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Moslem Sawez
Wireless Telecommunications Bureau
Federal Communications Commission
445 12th Street, SW
Washington, DC 20554

Re: Rule Making Proceeding concerning Amendment of Parts 1, 2, 22, 24, 27,
90 and 95 of the Commission's Rules to Improve Wireless Coverage
Through the Use of Signal Boosters, WT Docket 10-4

Dear Mr. Sawez:

By counsel, with this letter, CellAntenna Corporation tenders the attached information to supplement the record in the rule making proceeding involving Amendment of Parts 1, 2, 22, 24, 27, 90 and 95 of the Commission's Rules to Improve Wireless Coverage Through the Use of Signal Boosters, WT Docket 10-4.

Should questions or concerns arise in connection with this filing, please give me a call.

Very truly yours,

Marjorie K. Conner
Counsel to CellAntenna Corporation

cc: Roger S. Noel
Moslem Sawez
Becky Schwartz
Jennifer Johnston

CellAntenna Response to Questions Raised
by TruePosition, Inc.'s December 23, 2011 Submission

1. In reviewing their system TruePosition has indicated a flaw in its product. The mere fact that the LMU can be confused by multiple signals, some stronger than others reveals an important problem with their methods of determining locations of a cell phone. That is: the selection of the highest signal level in determining the location of the cell phone devices, which may not always be the one with the shortest path. As a result Their claim that they handle multipathing is incorrect as well, since the multipath by its very nature may provide an inaccurate false longer distance to the device than actually is occurring.
3. Signal boosters in fact provide a more accurate location method since their signal is one of direct nature overcoming any multipathing possibility. This is performed in almost all cases via the donor antenna located on top of a building. By having the cell phone go through the booster, and therefore the signal directly to the tower, any inaccuracies due to time delays within the amplifier filters or processing will for the most part provide a more accurate location than the cell phone signal , bouncing around and finally emerging from the building on its own, following a less than direct path to their equipment. As well, since the direction of the donor antenna is FIXED, the only error will be one of a linear amount and not an error in direction. This is most important when determining the actual location of the cell phone.
4. TruePosition fails to deal with the matter concerning the number of users on the booster system supplied in most cases via a distributed antenna system, that now of access to the network with the booster compared to those that would be without access without the booster. Consider a hospital with 3500 people within its center core that would have had no way of communicating with the tower, now have a clean signal unimpeded by the RF resistive materials that make up the structural components of the building. . As a result of the installation of a signal booster in the building, all of these 3500 people now can be located within the 100m area even with the inaccuracies that they may claim to be with the booster's time delay. Without the booster NONE of these people would be able to be located as their cell phone signal would not be strong enough and will be attenuated by the building structure and simply not make it to the tower.
5. The signal booster will provide them with an accurate location at a higher signal level to the tower than any cell phone signal trying to make its way to the tower through building materials that often deflect, absorb and reflect signals. These reflections all too often create multiple paths of travel that arrive at their equipment sooner or later than the booster signal. The problem is there, no matter if the booster is there or not. Multipathing is the often common cause of falsely locating any microwave based device, and hence cannot be relied upon entirely. Having a booster installed in fact, will aid TruePosition equipment in insuring a more direct path.
6. The LMU equipment is only required to detect the strongest signal in order to guarantee the location within the 100 Meters. This is not guaranteed by the cell

phones lower signal levels as their equipment with only fix on the highest value, which may prove to be the longer path or in all possible paths due to reflections may prove to be all too long. Using any time measurement technology, as is in the case of TruePosition, is risky to say the least unless combined with other information that the carriers currently have available, such as the last GPS location known to the carrier of the particular subscriber. GPS technology can provide locations within 50 M or less, and provide the last known location of any cell phone. Combining this information with any LMU would prove to be more accurate than any LMU alone. Again, the booster would enhance the capability of the LMU and any signal dependent location device.

7. Most repeater (booster) manufacturers that we utilize are concerned about the delays for reasons of throughput requirements resulting in decrease data speeds due to timing issues. Therefore consideration of any Delays have already been taken into account to insure high speed network access and as a result ALL repeater systems that we are aware of are designed to have minimal delays. .

It is important to note that we have equipment that is utilized by several Government agencies and cell phone providers to locate a particular cell phone within a **3 Meter radius**. Our equipment does in fact eliminate the problem of multipathing in its entirety, thereby for the most part eliminating any chance of competing multipath that may provide false values. To locate a cell phone within a 100 M radius is to say the least, unchallenging and based on older technology deployed several years ago. As stated, newer technologies can be deployed by the carriers to provide more accurate measurements or satisfy the E-911 requirements than TruePosition Technology.

It is our opinion that the comments of TruePosition do not represent the current industry position and capabilities and therefore should not be relied upon in determining any policy regarding signal boosters.