



Federal Communications Commission  
445 12th Street SW, Washington, DC 20554

Re: ET Docket 18-284, Metrom Rail Request for Waiver

Dear Office of Engineering and Technology,

I/We are writing in response to Metrom Rail LLC (Metrom) request for a waiver of certain Part 15 rules as part of the Public Comment period. This request is in the public interest by promoting safer train and transit operations. It will also pave the way for a wide number of intelligent transportation purposes coming in the near future.

Recently, Adaptive Motion Group has performed work with a variety of organizations including a variety of private and public entities trying to improve congestion and increase safety. One of these applications includes efforts to develop an autonomous bus lane for the Lincoln Tunnel. Another involves connected vehicle solutions for use in crowded NYC streets. After studying the need for better positioning in both above and below ground transportation applications, our conclusion is that UWB is the best means possible to provide the necessary accuracy and reliability to support critical applications. Other means of positioning have been pursued, but simply do not support the need for what we call “critical positioning” – where every inch can be a matter of life or death. For instance, buses in the Lincoln Tunnel must pass within inches of each other which requires the kind of accuracy possible through UWB. Moreover, the difference between life and death for a pedestrian in NY can easily be the width of a curb -- a matter of mere inches.

UWB can be a critical part of the much-needed safety and efficiency solution for trains as well as providing safety and connected vehicle capabilities for buses, trucks and eventually cars. For now we condone this next step as proposed by Metrom.

Metrom is asking for certain rule parts to be waived, and has offered a reasonable rationale for their requests:

- This waiver request is limited to the rail operators, such as municipals, thus the overall number of units deployed is relatively small and under operational controls.
- The system is limited to rail tracks and equipment along rail tracks, thus the location is specially known and can be monitored.
- The fixed outdoor infrastructure proposed is under the control of the system operators, is part of the rail system, and uses the strictest of the UWB spectrum masks.

- The additional gain for the directional antennas requested by Metrom will be directed along the track and have commented that the out-of-band emissions will not be any greater than the current Part 15 UWB rules allow.
- Surveillance systems are allowed to operate outdoors under the UWB rule parts by similar parties (Part 90 users) but with less strict emissions masks.
- The argument for handheld equivalence is logical and effectively has already been made by other companies in their use of UWB today.

We continue to support the FCC's issuance and allowance of the Special Temporary Authority (STA) and Waiver process. Requesting and granting waivers is a very important process that allows for the FCC and other concerned government bodies as well as the public and private industry to gather real world data and proof points about technology, specifically UWB, while being on a limited scale. This real-world data is extremely helpful in evaluating how UWB technology can be safely deployed in the future.

Overall, we are in support of this waiver request and see both the public value and the efforts made to address potential concerns.

Sincerely,

A handwritten signature in blue ink, appearing to read 'D. Bruemmer', with a stylized, flowing script.

David Bruemmer  
CEO

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