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

In the Matter of	)	
	)	
Improving Public Safety Communications in The 800 MHz Band	)	
	)	
	)	WT Docket No. 02-55
Consolidating the 900 MHz Industrial/Land Transportation and Business Pool Channels	)	

To: The Commission

COMMENTS

The law firm of Blooston, Mordkofsky, Dickens, Duffy & Prendergast (Blooston), on behalf of its clients listed in Attachment A hereto who utilize spectrum in the 800 MHz band for commercial and private internal uses, hereby submits, pursuant to Section 1.415 of the Commission's Rules, the foregoing comments in the captioned proceeding. At the outset, Blooston supports the Commission's goal of finding a permanent solution to the interference issues now being experienced by public safety systems in the 800 MHz band. Blooston notes that several proposals have been submitted to date and expects, before the comment cycle is completed, that more proposed solutions will be proffered. In evaluating these solutions, Blooston believes that it is important to determine which proposals will truly resolve frequency interference issues not only for public safety licensees, but prevent new problems for other licensees, while at the same time achieving the solution in a cost-efficient manner. As a result, frequency reallocation

may only be a small part of the solution if smart engineering practices can resolve the interference as it occurs.

I. PROTECTION OF PUBLIC SAFETY AND QUASI-PUBLIC SAFETY COMMUNICATIONS IS IMPORTANT TO OUR NATIONAL INTEREST.

Public safety entities, such as police, fire and emergency medical services (EMS) departments rely on radio for the dispatch and control of vehicles and personnel in order to respond to emergency calls for the protection of life and property. This radio communications function is necessary seven days a week on a 24-hour basis. In addition to responding to routine day-to-day emergencies, these public safety agencies are the front-lines in the event of a major disaster (e.g., flood, hurricane, blizzard, major brush fire, etc.) or a national emergency such as a terrorist attack. Unfortunately, the general design of public safety systems may contribute to the current interference issues. Unlike cellular, PCS and digital SMR systems, most public safety systems do not use a cellular architecture. Instead, these systems use only a few high power transmitters with mobile units that are able to receive weak signals as they travel away from the transmitter. This design is the result the local government's need to cover the entire county, city or town with the limited communications resources it has at its disposal. As a result, mobile units and hand-held portables must be able to receive and transmit any where in the service area, which leads to the mobile receivers not being as sensitive as they might otherwise be.

Likewise, in times of emergency, public safety entities often rely on commercial entities; for example alarm companies identify emergency situations, automobile clubs

provide for emergency roadside assistance, public utilities provide electric, water and sewer services, and waste haulers to remove any debris and hazardous wastes. While these entities are not typically thought of as providing public safety, each serves an important function in our communities, which is necessary for the protection of health, life and property. Because these functions are important, the Commission should take steps to ensure that their communications are either (a) not disrupted by any 800 MHz reallocation plan that may be adopted by the Commission or (b) subjected to an increased potential for harmful interference as a result of any relocation plan.

II. COMMISSION SHOULD DETERMINE IF MOST INTERFERENCE ISSUES CAN BE RESOLVED BY SOUND ENGINEERING PRACTICES BEFORE RESORTING TO FREQUENCY BAND REALLOCATION.

The NPRM clearly explains the problem that has resulted from the proliferation of 800 MHz public safety systems over the past few years. In general, investigation by the FCC has determined that interference has generally occurred when 800 MHz public safety vehicular mobile units and portable units are located near an 800 MHz cellularized Commercial Mobile Radio System (CMRS) transmitting location even though satisfactory coverage had either been previously experienced or been anticipated in system design. The interference may be audible for analog systems, while digital or trunked public safety systems may encounter signal quality issues on particular channels or system access difficulties. Finally, mobile data terminals (MDTs) may experience premature loading and prolonged response times. Because interference manifests itself in

various ways, public safety users may not even be aware that the radio reception issues are due to causes external to their radios.

It is not clear that the solution to these problems is either a restructuring of the 800 MHz band or a relocation of all public safety licensees outside of the 800 MHz band to spectrum in the 700 MHz band. Blooston believes that the Commission and the industry must first take a serious look at engineering fixes (e.g., filters and smarter frequency reuse patterns) before turning three major industries (public safety, industrial/land transportation, and CMRS two-way communications) on their ear and incurring billions of dollars in potentially unnecessary expense and service interruption. The Commission and the industry must first determine if a more economical and practical solution exists. Blooston understands that engineering solutions will be on-going as more public safety entities deploy their 800 MHz systems, and as CMRS carriers add additional cell sites. However, as facilities are deployed, better coordination between CMRS entities and public safety users can lead to smart engineering solutions in the field (including the use of transmitter filters to reduce co-channel and intermodulation interference) that could permit both systems to co-exist without harmful interference.

III. THE COMMISSION SHOULD TAKE FURTHER COMMENT ON A PROPOSED SET OF RULES BEFORE ADOPTING A DEFINITIVE SET OF RULES.

In the captioned proceeding, the Commission has only issued a Notice of Proposed Rulemaking which requests comment on a broad set of proposals to reconfigure the 800 MHz band in order to resolve interference issues between 800 MHz SMR and cellular

radiotelephone service systems on the one hand, and 800 MHz public safety systems on the other. While the NPRM provides general details of the National Association of Manufacturers (NAM) proposal, the Nextel proposal and even the Commission's own proposal, the NPRM suggests that these three approaches are not the only alternatives that should be considered by the Commission. As a result, the NPRM specifically requests additional ideas for resolving the current interference issues. Because the NPRM is so broad in nature, without specific rule proposals, Blooston urges the Commission to place any draft rules that are developed in this proceeding on public notice for further comment, prior to adoption. In this way, the Commission will be able to develop a set of rules (and thus, a transition plan) that meets the competing needs of as many interest parties as possible and minimizes the likelihood of litigation.

IV. INCUMBENT ANALOG SMR, CONVENTIONAL BUSINESS AND OTHER INDUSTRIAL/LAND TRANSPORTATION LICENSEES MUST BE TREATED EQUITABLY.

Nextel has proposed that incumbent analog SMR, Conventional Business and Other Industrial/Land Transportation licensees be required to relocate to either the 700 or 900 MHz band at their own expense, or remain in the 800 MHz band on a secondary, non-interference basis. As currently proposed, Nextel is not offering any assistance to these users who have made significant investments in equipment and infrastructure in order to meet their communications needs. While in certain rural locations, the regional public safety plan many not immediately require the incumbent's spectrum, it will likely be needed in urban and suburban areas in the near future, either for actual

communications or interference protection purposes. Even in rural area, incumbent operations along major roadways are likely to be displaced in the not-too-distant future. Blooston recommends that the Commission and the industry develop engineering solutions in order to avoid frequency relocations. However, if engineering solutions cannot resolve the harmful interference and incumbent licensees are relocated (some for a second time with much disruption to their business operations), then any incumbent licensee that is required to relocate to other spectrum must have its relocation expenses reimbursed. For this purpose, the Commission should use a model similar to that used in connection with the 800 MHz SMR and Broadband Personal Communications Service auctions. Alternatively, because public safety, and hence, homeland security mandate a resolution to the interference experienced by public safety entities, the Commission should consider funding for this initiative the dollars that Congress has set aside (and will continue to allocate) for homeland security matters. In this way, the needs of public safety can be met without placing incumbent licensees in a position of losing their investments in their much-needed communications systems.

V. REALLOCATION TO THE 700 MHZ BAND MAY BE A VIABLE ALTERNATIVE IF SOUND ENGINEERING PRACTICES DO NOT PERMIT PUBLIC SAFETY AND CMRS TO CO-EXIST IN THE 800 MHZ BAND.

In the event that it is not practicable for public safety and CMRS system to co-exist in the 800 MHz band, the Commission should relocate the 800 MHz public safety licensees to the 24 MHz of public safety spectrum already allocated in the 700 MHz band, and the 4 MHz of 700 MHz guard band spectrum proffered by Nextel (for a total of

28 MHz of spectrum), rather than attempting to reconfigure the 800 MHz band in its entirety. While spectrum in the 700 MHz band may not be available in certain areas until after calendar year 2006,[1] due to the transition of incumbent television broadcasters from the spectrum, planning for channel assignments in the 700 MHz band should commence as soon as possible, following adoption of final rules, in order to have a nationwide system planned and ready for implementation in 2006. The delay in implementing a relocation to the 700 MHz band would not necessarily be that much different than that for a reorganization of the 800 MHz band. This is because even though the NPRM proposes an ambitious implementation schedule, much planning and design will be required to accomplish the relocation in an organized manner. As a result, even where there are acute interference problems, Blooston believes that it would take two-to-three years to implement the relocations within the 800 MHz band.

The advantage of a relocation to the 700 MHz band is that public safety licensees would be using "virgin" spectrum that is not encumbered by incumbent licensees since most incumbent broadcast licensees will have been required to have vacated the band by the end of calendar year 2006.[2] However, a question for the Commission to ponder is

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[1] Until December 31, 2006, when public safety licensees could be transitioned to the 700 MHz band, CMRS providers would be required to resolve interference complaints on a piecemeal basis, much the way that they do today. While there is expense associated with resolving interference in this manner, the cost of interference resolution is far less than a total reconfiguration of the 800 MHz band and a displacement of incumbent industrial and analog SMR licensees.

[2] Currently, broadcasters are required to vacate the spectrum by December 31, 2006, or when there is 85 percent or greater digital television (DTV) penetration in the market. Hopefully, the Commission's voluntary band clearing mechanisms adopted in Reaollocation and Service Rules for 698 – 746 Spectrum MHz Band (Television

whether market area licensees in other portions of the 700 MHz band will cause similar interference to public safety as is now occurring in the 800 MHz band.

In establishing public safety systems in the 700 MHz band, Blooston believes that the Federal Government must take the lead in facilitating a national public safety communications system that provides interoperability on a nationwide basis. Such interoperability would allow police, fire and EMS units deployed for a major disaster far from their communities to communicate with other tactical police, fire and EMS units on the scene, and the incident commander upon their arrival. This interoperability could be accomplished through the establishment of 20 to 25 nationwide interoperability channels that would be compulsory in all radios using public safety spectrum in the 700 MHz band.[3]

Likewise, relocation of public safety licensees should be funded through the Federal Government's homeland security initiatives rather than by incumbent licensees in the 800 MHz band. This is because any relocation to the 700 MHz band would foster superior communications (assuming that current interference issues in the 800 MHz band could not be resolved) thereby improving homeland security in that police, fire and EMS personnel are the "front-line troops" in the event of a terrorist attack. Police officers, fire fighters and emergency medical technicians/paramedics are the first responders to any

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Channels 52 – 59), GN Docket 01-74, Report and Order, 17 FCC Rcd 1022 (2002), and the $500 million annual fee proposed for broadcasters in the President's federal budget proposal will make a four-year transition commonplace for broadcasters.

[3] Blooston does not suggest that entities licensed in the public safety low-band, VHF or UHF channels be required to relocate to the 700 MHz band. This is because the 700 and

incident, long before the arrival of the military or other Federal resources. In order to pay for the relocation from the 800 MHz band to the 700 MHz band, public safety licensees would surrender their 800 MHz spectrum to the government, which could then auction the spectrum in order to recover some of the expense associated with relocating public safety entities to the 700 MHz band and expenditures by public safety entities in the process of design and implementation of 800 MHz systems. In this way, there should be no out of pocket expenses for the public safety licensees moving to new spectrum and equipment.

If the Commission adopts a proposal to relocate public safety licensees to the 700 MHz band, Blooston urges the Commission to adopt rules requiring the narrowbanding of the spectrum from 12.5 kHz channels to 6.25 kHz. Narrowbanding in this manner would permit public safety to maximize the capacity of their spectrum through the use of spectrally efficient equipment without having to obtain additional channels.

Likewise, Blooston believes that the Commission should adopt technical standards for system design. In metropolitan areas, where there is likely to be a higher incidence of interference, the system design should focus on a cellular-type architecture with higher frequency reuse and lower power. As the area becomes more rural, higher-power transmitters, with smart frequency reuse, and greater co-channel separation, may be more suitable. This is because it may be more practical for use a less sensitive mobile receiver in sparsely populated rural areas and more sensitive cellular based receivers in urbanized

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800 MHz bands do not have propagation characteristics that would be practical for all public safety systems in rural, sparsely populated areas.

area. Accordingly, if the Commission is not able to utilize engineering solutions to resolve interference issues in the 800 MHz band, it should seriously consider a relocation of 800 MHz public safety licensees to narrowbanded 700 MHz channels.

VI. CONCLUSION

The Commission should look first and foremost at resolving 800 MHz interference within the band; and otherwise, it should consider relocating public safety 800 MHz operations to the 700 MHz public safety band. The Commission should ensure that fair and equitable treatment of cellular, SMR, and Other Industrial/Land Transportation licensees in this process.

Respectfully submitted,

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Attachment A

Electronic Specialties, Inc.
Computer Car, Inc.
California State Automobile Association
Automobile Club of Southern California
US Unwired, Inc.
Copper Valley Wireless, Inc.
Radio Communications Systems, Inc. d/b/a RCS Communications
3M Company
CC Communications
Southern Illinois RSA Partnership