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FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

Before the
Federal Communications Commission
Washington, D.C. 20554

In the Matter of	)	
	)	
Implementation of Sections 309(j) and 337 of the Communications Act of 1934 as Amended	)	WT Docket No. 99-87
	)	
Promotion of Spectrum Efficient Technologies on Certain Part 90 Frequencies	)	RM-9332
	)	
Establishment of Public Service Radio Pool in the Private Mobile Frequencies Below 800 MHz	)	RM-9405
	)	
Petition for Rule Making of The American Mobile Telecommunications Association	)	RM-9705
	)	

To: The Commission

COMMENTS OF THE ASSOCIATION OF AMERICAN RAILROADS

The Association of American Railroads ("AAR"), by its undersigned counsel, pursuant to section 1.415 of the rules of the Federal Communications Commission ("Commission")[1] hereby submits its comments in response to the *Further Notice of Proposed Rule Making* in the above captioned proceeding.[2]

AAR is a voluntary, non-profit organization composed of Class I member railroad companies operating in the United States, Canada and Mexico. AAR is the joint representative and agent of these railroads in connection with federal regulatory

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List A B C D E

1 *See* 47 C.F.R. § 1.415.

2 *Implementation of Sections 309(j) and 337 of the Communications Act of 1934 as Amended*, WT Docket No. 99-87, *Report and Order and Further Notice of Proposed Rule Making*, (FCC 00-403),(released November 20, 2000)("*Notice*").

matters of common concern to the industry as a whole, including matters pertaining to regulation of communications.

I. Nature of the Railroads' Interest

The North American railroad industry deploys and depends upon a comprehensive and sophisticated network of fixed and mobile communications systems to carry voice and data traffic which is integral to the minute-to-minute management and control of train movements throughout the rail network. These systems are vital to ensuring safety on the nation's railroads. The railroads use mobile radio channels for transmitting voice and data communications to and from crews in locomotives and for controlling and monitoring rail switches and signals, and also for communications to, from, and among track workers and personnel assigned to maintaining the railroad right-of-way. The fixed point-to-point microwave systems are used to interconnect the trackside mobile radio facilities with the centralized dispatching center in each railroad's operating region. These systems also carry communications to advise of dangerous conditions and, if necessary, bring train movements to a halt to prevent unsafe operation. The radio communications links between trains and central dispatchers provide immediate information on the location, direction and speed of hundreds of trains operating at the same time on each major railroad in the country, and are essential to protect railroad employees and the general public.

Because the railroads rely so heavily on radio communications to ensure the safe and efficient operation of the nation's railways, AAR has a vital interest in this proceeding.

II. The AMTA Proposal Would Impose a Significant and Unnecessary Burden on the Rail Industry.

Under the proposal of the American Mobile Telecommunications Association (AMTA), all non-public safety licensees would be required to convert to equipment that provides the efficiency equivalent of one voice path per 12.5 kHz channel.[3] The AMTA proposal would phase in the spectrum efficiency requirement over time, beginning in 2003 in the top 50 markets and ending in 2020 when rural areas would become subject to the standard. [4]

Imposing a date certain for implementation of the spectrum efficiency requirement would impose a significant and unnecessary burden on the railroad industry. While AMTA's phased approach to spectrum efficiency would appear to ease the burden on licensees by granting a reasonable period for the transition, it would in effect require the railroads to complete a nationwide migration to 12.5 kHz technology by 2003. This is because the railroad fleet of locomotives and related track equipment is a nationwide, inter-operating system encompassing rural and urban areas alike. Trains operating in the most densely populated and urban areas must also travel to, from, and through sparsely populated rural areas. These trains must have access to radio communications,[5] which in turn requires that compatible technology be deployed in all areas of the country to ensure interoperability.

In this regard, the railroad mobile communications network is vastly different from those of other private mobile radio licensees, and this difference has a direct

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[3] *See Notice* at ¶ 137.

[4] *Id.*

[5] See regulations of the Federal Railroad Administration requiring that trains be equipped with a "working radio." 49 C.F.R. Sections 220.5 and 220.9.

impact on the ease with which the railroads can change from one technology to another, as compared to other user groups. The vehicular fleets of most licensees are local or regional in nature and are smaller in terms of the number of vehicles per fleet. For such users, radios in an entire fleet of vehicles can be changed over the course of a weekend, for example. In contrast, the railroad fleet is essentially nationwide in scope because of the need for interoperability of radios due to equipment-sharing and track-sharing agreements between railroad companies. It is virtually impossible to change out the entire population of mobile radios in the rail industry "overnight."

As the Commission's staff is aware,[6] the railroad communications network covers vast geographic areas and is technically complex (a map indicating US railroad VHF base station locations is attached as Exhibit A). This system includes: more than 16,000 base stations,[7] 90,000 mobile radios, 125,000 portable radios, 5,000 radio-equipped trackside defect detectors, 21,000 "End-of-Train/Head-of-Train" devices, and 1,000 mid-train locomotive control radios.[8] Converting of all of this equipment to a narrowband platform will be enormously complex, and AAR urges the Commission to maintain the present policy adopted in the "refarming" proceeding whereby spectrum efficiency is achieved through the equipment type acceptance

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[6] On December 12, 2000, AAR presented a railroad industry communications briefing to the staff of the Public Safety and Private Wireless Division.

[7] All numbers are approximate.

[8] The Federal Railroad Administration has adopted regulations governing "End-of-Train/Head-of-Train" radio frequency devices (49 C.F.R. Sections 232.19-232.25), as well as regulations governing deployment of radio communications in general throughout the rail network (49 C.F.R. Part 220).

process, thus affording licensees flexibility in implementing the transition to new technology. This policy will ultimately achieve desired levels of spectrum efficiency without placing an undue burden on the nation's railroads.

Although AAR opposes a forced conversion to spectrally efficient equipment by a "date certain," AAR recognizes the need for users of the radio spectrum to take steps to use this valuable national resource more efficiently. The railroad industry has several initiatives currently underway that are leading toward a nationwide upgrade to spectrally efficient technology. AAR's members have adopted the APCO Project 25 digital modulation technology as the nationwide integrated voice and data platform, and have developed and formally adopted a VHF channel plan that will optimize the efficient use of the railroad spectrum allocations.

The railroad industry is currently conducting a pilot program in cooperation with the Federal Railroad Administration, NTIA and the Oregon Department of Transportation ("ODOT"), to test and evaluate the transition to the Project 25 platform. Once the ODOT pilot is complete and the results evaluated, the industry will be in a position to develop a comprehensive migration path plan. This process will ensure that the transition of the railroad radio system to spectrally efficient digital technology will be accomplished in the most efficient and least disruptive manner. Obviously, such a managed transition is much preferred over a transition necessitated to meet an arbitrary regulatory deadline.

III. Conclusion

AAR urges the Commission to preserve the transition policies adopted in the "refarming" proceeding that will achieve desired levels of spectrum efficiency without placing an arbitrary and undue burden on the nation's railroads. The railroads have

already incorporated these policies into their communications system planning, and are in the process of moving toward a nationwide upgrade of their radio networks to more efficient digital technologies. A mandated transition by a date certain is therefore unnecessary and inappropriate for the railroads. AAR respectfully suggests that, if the Commission is inclined to adopt a mandatory transition deadline for users of the spectrum covered by the "refarming" proceeding, the railroads should be exempt from such a deadline in light of the special and unique circumstances described herein.

Respectfully submitted,

ASSOCIATION OF AMERICAN RAILROADS

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Date: March 5, 2001

Attachment: Exhibit A

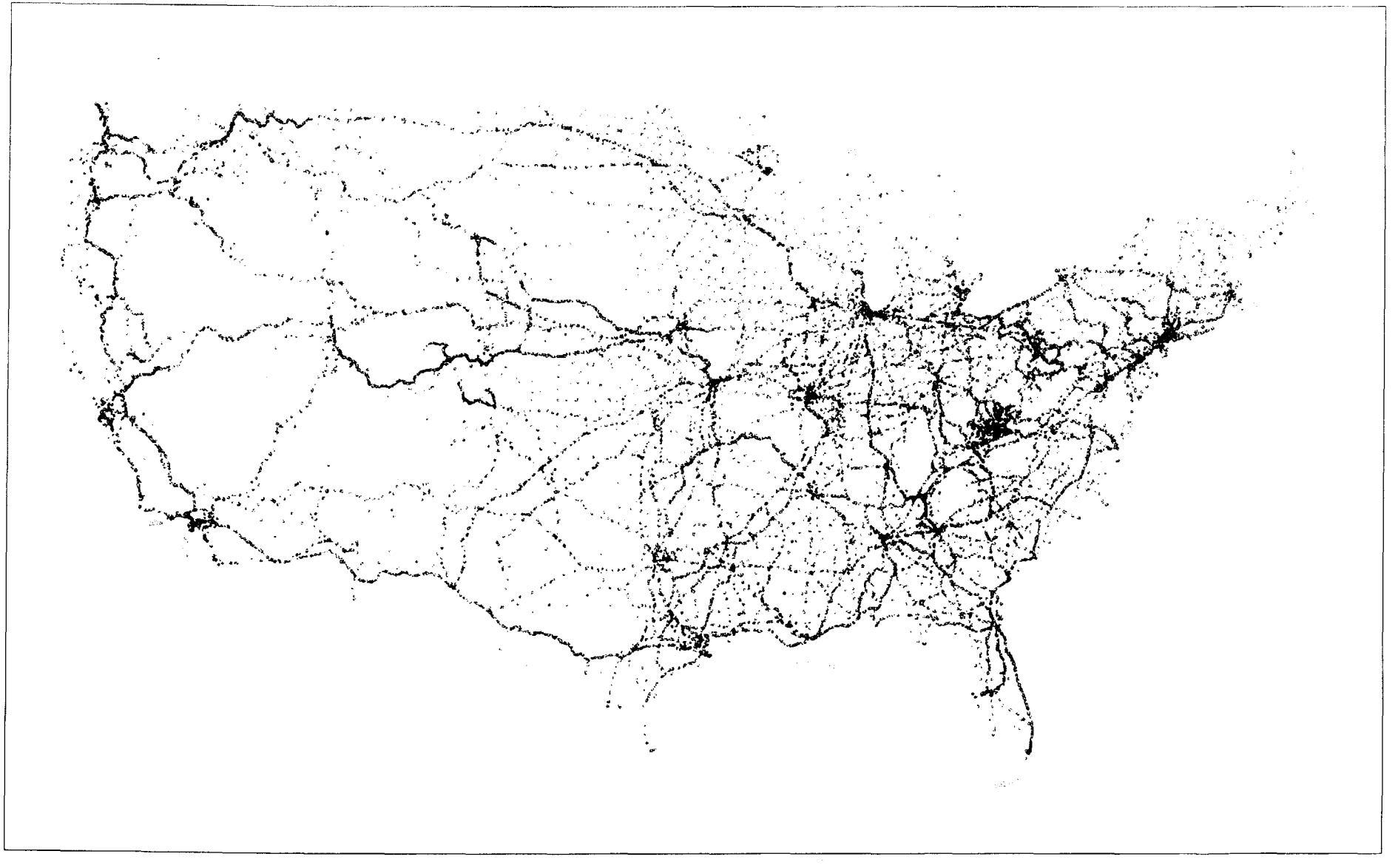

EXHIBIT A: LOCATIONS OF U.S. RAILROADS' VHF BASE STATIONS

CERTIFICATE OF SERVICE

I, Deirdre A. Johnson, a secretary for the law firm of Verner, Liipfert, Bernhard, McPherson, and Hand, Chartered, hereby certify that I have this 5th day of March, 2001, caused a copy of the foregoing "Comments" to be sent, via First Class, United States Mail, postage prepaid to each of the following:

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