

January 10, 2012

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. 10-04**

Dear Ms. Dortch:

On December 6, 2012, representatives of Cellphone-Mate Inc. (“Cellphone-Mate”) met with representative of the Commission staff to discuss the above referenced proceeding. Participating in the meeting on behalf of the Commission were Roger Noel, Chief of the Mobility Division; Tom Derenge, Moslem Sawez, and Joyce Jones of the Wireless Telecommunications Bureau; and Patrick Donovan and David Siehl of the Public Safety & Homeland Security Bureau. Participating in the meeting on behalf of Cellphone-Mate were Hongtao Zhan, Chairman and CEO of Cellphone-Mate, and the undersigned.

During the meeting, the Cellphone-Mate representatives expressed many of the same points that were made by Cellphone-Mate in its comments and reply comments that were filed in the above referenced proceeding. For example, as detailed in Cellphone-Mate’s reply comments, Cellphone-Mate believes that the joint proposal that was submitted to the Commission by Verizon Wireless and Wilson Electronics on July 25, 2012 is unnecessarily complex and burdensome, and may impair the vibrant competition that currently exists in the burgeoning signal booster industry.

The discussion also tracked closely with the attached PowerPoint presentation, which was distributed during the meeting. The Cellphone-Mate representatives acknowledged that signal boosters create brief delays in signal transmissions. Although these delays can be minimized, they cannot be eliminated. Further, wideband signal boosters typically have much less signal delay than narrowband signal boosters, which usually require additional circuitry.

The discussion also focused on the ex parte presentation of AT&T Services, Inc. and TruePosition, Inc., dated December 23, 2011, which argued that signal booster delays can impact the accuracy of Uplink Time Difference of Arrival (“U-TDOA”) position location services. Cellphone-Mate explained that RF marks can be used by U-TDOA network operators to identify signal boosters and address in their position location determinations the accuracy problems caused by booster delays.

Please contact the undersigned if you have any questions.

Sincerely,

/s/ Bruce A. Olcott
Bruce A. Olcott
Counsel to Cellphone-Mate, Inc.



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Introduction

- *Technology leader, innovator in this industry*
- *10 years old*
- *First to make available 4G LTE and AWS signal boosters for each carrier*
- *Our industry are part of the mobile internet revolution*
- *Self funding, no venture capital or government funding*





Our Industry Is Small But Important

- A majority of calls made from indoors are now made using wireless devices
- Even if some carriers can claim 99% coverage nationwide, that is outdoors
- Signals lose significant strength penetrating buildings making indoor coverage very difficult
- Our industry is an important part of last mile connection by bringing wireless voice and 3G and 4G internet connections into homes and offices
- Signal boosters are not only about 2G or voice, they are also about 3G and 4G, and more. It's about data and the internet
- Signal booster helps to make wireless broadband universally available to all Americans



Flexible Regulations for Signal Booster

- When properly designed and manufactured, signal boosters will not interfere with wireless networks
 - About one million signal boosters are likely currently in use in the US market
 - Despite significant number of units in service, we receive very few complaints of potential interference to wireless networks
 - The fact that interference complaints are relatively few demonstrates that signal boosters can operate reliably
- Any problems that do exist can be resolved through basic technical solutions
- Imposition of carrier authorization and coordination requirements would eliminate signal booster industry



Flexible Regulations for Signal Booster

- To prevent interference, the Commission should only impose these technically neutral requirements:
 - Signal boosters must comply with the technical rules for each wireless service (maximum power, out-of-band emissions, shutdown if power exceeded)
 - Signal boosters must be able to detect and prevent oscillation by shutting down or other means
 - Signal boosters must detect when nearing a base station operating within spectrum range of booster and reduce power or shutdown to prevent overload
- Same rules should apply to all types of boosters, be they mobile, fixed, consumer or commercial



Flexible Regulations for Signal Booster

- A growing number of Cellphone-Mate's signal booster models already automatically shut down when too close to a base station
 - Shut down occurs for the base station of any carrier covered by spectrum amplified by booster, regardless of whether the carrier is the service provider
- We plan to have this technology in all of our booster models later this year
- We believe the rest of signal booster industry could also develop these capabilities



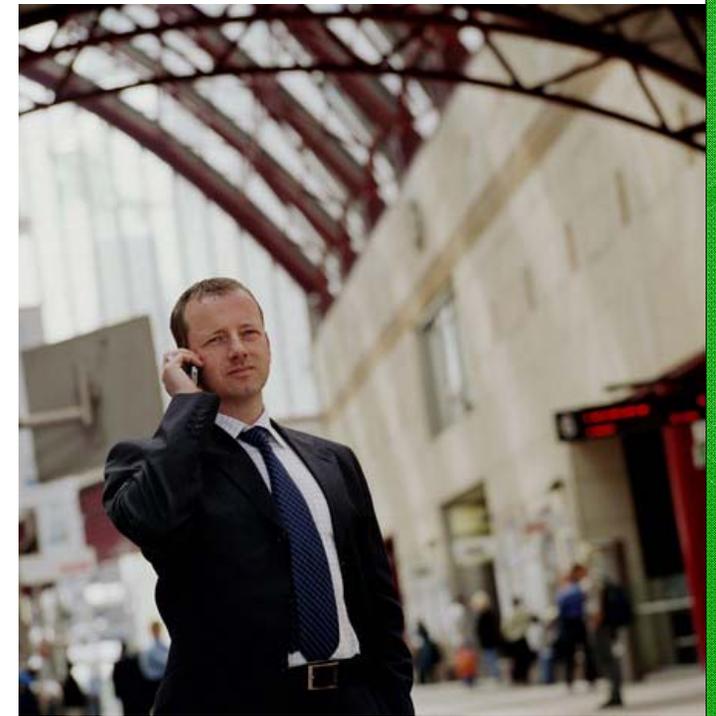
Flexible Regulations for Signal Booster

- Requiring signal boosters to function only in narrow band mode for each carrier would greatly increase costs
 - Narrowband signal boosters are much more expensive and technically complex than wideband signal boosters
 - Consumers want coverage for all bands. Thus, a narrowband requirement would necessitate the purchase of numerous units, one for each band
 - A narrowband requirement is unnecessary as long as the booster reduces power or shuts down whenever it approaches any base station operating in its bandwidth



Prior Carrier Approval Will Harm Consumers

- Requiring signal booster users to secure carrier approval will reduce options and increase consumer costs
- The commercial DAS industry provides as example:
 - DAS systems are very expensive and carriers often require lengthy user contracts
 - For example, Cowboy Stadium DAS cost \$6 million to cover major carriers
 - This is not a viable approach for small companies or individual consumers





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 AT&T and Verizon
- As their network coverage area increases, the need for signal boosters will 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
- Properly designed signal boosters do not prevent E911 or other calls from being completed
- Claims that signal boosters impair the accuracy of position location services are also overstated and can be resolved





Boosters Do Not Harm Position Location

- Transmission delays caused by signal boosters are minimal and imperceptible for consumers
- Cellphone-Mate boosters create a signal delay of about 0.4 microseconds (and no more than 0.6 microseconds)
- Most of delay results from semiconductor components (electrons are not as fast as light)
- We strive in our design process to minimize delay, but we are constrained by physics



Boosters Do Not Harm Position Location

- Handset based location services such as AGPS are increasingly used by carriers and are not impaired by signal booster delays
- If signal boosters are a problem for TDOA, then carrier-grade DAS systems are likely to be a much greater source of inaccuracy for them than consumer-grade booster devices
- TDOA system operators can address any such delay through their Location Measurement Unit (LMU) design



Boosters Do Not Harm Position Location

- TDOA operators are in the best position to address the delay through their LMU designs
- TDOA systems could detect existing “RF marks” in booster transmissions and use them to identify booster
- When booster detected, if LMU samples only the strongest (boosted) signal, time difference of arrival will remain accurate
- Digital watermarks for boosters are thus unnecessary, may be expensive, and create unneeded transmissions



Summary

- Wideband signal boosters are an important tool for making wireless broadband reliably available to all Americans
- To prevent interference, the Commission should only impose these technically neutral requirements:
 - Signal boosters must comply with the technical rules for each wireless service (maximum power, out-of-band emissions, etc.)
 - Signal boosters must be able to detect and prevent oscillation
 - Signal boosters must detect when nearing a base station and reduce power or shutdown to prevent overload
- Signal boosters aid E911 connectivity and AGPS position yield
- To the extent booster delays are a problem for some network-based location services, these can be resolved through modest measures best implemented by the location service provider