

**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554**

In the Matter of)	
)	
Review of the Commission's Rules Governing the)	WT Docket No. 17-200
896-901/935-940 MHz Band)	
)	
Realignment of the 896-901/935-940 MHz Band to)	RM-11738 (Terminated)
Create a Private Enterprise Broadband Allocation)	
)	
Amendment of the Commission's Rules to Allow)	RM-11755 (Terminated)
for Specialized Mobile Radio Services Over 900)	
MHz Business/Industrial Land Transportation)	
Frequencies)	

To: The Commission

COMMENTS ON NOTICE OF INQUIRY

The National Association of Manufacturers and MRFAC, Inc. (collectively, "NAM/MRFAC") hereby submit their comments on certain aspects of the Notice of Inquiry ("Notice" or "NOI") in the above-captioned proceeding.

Introduction

The National Association of Manufacturers (NAM) is the largest manufacturing association in the United States, representing small and large manufacturers in every industrial sector and in all 50 states. Manufacturing employs more than 12 million men and women, contributes \$2.17 trillion to the U.S. economy annually, has the largest economic impact of any major sector and accounts for more than three-quarters of all private-sector research and development in the nation. The NAM is the powerful voice of the manufacturing community and the leading advocate for a policy agenda that helps manufacturers compete in the global economy and create jobs across the United States.

MRFAC is a certified frequency coordinator for the private land mobile bands from 30 to 900 MHz. MRFAC began its operations over 30 years ago as the frequency coordinating arm for NAM. For the past two decades, MRFAC has operated independently, providing coordination and licensing-related services for U.S. manufacturers and other industrial and business entities. MRFAC has long participated in spectrum rulemakings affecting the interests of manufacturers.

The Notice

The Notice initiates a broad-ranging inquiry into the future regulation of the Private Land Mobile Radio 900 MHz band. The questions posed extend from converting the entire band into a broadband allocation, to liberalizing the rules applicable to SMR use of B/ILT channels, to licensing the spectrum on a geographic area basis via auction. NAM/MRFAC's focus in these Comments is on the last proposal, i.e. elimination of site-based licensing. As explained below, preservation of the existing licensing scheme, and the B/ILT frequency pool, is vital to manufacturers in the United States. Details follow.

Discussion

NAM/MRFAC members rely extensively on 900 MHz facilities. They typically have millions of dollars invested in their communications facilities, with 900 MHz featuring prominently among the bands they use. For example:

- One member has more than \$ 1.5 million invested in trunked 900 MHz radios with over 1,000 units in its several plants. These radio systems are used for a wide range of specialized communications needs including just-in-time delivery, materials handling with bar-code reader-equipped forklifts, robotic devices on the assembly line, security, medical, and plant maintenance.
- Another has invested \$2.25 million in a 900 MHz system at one of its plants. This facility, which employs 10,000 people, supports 1,000 radios used variously for security, fire, transportation, production, and maintenance.
- Another has invested \$3.5 million in 900 MHz technology. Its systems support 650 radios and provide a wide variety of specialized communications needs. Among other things, the radios are designed to be intrinsically safe in the presence of hazardous vapors. In addition, company personnel utilize special

radios when working in extremely confined spaces such as aircraft wing tanks. Aircraft manufacturers like this one have also made provision with local public safety organizations to communicate via 900 MHz systems in case of emergencies.

- A member in the beverage industry has over \$6 million invested in its 900 MHz facilities supporting nearly 1,500 subscriber units. The system is used for a range of specialized manufacturing communications needs including emergency medical and hazmat, communications with employees working alone in isolated spaces, materials handling, and remote control of locomotives and overhead cranes. Moreover, first responders share the Company's system when on the premises since their systems typically cannot penetrate many of the spaces where employees work.
- Finally, another in the forest products industry has approximately \$2 million invested in 900 MHz facilities that are typically used for safety-related communications purposes. These include, for example, the handling of chemicals, enclosed tank entry, firefighting, emergency medical support, and automated alarm monitoring and activation, among others.

The 900 MHz B/ILT allocation also supports mission critical communications systems necessary to assist with Homeland Security efforts across the country. B/ILT licensees work cooperatively with federal, state, and local first responders regarding every type of public safety issue. In other words, 900 MHz B/ILT channels support important communications networks.

Furthermore, 900 MHz channels are used effectively and efficiently. An analysis of the 900 MHz B/ILT channels shows that in all large markets, there are at most only a handful of channel pairs out of 199 that remain unassigned. Spectrum scarcity exists in most smaller markets as well, such as Phoenix, Sacramento, Providence, Salt Lake City, Orlando, and Austin, among numerous others.

The data for 900 MHz B/ILT license grants from 2008 through 2016 by frequency shows steady, meaningful growth.¹ After the slow thawing of the freeze necessary for re-banding "green space," the data show approximately 2250 grants in 2012, 2000 grants in 2013, 3300

¹ Since most B/ILT licenses have multiple frequencies at each location, the location and call sign totals are correspondingly smaller.

grants in 2014, and 2500 grants in 2015, a clear indicator of pent-up, steady demand for site-based channels.²

Geographic area licensing does not fit for B/ILT licensees, whose coverage areas and requirements are unique. The geographic areas the Commission uses for license auctions are of pre-determined size, such as a Basic Economic Area. That size is almost always too large for the typical B/ILT user, rarely coinciding with the user's actual needs. This results in valuable spectrum going to waste, contrary to the Commission's mandate to maximize use of the public resource. Even in the case where a manufacturer's need straddles two BEAs or encompasses multiple BEAs, assigning licenses according to predetermined areas has the effect of rendering spectrum unavailable and is, hence, inefficient.

The Commission looked at this issue nine years ago, and decided that it was important to preserve B/ILT spectrum for site-based licensing:

"We find that the record supports retention of the current site-based licensing formula for the 900 MHz B/ILT spectrum, and therefore we decline to adopt competitive bidding rules or geographic service areas to license 900 MHz B/ILT "white space." We are persuaded that the dedicated spectrum allotted to B/ILT licensees at 900 MHz represents one of the few remaining opportunities for such licensees to obtain much-needed spectrum. We concur with those commenters who point out that transitioning to the licensing paradigm [geographic area] proposed in the *Notice* could in many cases frustrate beneficial system growth. In the 900 MHz B/ILT spectrum, geographic-based service area licensing in lieu of site-based licensing would do little in terms of meeting the needs of current and future 900 MHz B/ILT licensees, many of whom would be forced to acquire at auction more spectrum than what they actually need, or can afford, to ensure that they have adequate spectrum necessary for wireless telecommunications systems to support their operations. Even if a traditional 900 MHz B/ILT licensee determined that it was fiscally responsible to acquire a geographic-based license, we are concerned that portions of the spectrum would remain unused and undervalued, precisely the result the Commission sought to avoid when it opened this proceeding.

We acknowledge the vital communications role that 900 MHz B/ILT spectrum plays in enabling traditional B/ILT licensees to safeguard our nation's critical infrastructure

² These data exclude, for example, green space STAs; activity like this is unrelated to typical B/ILT use for these channels as shown above.

industries. Such licensees must ensure that they have access to communications pathways to meet the essential communications needs of such varied and critical industries as utilities, land transportation, manufacturers/industry, and petro-chemical. . . . The 900 MHz B/ILT spectrum is also used by a range of licensees in a variety of ways to facilitate their efficient operations, to enable the cost-effective production of goods and services offered to the public, and to promote the safety of employees. Because of the nature of their operations, 900 MHz B/ILT incumbents demand substantial control over their own communications systems, and require greater certainty for their vital communications needs than some commercial carriers are currently willing to provide. Commenters have pointed out that, in some locations, commercial service offerings simply are not available to meet their needs. Where commercial service is available, in times of crisis and emergency, the public switched telephone network (PSTN) and commercial wireless services in an affected area can become overloaded and unreliable. . . . For these reasons, we conclude that the public interest is furthered by continuing to make the 900 MHz B/ILT spectrum available to these entities, to be licensed on a site-by-site basis so as to meet the actual service area needs of each licensee and eligible applicant.”³

Conclusion

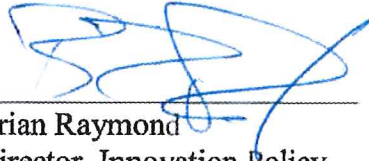
Converting the band to geographic area licensing would strand existing B/ILT systems at their existing capacity levels and service areas despite the expansion needs of many licensees. These systems are vital to productivity and safety for manufacturers in the United States, and

³ In the Matter of *Amendment of Part 90 of the Commission's Rules to Provide for Flexible Use of the 896-901 MHz and 935-940 MHz Band Allotted to the Business and Industrial Land Transportation Pool, et al*, 23 FCC Rcd 15856, at paras. 12-13 (2008)(footnotes omitted; emphasis added).

support mission-critical applications necessary to protect lives and property. Accordingly, geographic licensing for the band should not be pursued.

Respectfully submitted,

**THE NATIONAL ASSOCIATION OF
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