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FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

May 3, 2002

via Hand Delivery

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Wireless Telecommunications Bureau
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Re: Comments to Notice of Proposed Rule Making, WT Docket 02-55
In the Matter of Improving Public Safety Communications
in the 800 MHz Band
Consolidating the 900 MHz Industrial/Land Transportation
and Business Pool Channels

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Dear Sirs:

We represent the telecommunication interests of Fresno Mobile Radio, Inc. (Fresno). On behalf of Fresno, we submit its comments to the above referenced matter, WT Docket No.

02-55. Fresno Mobile Radio provides commercial service on the 800 MHz band in and around the greater Fresno, California area. As its operations will be directly impacted by the outcome of the above referenced proceeding, Fresno wishes the Commission to consider its comments and the opinions and concerns expressed therein.

To comply with the filing requirements announced in the NPRM, Fresno encloses the original copy of its comments herein, along with six copies thereof. The original comments and four copies should be delivered to William F. Caton. One copy should be provided to Qualex International, and one copy should be provided to Michael J. Wilhelm. Please feel free to contact us should there be any questions.

Very truly yours,

Robert H. Schwaninger, Jr.

enclosure
cc: Laura Smith
BJA:cfh

Before the

FEDERAL COMMUNICATIONS COMMISSION

Washington, D.C. 20554

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In the Matter of	)	
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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	)	

Comments Of Fresno Mobile Radio, Inc.

SUMMARY

Fresno Mobile Radio, Inc. is a licensee of dozens of 800 MHz channels situated in and around the Fresno, California area. Upon its authorized channels, Fresno Mobile Radio provides services to hundreds of end users including public safety entities. Fresno Mobile Radio, Inc. has commented consistently in in those rule makings affecting the use and licensing of 800 MHz channels for conventional and SMR use. Its interest in the Commission's regulation of the relevant band is a matter of public record and its commitment to the future of local operations and affected operators is well established. Accordingly, Fresno Mobile Radio is an intensely interested party to these proceedings.

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Comments Of Fresno Mobile Radio, Inc.

Fresno Mobile Radio, Inc. is a licensee of dozens of 800 MHz channels situated in and about the Fresno, California area, upon which Fresno Mobile Radio provides services to hundreds of end users including public safety entities. It has been a consistent commenter in those rule makings affecting the use and licensing of 800 MHz channels for conventional and SMR use. Its interest in the Commission's regulation of the relevant band is a matter of public record and its commitment to the future of local operations and affected operators is well established. Accordingly, Fresno Mobile Radio is an intensely interested party to these proceedings.

Overview

The Commission's Notice of Proposed Rule Making comes at the end of over a decade of shuffling status among 800 MHz private wireless licensees. Commencing with the Fleet Call waiver of 1991 and proceeding up to the present, operators have been made to suffer the constant uncertainty of a continuously changing regulatory environment. Auctions of relevant spectrum, changes in licensing, restrictions and freezes on applications, intrusions of ESMR and geographic licensing on a landscape of site-based authorizations, introduction of digital technologies which are incompatible with operation of analog systems, and more have been visited on public safety,

business, industrial and local commercial operations which served and serve hundreds of thousands of end users. And with each turn of the calendar, the Commission has been asked to accommodate again the growing appetite for spectrum and operational flexibility of a single operator, Nextel Communications, Inc. One must be struck with the question of whether the Commission and its regulatees have been made to expend greater resources to accommodate more for any other carrier. Likely not.

So, today the Commission is dealing once again with the problems created by Nextel when its business plans, and not its concern for the rights and operational capability of other operators, caused Nextel to lower its antenna heights and raise the level of power which would saturate the areas immediately surrounding its sites. Concurrent with this unilateral attempt at system efficiency were the attendant problems suffered by other 800 MHz operators. Nextel's changes in system design increased the level of interference to other operators by increasing the severity of intermodulation products and desensitizing receivers. Nextel's new configuration of its digital system brought to ground the high levels of energy packed into square waves of digital operation that are known to cause adjacent channel interference, and added to the devastation a raising of the noise floor and its resultant desensitizing of receivers caused by overloading the front end of affected devices. Public safety radio at 800 MHz is adversely affected, but so are the analog commercial operators and systems operated by business and industrial users. Each is placed at risk or made to suffer the interference caused by Nextel's operations, sometimes in concert with A and B cellular carriers.

The NPRM is a necessary inquiry into this problem and its tenor of open discussion is welcome. However, obscured by the Commission's understandable concern for public safety operations are two salient and guiding facts. One, analog operators are not the cause of the problem. Two, Nextel and cellular carriers are, alone and in concert, the cause of the interference. With these two simple, basic facts in mind and admitted by all parties, the Commission must be guided down a path that does not require non-interfering parties to bear the cost or even the brunt of any plan to relieve the interference. Nextel and the cellular carriers alone should be made to take responsibility for the problems caused by their operation and should be made to finance any solution. Any other approach would create an unfair burden on small businesses which rely on the band for operation of local commercial systems or for a myriad of beneficial industrial uses. That Nextel and the A and B cellular carriers should be responsible is made even more clear when one recognizes that each knew and understood the risks of their operation, particularly those involving low-level sites employing a multitude of channels; and yet, each proceeded to build out more and more sites, increasing the density of harm despite actual knowledge of the problem being created.

That public safety requires some form of relief from the present problem and the possible future increase of such problems of interference is generally agreed upon. But the NPRM does not sufficiently emphasize the first and most effective steps toward relieving the problems, choosing to spend much of its weight upon a rebanding solution. In the first instance, one must question whether any rebanding solution will be effective, with the exception of removing public safety from the 800 MHz band and placing it within the 700 MHz band in lieu of commercial operations arising from auction. This solution for relieving the interference suffered by public safety entities is likely

acceptable to local governments, provided that the relocation of existing systems is without cost to public safety entities. And thus far the Commission has not been guaranteed a source of the over $1 billion in funding which would be required to purchase new radio systems for affected public safety operators.

Only via removal of the public safety operations from the 800 MHz band can the Commission be assured that any rebanding proposal will be effective. Any rebanding advocate must admit that interference from intermodulation products will continue to plague public safety operations at 800 MHz and likely will continue to increase the threat to vital operations. And although removal of public safety operations to an end of the band (e.g. General Category frequencies) will improve conditions, no rebanding plan that includes public safety's continued operations in proximity on the spectrum to 800 MHz cellularized operations[1] will render safe those operations from increased threats of harmful interference.

Nextel's proposal to remove down the band public safety operations is a prime example of the worst of all possible solutions. Not only will its rebanding proposal fail to protect public safety, but it would work an intolerable hardship on affected analog operators. Despite analog operators' status as non-interfering parties, Nextel's proposal would impose on operators the extreme cost of relocation or, as an abusive alternative, secondary status. Meanwhile, Nextel would receive

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[1] "Cellularized operations" include any operations which includes overlapping of five or greater, interactive sites which include hand-off capability; operated with antenna heights of less than 100 feet above ground level on HAATs of less than 500 feet; and which are authorized for 20 or greater channels.

contiguous spectrum at 800 and 2100 MHz, two choice slices of the spectrum pie. It is only with greatest of gall that the interfering entity would select a settlement of those injuries directly caused by its own acts, by upending the business plans of its analog victims and innocent parties.

As an alternative to Nextel's proposal and with greater focus on the responsibility of all relevant parties, Fresno Mobile Radio strongly urges the Commission to place the burden for resolving interference on a case-by-case basis on Nextel and those contributing cellular carriers. The ability to resolve interference on a case-by-case basis is not beyond the capacity of Nextel or cellular carriers. Reduction in power, raising of antenna heights, employment of better and more effective filtering, use of better and "cleaner" amplifiers, and, in extreme cases, selective deconstruction of individual channels, would all work together to relieve interference. And since the solution is within the individual control of these entities, the Commission should require such solutions be employed immediately by interfering parties in recognition of those licensees' duties in accord with 47 U.S.C. §303 and 47 C.F.R. §90.173(b). Such a requirement is consistent with the rules' treatment of UHF television operations when those operations interfere with land mobile operations.

Fresno Mobile Radio does not believe that Nextel's operations are in accord with rule or law. That Nextel operates in accord with granted authorizations and employing type accepted radio equipment does not create an insulation from the general admonitions contained with the Communications Act and the agency's rules that require that operators avoid the creation of harmful interference. Those admonitions are not restricted to cochannel operations and no such limiting language exists in either codification of duties. Nor does there exist any statutory bar on the

Commission's ability to restrict interference arising from intermodulation products or via desensitizing receivers. The Commission long ago recognized the desensitizing problem when it created restrictions on frequency coordination and use by adjacent channel VHF systems licensed under Part 90. It recognized the problem with operation of 72-76 MHz equipment and its attendant effect on broadcast television reception. Each of these instances involved operation of type accepted equipment with attendant authorizations, yet each also included additional duties to protect potential victims of interference. For the Commission to step forward and require such protections for analog operations within the 800 MHz band is, therefore, not without precedent or necessity.

Accordingly, the initial burden for relieving harmful interference must be placed on those entities who are the source of the problem by requiring immediate resolution of all such problems. The responsibility must be codified and made clear that the agency will not shirk its responsibility to either public safety or non-public safety victims of this interference, to protect both from the machinations of operators which have sometimes acted with impunity to the rights of affected licensees.

By requiring case-by-case resolution of interference, the Commission acts first and immediately to solve the symptoms arising from a possibly problematic use of the 800 MHz band. Fresno Mobile Radio questions, along with nearly all others, the logic of locating NPSPAC channels between two digital, cellularized users of the 800 MHz band. This placement in a crossfire of intermodulation products has made more difficult the agency's task of resolving on a long-term basis the problem of interference to these sensitive systems. However, rebanding to move downward the

NPSPAC channels, as discussed infra., will not solve the problem alone and may not solve the problem at all. The only two solutions are a combination of "best practices"[2] made a portion of the agency's rules requiring that interfering parties take immediate responsibility for avoiding and resolving the creation of interference; and a look toward other spectrum solutions for public safety, i.e. the 700 MHz band.

Fresno Mobile Radio sympathizes with the Commission and the lack of direction provided by public safety regarding this issue. The only pre-proceeding comments from public safety appear to be that it recognizes that its systems have a problem, that the problem should be resolved, and that public safety should not be made to pay for the solution. These general comments are not sufficiently specific to guide the Commission during this proceeding and one can only hope that these comments are augmented with more concrete proposals that do not simultaneously cause local government to burden local business unfairly in arriving at a solution. Fresno Mobile Radio trusts that public safety entities will recognize the source of the problem and look first and only to those entities to bear the burden of resolution. Accordingly, Fresno Mobile Radio offers the following financial plan to offset the cost to adversely affected operators, both public safety and others, which may be made to relocate or retune systems in accord with any adopted rebanding plan:

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[2] *See, Avoiding Interference Between Public Safety Wireless Communications Systems and Commercial Wireless Communications Systems at 800 MHz – A Best Practices Guide (December 2000).*

Recommended Financial Plan

Source of Funding: A fee assessed on all licensees, existing or which come to exist, of 800 MHz CMRS systems employing interconnected, digital operations under geographic licensing, including ESMR, cellular or wide-area 800 MHz authorizations, to be collected on a per mobile unit (or customer unit) basis, which fees taken together would represent collections of approximately $500 million per year or approximately one-fifth of the expected cost of relocating all analog operators' systems. Such fees would be assessed and paid into a central fund for the purpose of financing the relocation, retuning or purchase of new equipment by all analog operators which are compelled to move under any rebanding scheme.

Operators Of Fund: The fund would be administered by a committee created by the Land Mobile Communications Council (LMCC) for the purpose of determining the cost and the expenditures for equipment for affected analog operators. The committee would review the relocation plans of affected operators to assure that cost-effective, necessary expenditures are met via the fund and are paid out in a manner similar to the Schools and Library fund for providing internet services to educational institutions.

Duration: The monies would be collected for a period equal to five years, with the obligation sunsetted by rule, thus relieving contributing CMRS operators of a continuing obligation to fund indefinitely the solution. The fund would continue in existence for an additional three years beyond the sunset date for contributions. No request for funding would be entertained beyond year six. At

the end of the eight-year term any balance remaining in the fund would be contributed to the Universal Service Fund.

Qualified Expenditures: Analog operators seeking use of the funds for the purpose of financing relocation would be entitled to receive funds for the cost of the following: (1) the cost of all new equipment, including without limitation transmitters, receivers, combiners, antennas, etc. required to employ any new frequencies upon which the operator is compelled to move; (2) the cost of all labor, both technical and engineering, required to design and construct any new or modified system, including that labor required to retune any mobile unit; (3) the cost of all increased site lease fees arising out of construction of additional systems for sensitive operations which require seamless transition requiring construction of duplicate systems on the channels upon which the system will be relocated; (4) the cost of any filters employed for the purpose of reducing the susceptability of existing equipment to harmful interference; and (5) such other costs as may reasonably arise as a direct result of relocation of an analog 800 MHz system due to compliance with any adopted rebanding proposal.

Non-qualified Expenditures: Contributing CMRS operators would not be entitled to receive monies from the fund, nor will the fund be employed to offset the costs of CMRS operators' compliance with any obligation to relieve interference on a case-by-case basis employing "Best Practices" or any other solution to resolve harmful interference. However, non-contributing analog operators may request funds for the purpose of offsetting the costs of those operators' cooperation

with any contributing CMRS operator's efforts employing "Best Practices" or other such resolutions of interference.

The above suggested method of funding places squarely on the responsible parties the burden of financing the resolution of the problem. This is both appropriate and in accord with Commission precedent. On the other hand, it does not create an economic burden for those operators who are not the source of the problem and are, rather, co-victims along with public safety of the operational methods unilaterally chosen by the interfering entities.

The LMCC is suggested as the administrator of the plan due to its unique expertise in the area of land mobile equipment usage and costs, including the design and implementation of affected analog systems. Its membership represents a wide array of land mobile users which employ the 800 MHz band for business, industrial, public safety, and fleet operations, providing specific insight into the process of relocation of affected users under any rebanding proposal. In sum, it represents the best qualified group of industry experts to assure that the fund is employed properly, including to review carefully requests for funding to assure that requests represent necessary costs and not questionable inflation of same.

Despite the above recommendation of a funding source for any rebanding at 800 MHz, Fresno Mobile Radio again emphasizes that rebanding is likely the last alternative for resolving the noted interference and that restrictions on methods of operation for interfering CMRS operators is a much better and more easily adopted resolution.

Equipment Issues

Fresno Mobile Radio would be remiss if it did not also mention that one difficulty in resolving the interference issues resides in the manner by which mobile and portable units are manufactured. Typical units include wide front end receivers which are capable of receiving across the entire private radio 800 MHz band. Accordingly, the Commission should limit the front end of receivers to reduce the threat of harmful interference, which units would be limited to more discreet bands reflecting any rebanding proposal. For example, public safety units would be capable of only receiving signals within a reduced bandwidth which reflects any new bands or sub-bands created, e.g. under the present allocations public safety receivers capable of operating upon NPSPAC channels would not be capable of receiving all signals below 866 MHz, with all other public safety receivers incapable of receiving above 861 MHz. This notching out of 5 MHz of signal receive capability would reduce the potential of interference by not allowing the signals to pass into the receiver for the purpose of oscillator-created blockage or other forms of desensitizing.

Fresno Mobile Radio must also state that it is not comfortable with the fact that the largest manufacturer of public safety equipment, Motorola, has also assisted in the design and operation of the equipment which is employed by Nextel to create the interference to public safety units. Although there may exist no method of extending responsibility to Motorola via this proceeding, it is of no small concern that the resolution of the problem will likely net additional sales to Motorola to participate in fixing a problem which is due, in no small way, to Motorola's equipment design. We leave it to public safety entities to determine whether the equipment purchased from Motorola is consistent with a duty to comply with any duty regarding fitness for use.

Rebanding Concerns

Although Fresno Mobile Radio has expressed many issues and concerns regarding any rebanding of the 800 MHz spectrum, particularly any rebanding which would require analog operators to bear the cost of resolving a problem not of their making, additional concerns also must be addressed to assure that any rebanding is equitable.

First, no rebanding proposal should be adopted which does not provide an opportunity to all EA licensees to employ digital operations in the future. That a particular EA licensee has not converted to digital operations is not evidence of that operator's lack of interest in converting to such technologies in the future.

Second, all licensed operators subject to or invited to participate in relocation must be provided an equal amount of spectrum. Given the unequal amount of spectrum located within the present categories of the 800 MHz allocation, there may exist a tendency to create a race from one portion of the band to another to occupy another spot on the spectrum. In the event of any such race, the winner would likely be the best funded participant and the Commission's rules should not provide any such advantage based on economic resources.

Third, Fresno Mobile Radio supports cellularized use of the 800 MHz band and the use of emerging technologies, provided however, low antenna heights should be subject to consent by analog operators whose systems share the affected operating area and whose operations are licensed for use within 2 MHz of the frequencies to be employed by the low site, cellularized operations.

Grant of such consent could then be tied to cellularizing operators' commitment to interference protection employing best practices of whatever method those operators deem appropriate for each unique location and use of the spectrum.

Fourth, all rebanding proposals should recognize that the problems suffered by public safety entities are not unique to pubic safety and affect all analog operators. Therefore, all analog operators should be taken into consideration in the future use of the 800 MHz band and the challenges created by CMRS operators employing low site operations.

Fifth, no rebanding proposal should be coupled with a spectrum giveaway at 2100 MHz or elsewhere. The public interest demands equitable treatment in the acquisition of spectrum by commercial operators, including the requirement to abide by the tenets of the Omnibus Reconciliation Act of 1993 which has guided the Commission's actions in applying its auction authority under 47 U.S.C. §309.

Sixth, no non-public safety 800 MHz operator should be required to relocate its system to either the 700 MHz band, with its attendant problems associated with protection of public safety operations and incumbent broadcast facilities (and lack of available equipment); or the 900 MHz band with the need to acquire new equipment and to possibly receive an unequal amount of spectrum in exchange due to differences in channelization between the bands. And such relocation accepted by non-public safety 800 MHz analog operators should be wholly voluntary and subject to funding by the above described fund.

Seventh, no rebanding should include a reduction in status for analog operators, rendering future use on a secondary basis to public safety or any other use. There is no evidence that any analog system has ever created the type of harmful interference dealt with within this proceeding, thus those operators' innocence makes such a result abhorrent in its consequences.

Eighth, in the event that an adopted rebanding proposal causes public safety operators to relocate from the 800 MHz band, unoccupied frequencies should be auctioned off in five channel blocks of no greater size that BEAs to allow small businesses to take advantage of the opportunity for growth of local systems and some of the blocks should be reserved for bidding upon only by small business.

Ninth, any operator subject to relocation pursuant to 47 C.F.R. §90.699 which has not completed its negotiations with the EA operator shall not be subject to relocation pursuant to that rule section if compliance with Section 90.699 would subject that operator to two relocations; and nothing contained within any new rebanding shall be deemed to be a reduction or waiver of an incumbent licensee's rights to compensation in accord with Section 90.699 and the Commission's decisions underlying the creation of that rule.

Conclusion

The above recommendations are reflective of an equitable approach to the problems faced by the Commission in attempting to relieve interference concerns of public safety operators and other analog users. The problem is complex and vexing for all affected operators, but only one class of operators is the direct cause of the problems and the resolutions must come first by a codifying of those CMRS operators' responsibility to individually and together share in providing quiet enjoyment of the spectrum to other authorized licensees. It is regrettable that the agency is considering reversing its promise to 800 MHz operators who accepted relocation under 47 C.F.R. §90.699 with the good faith belief that further relocation would not be imposed. It would be better if the agency did not undermine the sincerity of its promises by further accommodation of a single carrier, Nextel, which knew and should have known that its recent redesign of its systems would result in concurrent harm to so many public safety and local operations.

Respectfully submitted,

FRESNO MOBILE RADIO, INC.

By _____
Robert H. Schwaninger, Jr.

Dated: 5/3/02

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