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FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

May 3, 2002

via Hand Delivery

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Federal Communications Commission
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Washington, DC 20554

Qualex International
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Washington, DC 20554

Michael J. Wilhelm
Public Safety & Private Wireless Division
Wireless Telecommunications Bureau
Federal Communications Commission
445 12th Street, SW
Washington, DC 20554

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

Dear Sirs:

We represent the telecommunication interests of Madison County East Transit District (Madison County). On behalf of Madison County, we submit its comments to the above

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referenced matter, WT Docket No. 02-55. Madison County is a municipal transportation organization and authorized to operate on 800 MHz spectrum. As it's operations will be directly impacted by the outcome of the above referenced proceeding, Madison County wishes the Commission to consider its comments and the opinions and concerns expressed therein.

To comply with the filing requirements announced in the NPRM, Madison County 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,

Benjamin J. Aron

enclosure
cc: Laura Smith
BJA:cfh

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	)	

Comments of Madison County East Transit District

SUMMARY

In an effort to assist the Commission to reach a resolution to the problems facing public safety communications, Madison County East Transit District (Madison County) submits its comments to the Commission. The Commission should ensure that the financial burden of solving interference problems is solely the responsibility of Nextel and any other cellular operator that is responsible for causing interference. The Commission must also ensure that any rebanding, retuning or reallocation of spectrum takes into account the particular needs of those forced to move, and ensures continuity of service. As explained below, Madison County feels that the most logical solution to this problem is to force Nextel to move to unoccupied spectrum at 700 MHz at its own expense.

Table of Contents

Introduction	1
Argument	1
Conclusion	13

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	)	

Comments of Madison County East Transit District

1. Introduction.

To assist the Commission in developing a complete record in this matter, Madison County East Transit District (Madison County) hereby offers its comments to this proceeding and in reflection of its interest in the future viability of the 800 MHz private radio spectrum. Madison County is a licensee of vital 800 MHz systems which provides vital transportation services to the greater St. Louis metropolitan area with its fleet of passenger busses and special vans for handicap passengers. As its relocation plans are currently pending the resolution of the Commission's decision in the above referenced proceeding, Madison County is a directly interested party in the outcome of this proceeding.

2. Argument.

Within its NPRM, the Commission has offered a history of the allocation and use of the 800 MHz band for operation upon by commercial, business, industrial, CMRS and public safety users. Missing from that history are some of the economic realities which have also been witnessed and which are entirely relevant to this proceeding. To fill out the record of this proceeding and to

establish a better perspective for assigning responsibility to relieve interference concerns to public safety and similarly situated entities, a few additional facts are hereby offered.

Nextel's and cellular operators' use of the spectrum has increased dramatically in particularly urban areas via construction of additional fill-in sites designed to cover less geographic area with greater amounts of spectrum. This effort has been spurred by increasing rates of Minutes Per Use (MPU) per subscriber which has steadily increased over the past five years. Although many carriers still have limited coverage in rural areas and, thus, continue to employ high site, less densely packed system architecture, the incidents of harmful interference suffered by public safety entities and analog operators can be directly tied to the evolution in cellular design to serve urban and suburban localities.

In addition to adding cells, interfering carriers have lowered antenna heights to aid in sectorization and to avoid creating internal interference among cells. These lower sites increase the power density beneath them and thus create greater unintended byproducts of operation such as the harmful interference experienced by public safety users. Obviously intermodulation products and spurious emissions, when combined with greater power density, increase the levels of interfering signals and the capacity to desensitize receivers operating in proximity to the redesigned cells. Although cellularized carriers sometimes reduce the power of the cells, this reduction is not consistent and sometimes is not sufficient to offset the effect of low site operations.

Concurrently, the increased levels of collocation upon existing antenna supporting structures exacerbates the problem by increasing the incidents of interference due to intermodulation products among collocated carriers. With increased zoning restrictions coupled with a reduction in capital investment in additional tower construction, the path to system augmentation by construction of fill-in sites includes greater uses of collocation. Nor can this issue be relieved by interfering carriers whose access to capital has also been reduced due to market conditions, thus making site development unattractive and prohibitively expensive. The result is the collocating of up to three 800 MHz cellularized carriers on a single structure within an urban environment. And beneath these structures, public safety entities are unable to communicate due to the effects of this low-site, collocated operation. Therefore, in those urban areas where public safety entities are most likely to have migrated to 800 MHz use, the threat of harmful interference is the greatest, creating holes in coverage that threaten the viability of public safety systems.

Noting again that underscoring the redesign of cellularized systems is increased MPU, it should be recognized that some of the increase in MPU is due to increased customer confidence in wireless versus landline telephony, and some of the increased MPU is a direct result of calling plans employed for competitive purposes. Competition among broadband carriers for subscribers has created calling plans which make attractive wireless use for long distance telephony and which encourage greater MPU by customers taking advantage of "free minutes" touted in advertising. Insofar as the increased MPU is a byproduct of broadband carriers' own marketing efforts, the Commission should exhibit little sympathy for those carriers' success and the attendant problems associated with delivering on the promises made in advertising. Nor should the Commission expect

other operators to make good on those promises by agreeing to bear the cost of relocation, rebanding or retuning.

The focus on public safety users' problems arising from interfering signals created by broadband carriers is laudable, but too limiting in scope. The solution, any solution, should include relief for all analog operators within the 800 MHz band, whose equipment is made to suffer from the marketing efforts of the largest carriers. Yet, this conclusion cannot ignore the cost to broadband carriers in resolving the problem.

Any rebanding or relocation upon the subject spectrum will come with a very high price tag. Relocation or rebanding or repacking requires many operators to purchase new equipment, create new system designs, reengineer existing systems, and alter or delay business plans. And, as yet, the Commission has not determined a method of payment of the billions of dollars that such an effort would cost, without any concurrent benefit in increased efficiency of operation or profitability for affected operators. Public safety has not offered a financial solution. Rather, public safety operators are viewed as victims of corporate actions that have impeded the use of vital communications and should be, thus, made immune from bearing the cost of relocation or rebanding. This approach is quite attractive given the obvious equities. But it does not solve the issue of cost.

A related cost issue that cannot be overlooked is the impact of entities, such as Madison County, that receive federal funding to deliver service in compliance with the requirements of the Americans with Disabilities Act (ADA). To comply with the ADA, Madison County must provide

transportation services to handicap passengers that cannot make use of the bus fleet due to their physical handicaps. Thus, Madison County has a fleet of specially designed vehicles that serve the handicap community in the St. Louis metropolitan area. The service area for these vehicles covers an approximately 1500 square mile area and crosses numerous county lines. Should Madison County and similarly situated entities be forced to relocate to public safety channels that are licensed on a county wide basis, their ability to maintain effective communications throughout their service are could be compromised. Thus, Madison County urges the Commission to carefully consider the potential impact of any relocation plan on the continuity of service. Should such service be diminished due to a rebanding, retuning, or relocation plan, entities such as Madison County face the double edged sword of adverse legal action for failure to comply with the ADA, and a loss of funding for successfully complying with the ADA. No such result can be tolerated, and the Commission should bear such concerns squarely in mind when determining a solution to the public safety communications problems.

Small, local analog operators can neither afford the cost of relocation, nor can they be viewed as the cause of the difficulties. Like public safety entities, local commercial non-CMRS carriers occupy the band without concurrent harm to other operators via the creation of harmful interference. Again, the obvious equities mitigate against forcing these operators to bear the cost of relocation, particularly those operators which have already sustained the adverse effects of previous relocation pursuant to 47 C.F.R. §90.699.

Business and industrial/land transportation (B/ILT) operators typically employ analog equipment or, if using digital equipment, operate over limited plant areas into which public safety operators rarely roam. These operators evince the characteristics of the small, local analog operators, free from blame and often the victims of harmful interference. Therefore, it would be inappropriate for the Commission to expect these operators to bear the cost of relocation.

Thus, one returns, via responsibility for the harmful interference and the equities involved, to those interfering broadband carriers, whose marketing efforts have created high MPU and whose systems are being rapidly redesigned to make good on advertising claims. What, then, may the Commission expect of them for the purpose of financing a resolution of the harmful interference created by construction of low site, high power density, collocated facilities? The answer is not promising. The financial structures of even the largest carriers has been made precarious over the last two years, with the industry reaching a nadir in the capital markets. Negative earnings, reduction in access to sufficient capital, increased demands for capital expenditures unmet with increased revenues, and other gloomy facts surround the operation of broadband carriage. Even the promises of 3G technology do not provide a glimmer of economic hope, since delivery to the market of this service is very expensive and would concurrently exacerbate the very problems which this proceeding seeks to resolve. In fact, one must wonder realistically whether Nextel and the cellular carriers can, in fact, bear the cost of relocation or rebanding without suffering dramatically in share price, creating additional layoffs and reduction in capital expenditure needed to keep afloat the carriers' respective ability to service billions of dollars in debt.

The above considered, the agency must include as a portion of its inquiry the issue of ability to pay. As noted above, adversely affected operators are either unwilling or unable to finance rebanding or relocation as a stand-alone solution to the difficulties. This conclusion being found, the Commission must then determine whether its decision will result in the placement in economic peril of one or more of the above described market segments, or in seeking lower cost solutions to the problem. Madison County, of course, suggests the latter approach.

The most cost effective means of dealing with harmful interference is to fix the problem on a case-by-case basis. Although the agency should emphasize preventative measures as well, broadband carriers will be far better able to finance remedial actions than to pay for wholesale relocation. At costs that are geometrically lower than rebanding or relocation, interfering carriers can invest in remedial action programs that are also market-based. Market-based solutions arise from the effects of the market which create the need to construct low-site cellular systems on collocated facilities. MPU effect is felt most in urban areas and the concurrent demand increases the profitability of operation for those carriers. Thus, the profitability of the operation makes investment in remedial action more attractive in those markets. Customer revenues drive the incentive to prevent or remedy the problem.

Accordingly, the first action of the Commission should be to codify the responsibility of interfering carriers to remedy that interference. Madison County suggest new rules be adopted which state the following:

90.173(o) Persons authorized to operate in the 800 MHz band's obligation to avoid the creation of harmful interference shall include that harmful interference to stations licensed under Parts 90 or 22 arising out of adjacent channel operation, production of intermodulation products either alone or in concert with other licensed radio systems, or due to desensitizing of receivers employed by other licensed radio systems.

22.352(d) Persons authorized to operate in the 800 MHz band's obligation to avoid the creation of harmful interference shall include that harmful interference to stations licensed under Parts 90 or 22 arising out of adjacent channel operation, production of intermodulation products either alone or in concert with other licensed radio systems, or due to desensitizing of receivers employed by other licensed radio systems.

By adoption of these rules the Commission will clearly articulate the obligation of carriers to avoid and remedy all forms of harmful interference which this proceeding seeks to resolve. Adoption will also create certainty in future operations for all affected operators, providing guidelines for broadband carriers that will justify greater investment in interference avoidance, while providing non-interfering carriers the security necessary to justify further investment in equipment, either for business, industrial, land transportation or public safety uses. Finally, adoption of these rules would allow the agency to test the necessity of more radical and expensive approaches like relocation or rebanding.

In the event that the Commission deems some rebanding or relocation to be required to provide long-term protection for public safety users, the Commission needs to assure itself that it will not need to revisit this issue in the near term. In all candor, the 800 MHz band has suffered several previous allocations, rebanding, adjustments in rules and operation, the transition from site based to geographic licensing, the finder's preference program, and a host of other regulatory initiatives, each one adding greater cost and uncertainty to the future viability of the band. The

majority of the burden for past initiatives has been borne by local commercial operators and B/ILT licensees, increasing costs and reducing access to the band for vital operations and growth. This fact having been established, any relocation plan should strive to accomplish two goals, a permanent (or near permanent) solution to public safety interference issues and increased opportunity for the future vitality of the band.

One proposal is to relocate public safety users to the 700 MHz band in lieu of the Commission's holding of Auction 31. This proposal is quite attractive and must be seriously considered by the Commission. By removal of public safety to those 700 MHz channels, the Commission will correct completely the harmful interference suffered by those users and promote interoperability upon those channels for future investment by local governments. As suggested by some, the cost of public safety's relocation might be financed by two or three sources: (1) payments by interfering carriers when relocation is employed to remedy interference problems; (2) federal grants from, perhaps, Homeland Security funding; and (3) application of proceeds from auction of abandoned 800 MHz spectrum. Likely, all three sources are in combination adequate for financing the effort, however, equally likely is the fact that none are individually capable of financing the entire effort. However, the Commission should recognize that unless the Commission mandates an immediate relocation effort, the proposed relocation of public safety could proceed over time on an as-needed basis, thus allowing all sources the ability to pay more rationally over time the cost of that relocation. A phased in approach of that relocation makes sense because rural public safety is not suffering the problems of harmful interference with any degree of regularity and many public safety systems are not operated on 800 MHz, instead continuing to reside on old VHF channels.

Similarly, auctions of channels would be phased in based on timing of relocation efforts. To assist in revitalizing the band, the Commission should limit the auction of presently interleaved channels to only small business operators or as extensions of existing B/ILT systems. Thus, when reoccupied, the new licensee will not be among the interfering carriers whose operations have created the need to take actions to remedy interference in the band. Additionally, such a limitation will provide an incentive to local competitive markets by revitalizing the use of the band for a wider array of operators and uses.

In the alternative, the Commission may look to relocating Nextel's operations to a position outside the 800 MHz band. In 1991 when the original waiver was granted to Nextel (nee Fleet Call), the waiver was granted with an understanding that operation on those SMR frequencies by Nextel could be accomplished without harmful interference being creating to existing operators. This understanding has not been met in practice and Nextel has not been able to develop a system which avoids interference to analog operations. This said, Nextel's proposal is insufficient for meeting the needs of all operators and results in Nextel's continuing occupation of the band which activity is known to be the primary source of interference, including that produced by intermodulation products which will not be eliminated by Nextel's continued occupancy in conjunction with public safety's continued use of 800 MHz channels.

Nextel possesses the ability to acquire (if auctioned) additional spectrum at 700 MHz, already holds channels at 900 MHz, and may further exploit its existing spectrum holdings at 700 MHz obtained via the guardband auction. If Nextel has become a bothersome neighbor to all other

operators within the 800 MHz band, then the Commission may be left with no other viable solution other than to allow and encourage Nextel to relocate from the band, starting with the interleaved and General Category channels where the problem of interference is most severe to the widest number of licensed users. If the Commission is inclined to provide Nextel a new home at 2100 MHz, that new home should come at a obvious cost – continued operation at 800 MHz. Accordingly, the only way the Commission can justify eschewing the revenue which would otherwise be raised for the U.S. Treasury by auction of any available 2100 MHz spectrum and, instead, offering that spectrum to Nextel, would be if the Commission would simultaneously cure the interference at 800 MHz by demanding that Nextel leave the band and that no future operator at 800 MHz employ a cellular architecture that includes low-site operations.

Again the issue of cost must be addressed. Standing alone, it is not clear that Nextel can immediately finance this move. Although equities demand that the primary funding come from the interfering operator with the attendant obligations which exist under 47 U.S.C. §303, the Commission must, at least, consider the implications for Nextel. Nextel, in its White Paper, stated that the cost of relocation should be borne by the analog operators because relocation to 700 or 900 MHz would result in those operators receipt of superior spectrum. Although we strongly disagree with Nextel's characterization of that spectrum for analog operators, we believe that Nextel should receive the benefit of its conclusion for its proposed use of 2100 MHz. Therefore, Nextel would receive extremely valuable, contiguous spectrum as a result of grant of a nationwide, exclusive license at 2100 and, in exchange, would bear the cost of its relocation – something it has already

expressed a willingness to perform. It appears that Nextel has economically packed its bags and it may be prudent for the Commission to punch Nextel's ticket to 2100 MHz.

As expressed above, the situation confronting the Commission is not simple and possible solutions are not without substantial costs. Financing the effort is one of the greatest issues confronting all commenters and affected operators. A logical appreciation of the marketplace and the ability of persons to participate in any wholesale rebanding or immediately mandated relocation weighs against any precipitous action and weighs more toward a phased in solution which would allow all operators the opportunity to adjust investment strategies, business plans, and future viability of operation at 800 MHz. This shown, it is of greater necessity for the agency to immediately take steps to ameliorate harm to public safety entities and analog operations by the adoption of rules which articulate the responsibility of interfering carriers to immediately remedy incidents of harmful interference to licensed operations. Only by providing this interim solution can the Commission achieve the necessary time to develop and effect a long-term strategy for permanent resolution of the problem following a reasonable balancing of interests. The cost to interfering operators to comply with those rules is neither unexpected nor so daunting as to preclude immediate application. And the positive effect on the viability of public safety operations requires that the Commission specifically demand such solutions on a case-by-case basis.

3. Conclussion.

All other avenues of resolution should be explored while focusing on the equitable division of the burden of rebanding or relocation. And at no time should the Commission fail to recognize that the number of interfering parties is highly limited, while the number of operators which have suffered from that inference without ever causing same, is quite large.

Respectfully submitted,

Dated: May 3, 2002

Madison County East Transit District
By _____
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