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Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20054

FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

In the Matter of)
)
Improving Public Safety Communications)
In the 800 MHz Band)
)
Consolidating the 900 MHz Industrial/Land)
Transportation and Business Pool Channels)
)

WT Docket No. 02-55

To: The Commission

REPLY COMMENTS

Respectfully submitted,

SMALL BUSINESS IN
TELECOMMUNICATIONS

By Counsel:

ROBERT H. SCHWANINGER, JR.

Schwaninger & Associates. P.C.
1331 H Street, N.W. Suite 500
Washington, D.C. 20005
(202) 347-8580
rschwaninger@sa-lawyers.net

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SUMMARY

SBT hereby submits its reply to those comments filed within this proceeding. SBT agrees with the vast majority of commenting parties that have called for the Commission to adopt specific technical solutions to the interference suffered by public safety entities and other adversely affected analog radio operators from the operation of low-site cellular facilities. Herein, SBT has offered specific, comprehensive solutions for avoiding the subject interference, creating avenues of cooperation among affected operators, and adopting of methods of rapid interference resolution. SBT avers that adoption of the suggested rules and guidelines will result in resolution of nearly all of the problems addressed within this proceeding.

SBT joins with nearly every commenting party in supporting the migration of public safety operations to 700 MHz. This long-term solution is appropriate, feasible and highly desirable for the advancement of interoperability and expansion of vital public safety systems, while assuring that the problems cited within this proceeding receive a long-term solution. SBT has set forth a recommended methodology for such migration and the financing of same, which methods will not require Commission micro-management and that will further promote cooperation among licensees, while providing much needed spectrum relief for existing 800 MHz licensees and cellular operators.

SBT opposes strongly any rebanding of the 800 MHz spectrum. As the comments demonstrate, rebanding of 800 MHz will not resolve the interference issues and will do little more than result in delay, cost, complexity, litigation, contention, and inequity among licensees. Any consideration of rebanding should be only following the adoption of technical solutions and

following an opportunity to discover whether such solutions have been sufficiently effective.

Then, and only then, and absent a migration of public safety use to 700 MHz, should the agency even consider such action.

SBT opposes those suggestions made by Nextel Communications, Inc. as unworkable, inequitable, blatantly self-serving, and sufficient to shock the sensibilities of any objective observer. Although SBT supports the comments of the vast number of commenting parties which correctly stated that Nextel should bear the brunt of the burden for resolving the interference problem, including all costs related thereto, SBT can find no justification for concurrently rewarding Nextel with additional spectrum for performing those acts which are required under the Act and the agency's rules.

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To: The Commission

REPLY COMMENTS OF
SMALL BUSINESS IN TELECOMMUNICATIONS

Small Business in Telecommunications (SBT) is a non-profit association of companies and persons serving the telecommunications industry, whose membership includes many local operators of 800 and 900 MHz SMR facilities. It has long demonstrated an intense interest in assuring that the Commission takes into consideration the needs of small business in the creation and adoption of rules. SBT is fully aware of the interference suffered by public safety operators, since many of its members are similarly plagued by equal interference caused over 90% of the time by operation of facilities by Nextel Communications, Inc. or Nextel Partners, Inc. SBT joins with the other commenting parties in seeking a greater articulation of the duties of entities operating low-site cellular architecture, often with apparent impunity to the plight of analog operators which are made to suffer in interference and system degradation.

The volume of comments received within this proceeding fully demonstrate both the importance and the complexity of the matter with which this rule making deals. Although the issue of harmful interference to public safety systems underscores and motivates many of the

comments, it is fully apparent that the issues go beyond the concerns of public safety and include the future vitality of the band for all affected operators. Future use of the 700, 800, 900, 1900 and 2100 MHz bands are treated throughout the comments, as commenters explored both resolution of the interference issue in terms of present allocation and use, while looking at long term solutions and possible methods to achieve harmonious operations by all licensed operators. Although there are differences in approach by the varying commenters, certain themes and ideas did find general commonality.

As is common in rule makings with potentially contentious parties participating, there was no shortage of self-serving statements. These should be both appreciated and weighed against the collective needs of affected licensees. The rule making process is forwarded by persons who provide valuable information about their specific needs and problems, adding necessary insight into their individual experiences. However, as is also common in many rule makings, some commenters have chosen to turn this rule making into an opportunity to increase holdings, solve individual business problems, and leverage the problems of others into advantages for themselves.

SBT, therefore, urges the Commission to focus primarily on the central issue of harmful interference to operators at 800 MHz and the agency's efforts to determine what steps are necessary to achieve both short term and long term solutions. There is no doubt that harmful interference is being experienced by public safety systems. There is shared agreement among the commenting parties that such interference is suffered by many 800 MHz licenses, including Business and Industrial users, analog commercial systems, and those entities which deem themselves part of the Critical Infrastructure of the Country. For one to say, speaking solely in

engineering terms, that levels of interference to public safety systems are more prevalent on a more devastating scale, is an unfounded statement. The forms of interference are nearly equal and the effect is too similar between non-public safety and public safety analog radio operators. However, the need to correct public safety operators' problems is deemed the first priority. Although, given this important opportunity, this should be a shared priority with one that provides necessary relief for other adversely affected licensees who also have neither invited nor should be made to suffer the consequences of harmful interference. It is a hollow victory at best to resolve to correct harmful interference if the manner of relief chosen creates undue burdens for other victims of the same interference.

The Interference

The types of interference reported in the comments are as expected. The three types of interference suffered by 800 MHz analog systems are caused by (1) intermodulation products arising out of the operation of cellularized systems, i.e. Nextel and A and B cellular systems alone or in concert; (2) sideband or out of band emissions (OOBE) which create sufficient spurious energy to block the reception of signals; and (3) desensitization of receivers via the creation of internal products within the receivers (aka overload). Each form of interference can be traced to the operation of cellularized systems operating in spectrum proximity and geographic proximity to the unit receiving the interference. The effect in each case is a reduction in receptivity of desired signals, either as a partial reduction which is noted by a buzzing noise (sometimes intermittent) being heard over the affected unit, or as the elimination of any ability to receive transmissions.

SBT believes Motorola's comments give the best description of the types of interference:¹

1. **Intermodulation ("IM")**: The type of interference caused by the mixing of two or more signals on different carrier frequencies, which causes interference on a third, separate "intermodulated" frequency. The mixing can occur in either the source transmitter or the victim receiver. Typically, this predominant form of interference occurs if an intermodulated frequency is on or near a public safety receiver's assigned frequency. This will cause the receiver to lose sensitivity as it experiences difficulty distinguishing between the desired signal and the undesired intermodulated signal. IM normally arises when one or more CMRS operators have multiple frequency transmitters located on the same site or nearby towers. As the number of CMRS frequencies transmitting from nearby locations increases, so too does the probability of IM interference to public safety and B/ILT licensees operating on nearby frequencies. Also, the wider the frequency spread across the channels at a given CMRS site, the wider the reach (spread) of the resulting intermodulation signals. Today's public safety radios have IM rejection that is typically 70 to 75 dB which, when compared on an equivalent basis, is greater than that for CMRS radios. CMRS systems are able to control intra-system mechanisms consistent with their primary business goals and therefore do not normally need such high levels of IM rejection.

¹ See, comments of Motorola, Inc. ("Motorola") at 15-16.

2. **Transmitter Sideband Noise:** As a result of the modulation process, all radio transmitters produce some energy above and/or below the intended transmission frequency. Close to the channel, this is normally called sideband noise. At separations beyond 150 percent of the channel bandwidth, this energy is normally referred to as out-of-band emissions (“OOBE”). The Commission’s rules establish out-of-band emission limits that restrict the amount of energy that a transmitter may produce on the first, second and third adjacent channels to the assigned frequency. This set of limits is referred to as the FCC “mask”. Digital systems typically produce greater sideband noise and out of band emissions than analog systems. For both analog and digital systems, this type of interference becomes predominant when no IM occurs.

3. **Receiver Overload:** The amplifier in a receiver is designed to amplify the signals in the assigned frequency to a level other components of the receiver can use. When that desired signal or other signals close to that frequency becomes too strong, they may overload the amplifier. The probability of this type of interference increases as the number of base transmitters in an area increases. Newer receiver designs limit the occurrence of this type of interference.

The analog operator’s location within the band might place its operation at greater risk of receiving one type of interference versus another. For example, an operator upon the General Category channels would be more likely to suffer from desensitization than interference from intermodulation products. The reason is the spectrum separation from cellular operations is

likely sufficient to avoid intermodulation products from those operations, but Nextel's system operates throughout the affected band and might still produce other forms of interference, including intermodulation products that interfere with the analog operator's signal.

Some of the commenting parties have focused on each type of interference for the purpose of discussion and to determine whether there exists any method of rebanding the 800 MHz band which would, standing alone, effectively eliminate the harmful interference being suffered by public safety and others. The comments are clear in the answer – no form of rebanding/relocation within the 800 MHz band, as a single answer, will result in elimination of the harmful interference.

Rebanding within 800 MHz is a false panacea and there is nothing within the comments which suggests otherwise. To the contrary, it is apparent that low site, cellularized operations are incompatible with cost efficient operation of 800 MHz analog equipment due to the unintended byproducts created by those cellularized operations. For example, there are some suggestions that analog operators might lessen the impact of cellularized operations by construction of more "robust" systems. Stated simply, the construction of additional sites which increase the signal strength to receive units would overcome some of the difficulties of reception. This is highly logical and equally highly impractical. Although interference might be lessened or eliminated by construction of fill-in sites, the cost of construction and networking the sites is prohibitive for most public safety entities and local analog operators. Accordingly, the solution creates additional, insurmountable problems. More on cost of resolution *infra*.

As stated above, the sources of the interference are known. Representatives of the cellular community have been forthcoming in admitting that intermodulation products caused by

cellular operations have and may continue to create problems for public safety entities, particularly those operating in the NPSPAC channels directly below the cellular allocations. Nextel² also admits that its systems create harmful interference to analog systems, either by production of OOB or through intermodulation products. That interference created by Nextel's system is spread over the entirety of the band, which reflects Nextel's use of the entirety of the band on all channels not reserved for public safety operations. Accordingly, Nextel's systems create harmful interference to entities operating from 851 - 869 MHz. Due to the pervasive nature of the Nextel interference, some commenters have focused on Nextel as the primary source of the problem. This is not without basis. However, to appreciate the totality of the problem, one must also consider the mobile units employed by analog operators.

Analog mobile units in service are manufactured for two purposes, communications and profit. The consumers employ the radios for the purpose of communicating throughout service areas and the manufacturers produce the radios to make a profit. This second purpose requires that the mobile units be produced in an efficient manner, with a close eye toward costs of production. Reducing production costs is the duty of the corporations that manufacture the radios. Therefore, to meet their respective duties the manufacturers have not produced interference resistant radios and have opted for lower cost alternatives, including the manufacture of wide front end radios that will allow OOB and spurious radiation from non-cochannel facilities to effect the operation of the radios. A similar economic dynamic has occurred for the

² Although strangely silent thus far in this rule making, Nextel Partners, Inc.'s operations are also a source of interference when it employs low-site architecture, e.g. those problems allegedly created in State College, Pennsylvania by Nextel Partners' system.

production and use of certain amplifiers and combiners³ which have also been linked to the problem.

There has been a temptation for some commenters to focus on the state of design of mobile radios as the primary cause of the interference. This approach has limited merit. Were the discussion regarding an analog-to-analog interference problem, the approach might have greater credence, but there is no issue regarding whether the quality of the equipment alone is to blame.⁴ In this case one is struck by the fact that state of the art analog equipment is still suffering from harmful interference caused by cellularized operations; and the cellularized operations are those of persons who knew that such operations would have an adverse effect on analog operations. The problem created was fully foreseeable and yet, cellularized operations were expanded and made more detrimental to public safety and all other analog users. Stated simply, due care and good engineering practices were severely lacking in the roll out of cellularized systems that chewed up service areas of public safety operators, one cell site at a time.

To date, analog operators have been told that Nextel's iDEN system is type accepted under the agency's rules and, therefore, Nextel has not acted in violation of the Commission's

³ Hybrid combiners have been identified repeatedly as one source of the subject interference.

⁴ As correctly pointed out in Motorola's comments, modification of analog mobile units to make them more interference resistant is not without cost, increases in size, and adverse effects on battery life. We note, however, Motorola did not fully address the issue of the passband of the receivers and what steps might be taken to reduce this the size of the passband of units, thus reducing the invitation of interference from this source. *See, also*, Motorola's comments at Footnote 24 which correctly points out that the use if iDEN technology does not create interference, rather, the manner in which it is used creates the problem, i.e. from low-sites employing relatively high powered facilities.

Rules. This myopic approach to the duties of licensed operators is erroneous. As the Commission is fully aware, one can use “legal” equipment in an illegal way. All licensees have the obligation to avoid the creation of harmful interference in accord with 47 U.S.C. §333, 47 C.F.R. §90.173 and 47 C.F.R. §90.403(e). And although the Commission’s Rules speak to cooperation among licensees, one can never be found to have cooperated when one constructs with impunity and awaits the complaints to follow naturally later. More simply stated, acting with wanton disregard for the adverse effects of operation which an operator knows will occur is a clear demonstration of a lack of cooperation, which cooperation is mandated by the Rules.

Accordingly, the facts are clear that the problem has been known both theoretically and practically for years. And despite this knowledge, Nextel and others proceeded to follow their respective business plans rather than their duty to leave undisturbed the operation of vital systems. Revenues per unit (RPU) were placed ahead of third party operators’ rights to quiet enjoyment of their licensed portion of the spectrum and money flowed in to interfering parties from the repeated installation of low site cellularized systems, without ample regard for the needs of public safety and others. In a more civilized world than one finds in the rough and tumble environment of commercial competition, those offending sites would not have been built. In telecommunications, carriers often go for the buck and ask for forgiveness (or accommodation) later.

The foregoing brings one to the Commission’s present challenge – to take into account the needs and desires of the commenting parties and balance the arguments made for the purpose of serving the public interest. As all know, it is not enough to simply point fingers of blame or to criticize past actions. The Commission has charged itself with the duty to resolve the problems

suffered and to create a more interference-free environment for the future. To those ends, many commenters have offered suggestions regarding what course is best in resolving the interference. Those comments are hereafter addressed.

Industrial Concerns

Of the ten commenting Industrial parties, all ten objected to having to relocate within the 800 MHz band.⁵ This consensus of opinion is understandable, considering that none of the commenting parties appears to be creating interference to other users of the 800 MHz band, therefore, each views itself as either a victim of or threatened by that harmful interference being suffered by some public safety operators. The overwhelming attitude of the Industrial commenting parties is that the interfering operator should take reasonable and immediate steps to resolve incidents of interference when they arise, including, if prudent, shutting down the offending facilities. FedEx, Lockheed and Boeing all cited the *Best Practices Guide* (BPG) as a starting point for such actions.⁶

Among the Industrial commenting parties, Boeing and FedEx focused on the border areas, and the complex nature of rebanding in view of existing treaties and channel allocations.⁷ Although specific rebanding proposals were not offered, Boeing asserts that any change in

⁵ See, comments of Lockheed Martin Corporation (“Lockheed Martin”); Intel Corporation (“Intel”); AVR, Inc.; Eastman Chemical Company (“Eastman”); Aeronautical Radio, Inc.; ISG-Cleveland, Inc.; The Lutrizol Corporation; Marnell Corrao Associates; Federal Express Corporation (“FedEx”); The Boeing Company (“Boeing”).

⁶ See, comments of Lockheed Martin note 12; Boeing note 43 and 44; and FedEx.

⁷ See, comments of FedEx at ¶ 3; see, also, comments of Boeing at 4-16.

channel allocation or rebanding within border regions should be accomplished only following the making of a new treaty with Canada;⁸ and such action should be taken incrementally.

Of those Industrial commenting parties making estimates of cost of relocating, Intel estimates that relocation of its facilities will cost \$4.5 million⁹ and Boeing states that its anticipated costs will equal \$50 million in equipment alone.¹⁰ Accordingly, the cost of rebanding for Industrial operators is not inconsequential nor easily justified.

SBT is quite concerned about this group of 800 MHz users, whose views appear to be given inadequate consideration in some of the proposals offered by commenting associations and related parties. Although some commenters have stated that “campus” systems might be employed as a type of authorized “guard band” operator,¹¹ standing more impervious to harmful interference from cellularized operations, there is at least some difficulties in determining whether each industrial use is, indeed, campus-like in operation. Nor should one assume that these campus systems are more insulated from harmful interference, since no technical evidence has been provided within this rule making which would support such assumption. Absent the provision of such evidence, it would appear to be overly cavalier to create regulation which relies on any such characterization of these systems.

Perhaps the noted problem arises from the commenting parties’ omission of specific safeguards for operation of these systems and the attendant need to make modifications in

⁸ See, comments of Boeing at 14.

⁹ See, comments of Intel at 2.

¹⁰ See, comments of Boeing at 6.

¹¹ See, comments of PWC.

existing Industrial systems to assure that the assumptions regarding susceptibility to IM, OOB or receiver overload are made more tangible. For example, SBT proposes that if the agency determines that a guardband might be created via licensing of a subgroup known as "campus" systems, the agency should allow those affected Industrial (and other) incumbent systems two vital considerations: (1) the ability to modify existing facilities, to add or move existing repeater equipment, to concentrate coverage in a more discrete area; and (2) a prohibition on construction of cellularized 800 MHz systems, which employ channels separated by less than 2 MHz from the campus systems' operations, within 500 yards of any protected area that is identified with specificity on the campus system licenses. These two considerations would, therefore, provide needed licensing flexibility for campus system operators, that did not design their systems with any consideration for being used as a guardband; while adding the necessary distance from their respective operations and the known threat of interference, *i.e.* a cellularized facility located in close proximity to the "campuses." Absent these two necessary actions, the use of Industrial and other "campus" facilities for the purposes suggested would needlessly create only a paper guardband, and not true protection for unfettered, undisturbed operations for these affected licensees.

Finally, if these operators are to stand as the incumbents in a newly created guardband, this status should not result in secondary treatment as among all other licensees. All incidents of interference to campus systems should be dealt with employing the same vigor as any other victimized operator. It is one thing to be situated within the DMZ of harmful interference, and quite another to be abandoned by all, following such a spectrum sacrifice. Although the commenting parties have suggested greater use of the BPG, the tenor of the comments is more

pointed than a mere reference to that rather flaccid document that speaks in generalities, rather than in specific solutions and procedures. Accordingly, SBT opines that this group of commenting parties would welcome a stronger statement from the Commission that gives far more tangible protection to incumbent, non-interfering parties, than the present state of the BPG.

Critical Infrastructure Industries

The Commission received a large volume of comments from entities which claim special treatment due their proposed status as providers/members of critical infrastructure industries (CII).¹² These include petroleum producers, utilities, public transportation systems, railroads, and other related operations. In the first instance, SBT must question the use of the CII designation for the purported purpose of providing the commenting parties' recommended special consideration, *i.e.* treatment as though each CII licensee was a public safety entity.¹³

SBT does not make such a distinction when viewing harmful interference. When harmful interference arises or becomes endemic, the issue is electrical, not operational. The victim, regardless of licensee status, should be protected and the interfering party should take those

¹² See, comments of Jones Onslow Electric Membership Corporation ("Jones Onslow"); United Telecom Counsel ("UTC"); Florida Power and Light Company ("FPL"); Washington Electric Membership Corporation ("Washington EMC"); Southeastern Electric Cooperative, Inc. ("Southeastern Electric"); Renville-Sibley Cooperative Power Association ("Renville-Sibley"); Delmarva Power and Light Company and Atlantic City Electric Company; Entergy Corporation and Entergy Services, Inc. (Collectively "Entergy"); National Rural Electric Cooperative Association ("NRECA"); Duke Energy Corporation ("Duke"); Sid Richardson Energy Services Co. ("Sid Richardson"); East River Electric Power Cooperative, Inc. ("East River"); Pinnacle West Capital Corporation ("Pinnacle"); Excelsior Corporation ("Excelsior"); SCANA Corporation ("SCANA").

¹³ Unlike the comments received by public safety entities, none of the CII commenting parties supported Nextel's proposals.

actions required under the Commission's Rules to correct immediately the problem. That the victim is a purported CII may be material for the purpose of setting priority of action, *e.g.* public safety operators given first priority in remedial action, with CII operators perhaps second, and industrial operators third, etc.; but the overall treatment of victims of harmful interference is a matter of grave concern to all operators and corrective action should not be offered only to those who claim some greater status.

SBT opposes any special treatment for this self-classified group. This is not to suggest that SBT does not recognize the benefit to the public in protecting the operations of CII entities. Nor does SBT aver that CII entities be abandoned, victimized, or made to pay for any required remedial actions the Commission might be contemplating. To the contrary, SBT avers that CII entities, like all victims and potential victims of the subject harmful interference, receive equal consideration in this rule making. The issue before the agency is one of harmonious operation of 800 MHz radio systems, without regard to self proclaimed special status.

The above considered, SBT supports CII commenters that seek an equitable, workable solution to the subject problem, viewing themselves not only as a self-serving licensee with an important task to keep operating their respective systems and the agencies those systems serve, but members of a greater community of analog operators which has been confronted with the possibility of unwanted interference, cost, rebanding, disruption, and all other attendant woes to future operation in an increasingly hostile radio environment.

Transportation Entities

All seven commenting Transportation parties joined in citing the need for interfering operators to bear the primary burden of resolving harmful interference.¹⁴ In a united voice, each of the commenting parties pointed to the logical and equitable source of remedial action, the parties which are both causing the harmful interference and concurrently reaping economic rewards from use of low-site, cellularized operations.

Given the heavy use of radio to coordinate the activities of often complex transportation operations, it is not surprising that reporting commenters gave high estimates for the cost of relocation within the 800 MHz band. NYCT estimated its costs at \$3-5 million,¹⁵ BART's estimate was \$3.25 million,¹⁶ DART estimated greater than \$30 million in unwanted costs,¹⁷ and Harris County estimated that it would bear \$40 million in new costs.¹⁸ Given the private/public nature of these systems, it is quite doubtful that such amounts could be raised without placing an enormous burden on local budgets that are already strained – a financing alternative rejected by all the commenting parties.

¹⁴ *See*, comments of Dallas Area Rapid Transit (“DART”); San Francisco Bay Area Rapid Transit (“BART”); Association of American Railroads (“AAR”); American Public Transportation Association (“APTA”); New Jersey Transit Authority (“NJ Transit”); The Metropolitan Transit Authority of Harris County, Texas (“Harris County”); The New York City Transit Authority (“NYCT”); and Madison County East Transit District (“Madison County”).

¹⁵ *See*, comments of NYCT at 9.

¹⁶ *See*, comments of BART at 2.

¹⁷ *See*, comments of DART at 1.

¹⁸ *See*, comments of Harris County at 3.

Again, SBT notes that the commenting parties have supported two constant themes in this rule making: (1) that operators which have not caused the subject interference and will not likely create interference in the future, be insulated or compensated from the cost of rebanding; and (2) that interfering CMRS operators be made to take immediate and tangible actions to relieve any interference arising out of their operations. SBT strongly doubts that reference to the BPG alone will provide that necessary protection and action which is required for operators' quiet enjoyment of the spectrum. Something more is necessary to protect the continuing operations of these commenting parties' systems.

Madison County suggests an initial approach of moving public safety use to the 700 MHz band, to provide necessary channel flexibility for any reasonable rebanding approach the agency might determine.¹⁹ In this manner, the Commission can protect the continued use of public safety radio, combine future operations within a single, contiguous swath of spectrum, and insulate the most sensitive operations from further political/safety considerations which have arisen due to increasing incidents of harmful interference. SBT supports this approach as a second step in a comprehensive plan to resolve the subject difficulties, taken in conjunction with the creation of more specific and comprehensive rules regarding case-by-case correction of harmful interference by cellularized CMRS operators, to be properly imposed on interfering parties.

¹⁹ See, comments of Madison County at 9.

Utilities

One of the largest groups of commenting parties, the utility operators were quite vocal in their objection to the Nextel proposals; rejecting any plan which would unnecessarily burden non-interfering operations by forced relocation, particularly to non-800 MHz spectrum; rejecting any notion that non-interfering parties be forced to suffer the cost of relocation; and supporting the creation of comprehensive rules that would direct interfering operators to take immediate and tangible steps to resolve interference complaints.²⁰

In support of their joint concerns regarding the cost of rebanding, commenting utility operators were forthcoming with estimates of costs for participating in any rebanding solution which would require a rechannelization of incumbent systems. Whereas Jones Onslow stated that its costs would only be \$15,000²¹ and White County REMC says it will cost \$61,400,²² East

²⁰ See, comments of Consumers Energy Company (“Consumers”); City of Baltimore Maryland; Bergen County Police Department; The State of Florida (“Florida”); Utah Communications Agency Network (“UCAN”); Northern Electric Cooperative, Inc.; H-D Electric Cooperative, Inc.; FEM Electric Association, Inc. (“FEM”); Codington-Clark Electric Cooperative, Inc. (“Codington-Clark”); Kankakee Valley Rural Electric Membership Corporation (“KVREMC”); Omaha Public Power District (“OPPD”) and Metropolitan Utilities District of Omaha (“MUD”); Cinergy Corporation (“Cinergy”); White County Rural Electric Membership Corporation (“White County REMC”); Holy Cross Electric Association, Inc. (“Holy Cross”); Jones Onslow; Southwest Louisiana Electric Membership Corporation (“SLEMCO”); American Electric Power Company, Inc. (“AEP”); Carolina Power and Light Company and TXU Business Services (collectively, “Carolina Power”); Washington EMC; Xcel Energy Services (“Xcel”).

²¹ See, comments of Jones Onslow at 6.

²² See, comments of White County REMC at 2.

River estimates its costs at \$3.6 million²³. Holy Cross estimates \$1.564 million,²⁴ KVREMC estimates \$350,000,²⁵ and Washington EMC came in at \$230,496.²⁶ But Consumers estimates its costs to be \$55 million,²⁷ Xcel estimates \$20 million,²⁸ Carolina Power estimates \$40 million,²⁹ NRECA is at \$20 million,³⁰ SCANA estimates \$61 million,³¹ Entergy estimates \$100 million in new costs³², AEP adds its estimate at more than \$60 million,³³ and Cinergy states that it estimates new costs of \$35 million.³⁴ Taken together, the estimates cited equal approximately \$400 million in costs to utility companies alone.

To be fair and to approach these estimates with some healthy scepticism, SBT states that some of these estimates might tend toward hyperbole to support a particular commenting party's position. So, in an effort to give a nod in the direction of conservative cost estimates, the

²³ *See*, comments of East River at 2.

²⁴ *See*, comments of Holy Cross at 4.

²⁵ *See*, comments of KVREMC at 3.

²⁶ *See*, comments of Washington EMC at 3.

²⁷ *See*, comments of Consumers at 20.

²⁸ *See*, comments of Xcel at 5.

²⁹ *See*, comments of Carolina Power at 16.

³⁰ *See*, comments of NRECA.

³¹ *See*, comments of SCANA at 22.

³² *See*, comments of Entergy at 31.

³³ *See*, comments of AEP at 10.

³⁴ *See*, comments of Cinergy at 35.

Commission may wish to “discount” these estimates by a factor that represents the cost of retuning, rather than wholesale replacement of equipment (which it appears has been done already by some of the commenting parties). But retuning is not without significant costs in material, labor, downtime, lost productivity, administrative costs, some new equipment, engineering, attorney’s fees, and many other costs which can still mount up to substantial outlays. Therefore, as a conservative gesture, we discount the above estimates by half, to a mere \$200 million. However, we further note that the above estimates do not include all utility companies which might be subjected to increased costs due to any relocation plan, *e.g.* Duke did not provide an estimate of its costs. Therefore, to be fair on the other side of the equation, it appears that the total cost of relocation of utility entities’ systems via rebanding might run in the \$350-500 million range. If the Commission correctly decides that these entities’ operations are entitled to a seamless transition, requiring that a duplicate system be installed for the purpose of facilitating any relocation, then SBT’s estimates of utility entities’ costs would increase to \$450-600 million.

This enormous price tag would be levied against an industry which has suffered great downturn in the financial markets due to the machinations of Enron Corporation and other difficulties, which are relevant to this rule making only as an appropriate consideration of licensees’ abilities to finance any relocation plan. Further, it should not escape the Commission’s notice that if the proffered \$500 million was forthcoming from Nextel, it would only barely be useful for financing this important market segment’s participation in any radical rebanding solution. Since SBT does not believe that any ruling by the agency would provide a “first bite” status for utility companies in any fund created for the purpose of rebanding, this comment is more illustrative than instructive. However, it does point up the fact that the cost of

rebanding is neither without enormous implication nor is it immaterial to the agency's actions. It further points out that Nextel's proposed *quid pro quo* (\$500 million in exchange for 10 MHz of spectrum above 1 GHz) is short several million quid.

Is it any wonder, then, that utility companies look moreover to solutions which place the burden on interfering CMRS operators, rather than on non-interfering utility systems? Like all similarly situated analog operators (or non-interfering digital operators³⁵), the utility companies have united in praying the Commission not engage in radical rebanding of the 800 MHz band, and certainly not endorse any plan which would require relocation out of the band or secondary status within the band. Some of the commenting utility operators speak to a "market based" approach, although the exact meaning of this phrase is in some doubt. SBT contends that these commenting parties seek case-by-case resolution of interference, with as little rebanding (if any) that might be necessary to resolve individual incidents of interference, with the cost of any specific relocation effort being borne entirely by the interfering party.

Again, the Commission discovers the thread of consensus within these comments, that (1) the agency should encourage via this rule making a more responsible approach for interfering CMRS operators, to take immediate action to resolve quickly and appropriately each incident of harmful interference arising from cellularized operation; and that (2) non-interfering entities should not be held liable via imposition of relocation or retuning costs to solve a problem not of their making and which they are not positioned to resolve by any means other than costly and undeserved and forced participation in any rebanding proposal.

³⁵ E.g. ARINC and Souther LINC

SBT also notes that CII entities' operations, like the utility companies, do emphasize the need for any relocation to be a seamless transition. A retune job will not suffice. CII entities, like all affected operators, but perhaps even more so, require continuous use of their systems to provide necessary services. Any cavalier action which does not fully recognize this need for vital communications services to be offered to entire fleets during any relocation, is not responsive to the needs of affected operators. Accordingly, SBT seeks, at a minimum, those relocation protections provided by the Commission in its decisions underlying the earlier relocation of 800 MHz incumbent licensees who were made to move to accommodate Nextel's previous business strategy.

Public Safety

It is apparent by the Commission's NPRM that this category of user is of greatest concern to the agency and the agency's concern is fully understandable. The need to promote and defend efficient, dependable public safety use of the radio spectrum is paramount, and the added desire to promote interoperability among cooperative emergency agencies is laudable. Insofar as this rule making will promote such goals, SBT fully supports the agency's efforts to determine what actions might assist in this effort and to make those decisions which will best support the existing and future operations of local governments, police departments, fire departments and those public servants that protect the safety of life and property.

As a secondary effort, properly prioritized far below the immediate concerns of interference-free operations, is the idea of employing this rule making for the purpose of increasing public safety's use of the radio spectrum. In fact, SBT avers that this element is of so