
 - Could provide cable in kit form, or use professional installers
 - Either way, no need exists for a carrier consent requirement



Transitional Issues

- If the Commission adopts its Network Protect Standards for consumer signal boosters, manufacturers will need at least 18 months to implement the new rules
 - New consumer signal boosters must be designed
 - New boosters must also be certified by FCC as compliant
 - Additional components must be identified and purchased
 - Additional manufacturing capabilities may also be needed
- Enforcing new rules too quickly may eliminate availability of new signal boosters during transition to new designs
- Given the very minimal interference issues that have been identified, an 18 month transition would be reasonable



Signal Boosters Help Small Carriers

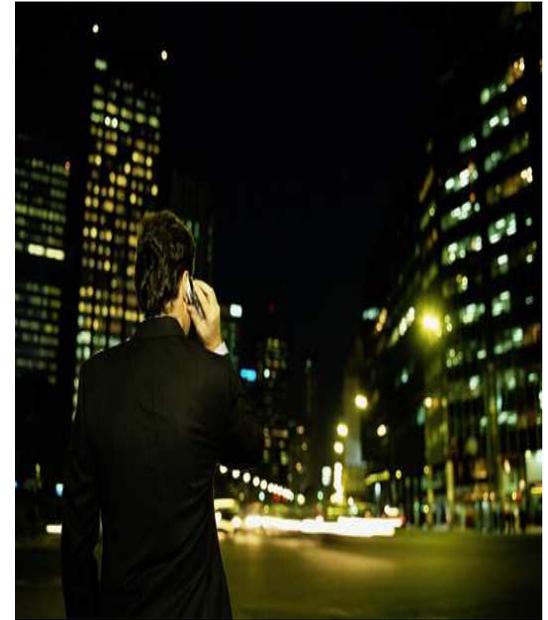
- Small carriers have competitive challenges competing against major wireless carriers
- Signal boosters can help expand their coverage giving them more flexibility to compete against nationwide wireless carriers
- As their network coverage area increases, the need for signal boosters might reduce and consumers will stop purchasing them





Signal Boosters Help Emergency E911

- Signal boosters enable consumers to complete E911 calls that might not have been possible at the edge of network coverage
- Signal boosters also enable more reliable connections, facilitating greater AGPS yield and faster location fixes
- Claims that signal boosters impair the accuracy of position location services are also overstated and can be resolved





Summary

- Wideband signal boosters are an important tool for making wireless broadband reliably available to all Americans
 - The compromise technical proposal for consumer boosters ensures protection of carrier networks and obviates need for carrier consent
- Small businesses depend on affordable access to boosters, which major wireless carriers have refused to make available
 - The compromise proposal can also be adapted easily for small business use without any risk to carrier network reliability
- If carriers are permitted to require individual consent for each booster, the carriers could rapidly eliminate entire industry
 - Such a result would make wireless broadband far less available to consumers and would also harm countless small businesses
 - At the very least, carriers should be prohibited from unreasonably refusing to provide consent on a timely basis