

ORIGINAL

BEFORE THE
FEDERAL COMMUNICATIONS COMMISSION
WASHINGTON, D.C. 20554

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In the matter of)
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THE RAIL NETWORK, INC.)
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Request for Waiver of Section 15.209 of the)
Commission's Rules)
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Federal Communications Commission
Office of Secretary

Docket No. 06-161

THE RAIL NETWORK, INC.
REQUEST OF WAIVER OF SECTION 1.3 AND 15.209 INTERFERENCE
PROTECTION SHOWING

The Rail Network, Inc. and its affiliates ("TRN")¹, by counsel and pursuant to 47 C.F.R. § 1.3, hereby request a waiver of Section 15.209 of the Commission's rules, 47 C.F.R. § 15.209 (the "Waiver"), in order to permit operation at a maximum power of 87 dBuV/m for TRN's audio services over the FM broadcast band.

As demonstrated below, grant of the subject waiver would serve the public interest, convenience and necessity by facilitating the public's access to critically important information, including emergency, public safety information and news programming. In addition, grant of the Waiver would enhance public ridership over mass transit rail systems, by making rail travel more attractive and efficient. Significantly, grant of the waiver would not cause harm to licensed facilities.

¹ Affiliates include: (a) TRN Atlanta, LLC; (b) TRN Bay Area, LLC; (c) TRN Boston, LLC; (d) TRN Atlanta Leasing, LLC; (e) TRN New York, LLC; and (f) TRN Washington, LLC.

**I. SUMMARY STATEMENT REGARDING PUBLIC INTEREST BENEFITS OF TRN
WAIVER GRANT**

This nation's mass transit rail systems are of critical importance to millions of Americans. Many lack sufficient funding to enhance passenger services and to create a safer and more enjoyable environment for their passengers. TRN's services can provide meaningful improvement on each of these fronts, and grant of TRN's requested waiver would thereby serve the public interest.

In the event of an emergency situation similar to those which occurred on rail systems in London and Spain, TRN's platform could be an important component of the passenger communications. Additionally, TRN's network provides certain elements which could allow the transit authority to implement an on-board video surveillance system without an additional cost.

Aside from TRN's services in the event of an emergency, TRN would help the transit authority create a more enjoyable passenger experience and may help to increase overall ridership. In this continuing time of energy shortages, high energy costs and heightened concerns about pollution and global warming, this benefit alone warrants grant of the TRN request.

TRN's services are at no cost to transit authorities or the passengers and the transit authorities receive a percentage of TRN's revenues.

For all of the above reasons, grant of the TRN Waiver will greatly served the public interest.

II. BACKGROUND OF TRN

TRN currently provides service the Metropolitan Atlanta Rapid Transit Authority ("MARTA") system in Atlanta, Georgia. TRN, through the use of the first wireless video and

radio network deployed on a subway system, provides transit authorities with in-service capabilities that include the following:

- on-board emergency audio and video messaging;
- Homeland Security/Amber Alert messaging;
- digital television programming, with closed captioning updated throughout the day; and
- up to seven channels of private, non-disruptive, wireless audio programming including:
 - multiple language choices for the television programming;
 - a transit information channel for the transit authority to communicate safety, service and marketing information to passengers;
 - up to three music/talk radio channels.

In addition, TRN's service offerings continue to evolve. Future service capabilities may include the following:

- video surveillance for transit system security purposes and
- two-way broadband for internet access.

TRN's services are provided over its patented system, at no cost to the passengers or the transit authority. TRN incurs the up-front and ongoing cost to install, maintain and operate its system. At the same time, TRN shares revenue generated from advertising on the system with the transit authority. Thus, TRN's services are an important revenue source for transit systems.

Prior to TRN's existence, passengers traveling on subway systems in North America had no access to current video and wireless audio programming as a source of information and entertainment. Content providers had been unable to provide current video and audio programming to passengers in metropolitan subway systems that travel both above and below ground. TRN created a solution. Since its inception in June 2001, TRN has focused on

providing rail passengers with information and entertainment through TRN's proprietary network. and service commenced in 2005 in Atlanta, Georgia. TRN has been granted a U.S. patent (Patent No. 6,407,673) for a transit multimedia broadcast system which delivers content to, and within, transit vehicles. TRN has previously submitted responses to Requests for Proposals (RFPs) for such services from several transit systems in the United States including, the Washington Metropolitan Area Transit Authority (Washington, D.C.) and the Port Authority of NY/NJ (New York), the Massachusetts Bay Transportation Authority (Boston), the Bay Area Rapid Transit Authority (San Francisco/Oakland) and the Greater Cleveland Regional Transit Authority (Cleveland). TRN anticipates the release of RFPs from additional transit authorities in the United States in the next several months.

III. REQUEST FOR WAIVER OF SECTION 15.209

TRN requests a Waiver of Section 15.209 of the rules, 47 C.F.R. § 15.209. The Waiver is necessary in order to permit TRN to provide maximum coverage of its audio services to the public over the FM broadcast band.

TRN has already received an Experimental Radio Service authorization awarded pursuant to Part 5 of the Commission's rules.² The award followed submissions by TRN of a showing that its services would serve the public interest. As TRN's pre-operational test forecasted would be the case, TRN's services have been provided without any harmful interference to any other licensed operations. In the year during which service has been offered, there has not been a single claim of interference.

TRN requires the Waiver to allow for the most effective use of TRN's audio services by all passengers using the FM broadcast band. While the limited level of coverage which Part

² See Radio Station Construction Permit and License, Station WD2XOW, issued to TRN Atlanta, LLC.

15.209 allows may be sufficient for some services, it does not provide the 100% quality coverage that is necessary for TRN's emergency messaging, entertainment and other important information services for passengers traveling on-board a public rail system.

As TRN's intends to provide its services to additional metropolitan areas, TRN's operational authorities must be expanded to cover those additional markets. At this time, relief is requested for the Atlanta, Washington DC, New York, Boston, San Francisco and Cleveland metropolitan areas where either TRN has a contract to provide such services or, the public transit authorities have issued an RFP for such services.

A. Justification for Requested Emission Level

TRN's requested maximum power of 87 dBuV/m reflects the minimum power necessary to provide quality service in the environment in which TRN operates. TRN has conducted extensive testing of its audio transmission infrastructure including, potential locations for the antennas, different types of antennas and power levels to determine the most effective infrastructure and effective power levels to provide service to the passengers throughout each railcar. A number of obstacles had to be overcome including, but not limited to, limited physical space for placement of equipment, the loss of signal strength over required antenna cabling paths and the reduced transmission effectiveness due to the location of antennas within the rail vehicle. As a result of this testing, TRN has identified the infrastructure and power levels to effectively provide TRN's audio services. With the help of an independent certified testing firm, TRN conducted extensive testing to determine the lowest power level that would provide effective transmission coverage throughout the railcar to allow passengers traveling inside the rail car to receive the audio services no matter where the railcar was traveling.

B. Consideration of Possible Alternative Methods of Operation

Transit authorities have required that TRN's audio signal be non-disruptive to the passengers and have prohibited the use of public speaker systems. In addition, the physical layout of rail vehicles for the selected transit systems in the United States does not include armrests at each passenger seat. These factors combine to make wireless FM audio the most effective delivery method available. Prior to selecting the 88-108 MHz FM band, TRN considered a number of transmission alternatives. That analysis confirmed that TRN must use the 88-108 MHz FM band to ensure that all passengers would have the opportunity to access the programming. The system has been designed to use frequencies that are accessible to all passengers. Any system which would restrict access to only those passengers who possess a proprietary device would be especially dangerous in emergency situations. FM radios are readily available and personal audio and communication devices, such as cell phones, have incorporated the capability to listen to FM frequencies without an additional subscription fee or the need for cellular network access.

TRN has considered several alternatives to increasing the operating power on its system in order to improve coverage such as modifying equipment locations, using different types of antennas as well as adding additional antennas. None of these alternatives proved to be effective. Physical space is limited within the railcars, thereby restricting equipment locations as well as the ability to add additional antennas. In addition, alternative antenna designs resulted in significant signal interference between adjacent trains.

Further, a system which would require transit authority personnel to manually increase the power during emergency situations is not acceptable to transit authorities due to safety and service issues and is ultimately impractical. In order to manually increase the power in such

event, the conductor would be required to leave the conductor's post in control car of the rail consist and go to each railcar in the train consist in order to access the secure equipment and manually increase the power. TRN believes that these tasks would be nearly impossible during an emergency situation and that such action would put passengers, as well as the conductors, at greater risk. In addition, such an arrangement would not allow TRN to deliver effective audio to its passengers which would impair TRN's ability to sustain its business model.

The experimental nature and limited scope of the existing TRN authority must be expanded to permit TRN to operate at a maximum power of 87 dBuV/m. TRN believes that grant of the Waiver would allow TRN to provide audio service with close to 100% coverage of the system.

IV. WAIVER OF SECTION 15.209 IS NECESSARY TO SERVE THE PUBLIC INTEREST

Grant of the Waiver is necessary to serve the public interest in order to facilitate the public's access to important information, including emergency and public safety information, and entertainment services. There are numerous public interest considerations which warrant waiver of the rules including, without limitation:

- the delivery of emergency messaging;
- the provision of information and entertainment to passengers at no cost to the public;
- the ability for the transit authority to communicate with its passengers;
- the generation of revenue for the transit authority;
- the potential for transit authority(s) to defer, or possibly avoid, fare increases;
- the availability of funds for transit authority to spend on service and safety improvements;
- the enhancement to the transit environment; and

- the potential for increased use of public transportation thereby reducing traffic congestion and oil use.

A. Waiver is Necessary for the Effective Provision of Emergency Information and Other Public Safety Information

Public Interest Consideration: the delivery of emergency and public safety messaging

The Waiver is necessary to allow TRN to maximize the provision of its audio services which would inform the rail passengers about important news and information, including emergency information. In addition, by granting the Waiver, the Commission would benefit the public by enhancing the opportunity for passengers to receive critical audio information in the event of an emergency such as a terrorist attack or natural disaster. As an example, in an emergency, the transit authority may rely, in part, upon TRN's infrastructure to communicate to the passengers and provide critical audio information which must be available throughout the entire rail system. This is particularly the case given that TRN works with each transit authority to identify independent power sources that may permit communications over TRN's system even when certain on-board power sources have failed. The ability for TRN to provide clear audio information to passengers in such event would be a critical component of the transit authority's emergency response effort and thus, the Waiver is necessary for public safety.

B. The Waiver is Necessary for TRN to Deliver Maximum Coverage of its Information, Entertainment and Communication Services all of which are Benefits to the Public

Public Interest Considerations: the provision of information and entertainment to passengers at no cost to the public and the ability for the transit authority to communicate with its passengers

First, TRN's service, provided at no cost to the public, is itself a benefit to the public. The Waiver is necessary to allow TRN to maximize coverage of TRN's service. Subject to transit authority approval in each market, TRN service would bring numerous benefits to the passenger-public, including:

- the availability of on-board emergency audio and video messaging;
- a dedicated Transit Authority Information Channel to communicate directly to the rail passengers;
- world, national and local news, weather, sports and entertainment news updated throughout the day;
- multiple music/talk radio channels;
- enhancement to the transit environment; and
- information/entertainment source for passengers on-board the trains.

TRN expects that its services will soon be available in several metropolitan areas. Grant of the Waiver is necessary to maximize the coverage area of the service in each market and thereby maximizing the availability of the above service benefits for passengers.

C. Waiver is Necessary to Provide Additional Revenue to Transit Authorities

Public Interest Considerations: generation of revenue for the transit authority; potential for transit authority(s) to defer, or possibly avoid, fare increases; and availability of funds for transit authorities to spend on service and safety improvements

Grant of the Waiver is necessary in order to benefit the public by allowing TRN to provide a service which TRN expects to generate much needed additional revenue for transit authorities. Many transit systems are experiencing financial hardship and are desperately seeking supplemental revenue sources. Transit authorities throughout the United States have been forced to restrictively manage their services, including those related to public safety and security, in light of significant budget constraints. TRN's services are at no cost to the passengers or the transit authority and would allow the transit authority to generate additional revenue. Moreover, this supplemental revenue may allow transit authorities to defer, or possibly avoid, fare increases for the general public. In addition the supplemental revenue generated by TRN's services could allow transit authorities to add other security elements and/or increase service quality for passengers.

D. The Waiver is Necessary for the Modernization and Enhancement of Transit Environment and Increased Use of Public Transportation

Public Interest Considerations: enhancement to the transit environment; and potential for increased use of public transportation thereby reducing traffic congestion and oil use.

The Waiver would allow the public to enjoy an innovative and modern enhancement to the transit environment which provides rail passengers with access to information and entertainment and includes key security and public safety components. As such, TRN's service could also encourage people to use public transportation. The increased use of public transportation is believed to benefit the public by reducing traffic congestion in major metropolitan areas, reducing the related negative effects on the environment (such as pollution) and reducing the public's consumption of oil as fuel for their vehicles.

V. WAIVER OF SECTION 15.209 WOULD NOT CAUSE HARM

The Waiver would not cause harm to licensed or other radio broadcasters as TRN's operations will not interfere with other broadcast operations.

A. Channel Selection

The audio portion of TRN's service, which will operate on up to seven (7) different channels, can operate over any available frequency in the 88-108 MHz range. TRN undertakes a spectrum analyses to identify which frequencies are not being utilized by a licensed broadcaster. As a further means of avoiding interference with licensed operations, as spectrum is utilized by TRN, spectrum monitoring is conducted to assure that there is no interference. If the results demonstrate harmful interference, TRN's operations will be altered as necessary to avoid such harmful interference to any licensed operations.

B. Analysis of Interference Potential

TRN submits that operations at the nominal 87 dBuV/m level will not cause harmful interference with broadcast operations. TRN has provided herewith as Exhibit 1 the results from a test conducted by Compatible Electronics (NVLAP Code: 200527-0) which shows the radiated field strength of the emission generated by TRN's Audio Control Unit ("ACU") (FCC Identifier: QY4-580230) which provides service to the rail passengers. The tests performed were in accordance with Section 15.209 and designed to show the emission levels from the ACU, at a power level of 87 dBuV/m, on the 1st and 2nd adjacent frequencies from the frequency which TRN is utilizing. The test results demonstrate that emissions on adjacent frequencies will not affect the quality of sound from audio programming available on the adjacent frequencies.

The risk of harmful interference is further limited by several operational factors. First, TRN's equipment has been designed to allow TRN to change frequencies in the event any unexpected harmful interference exists. Thus, harmful interference can be eliminated without the need to discontinue service.

Moreover, TRN's infrastructure is built directly into the rail car and its audio service is limited to within the rail car. In fact, TRN's network emissions are further limited because its systems have been designed to avoid interference between two adjacent rail vehicles so as not to disrupt the audio transmission to the on-board passengers in other adjacent rail vehicles. TRN's antennas are installed in such a manner so that the emissions radiate from the front to the back of the rail vehicle and limit the emissions that travel outside of the rail vehicle. This is important because the operational conditions of a rail system present circumstances when two trains are traveling adjacent to each other. If the emissions were to radiate out of the sides of the rail car between the outside of two trains traveling adjacent to each other, passengers would experience

interference from the emissions on the same frequency, effectively canceling out the audio services available for that period of time. TRN's system was designed to avoid interference with nearby trains and, of course, parties located further away such as on the train platform or within cars or homes that may be located near the rail system.

In addition, the very nature of the TRN offering provides yet another safeguard against harmful interference. The service is provided only on the inside of subway and commuter rail cars. Moreover, these rail cars generally operate in systems where a significant portion of the rail system operates underground or in other locations where FM reception is not readily available. Therefore, there is a limited geographic area and time period in each system where a train travels in locations where traditional broadcast signals could be received.

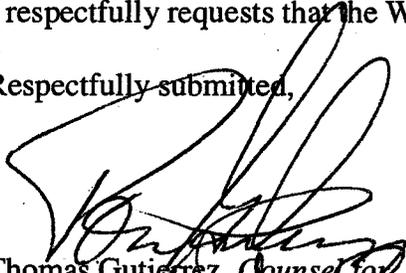
Lastly, any intrusion of any undesired signal produced by TRN would be temporary and transient, and its effects thus reduced because during rail operations, the rail cars travel throughout the transit system from station to station.

TRN's operations at the increased power level will not harmfully interfere with licensed broadcasters and therefore, grant of the Waiver would not cause harm.

VI. CONCLUSION

There is currently a critical need for the provision of better service and information to passengers traveling on-board metropolitan rail systems, particularly emergency information. The Commission here has an opportunity to fill that need by grant of the instant Waiver. Grant of the Waiver would permit TRN and its public transit authority partners to provide the necessary services to the public with maximum coverage while, at the same time, not harmfully interfering with licensed broadcasters. As the Waiver would clearly be in the public interest and not cause harm to licensed broadcasters, TRN respectfully requests that the Wavier be granted.

Respectfully submitted,



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