



Public Safety Wireless Network

Saving Lives and Property Through *Improved Interoperability*

February 25, 2003

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FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

Ms. Marlene H. Dortch
Secretary
Federal Communications Commission
44.5 Twelfth Street, SW
12th St. Lobby, TW-A325
Washington, DC 20554

Re: Reply Comment of the Public Safety Wireless Network, In the Matter of Improving Public Safety Communications in the 800 MHz Band, Consolidating the 900 MHz Industrial/Land Transportation Business Pools, in response to Supplemental Comments of the Consensus Parties, WT Docket No. 02-55

Dear Ms. Dortch:

On behalf of the Public Safety Wireless Network (PSWN) Program and pursuant to Section 1.51 of the Commission's Rules, 47 C.F.R. § 1.51 (2002), enclosed herewith for filing are an original and four (4) copies of the PSWN Program's Comments in the above-referenced proceeding.

Kindly date-stamp and return the additional, marked copy of this cover letter and filing.

Should you require any additional information, please contact the undersigned,

Respectfully submitted,

Steven Proctor
Executive Director
Utah Communications Agency Network
Executive Vice-Chair,
PSWN Executive Committee

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Before the
Federal Communications Commission
Washington, DC 20554

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

FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

WT Docket No. 02-55

February 25, 2003

REPLY COMMENTS OF THE
PUBLIC SAFETY WIRELESS NETWORK PROGRAM

**Before the
Federal Communications Commission
Washington, DC 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)	
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To: The Commission

**REPLY COMMENTS OF THE
PUBLIC SAFETY WIRELESS NETWORK PROGRAM**

I. The Public Safety Wireless Network (PSWN) Program¹ respectfully submits the Following Reply Comments in response to comments addressed to the above-referenced docket.² Specifically, these Reply Comments discuss provisions of the proposed Consensus Plan to reorganize the 800 megahertz (MHz) band to reduce interference to public safety communication, and to provide additional spectrum to support these indispensable services. Because this rulemaking could result in decisions of critical importance to the public safety community, the PSWN Program urges that the Commission proceed cautiously and deliberately in balancing the interests of all incumbent licensees. The Commission must ensure that any plan that is selected will be completed in a well organized manner that causes minimal disruption to

¹ The PSWN Program is a federally funded initiative operating on behalf of all local, state, federal, and tribal public safety agencies. The Department of Justice and the Department of the Treasury are jointly leading the PSWN Program's efforts to plan and foster interoperability among public safety wireless networks.

² See Public Notice DA 03-14, Wireless Telecommunications Bureau Seeks Comment on "Supplemental Comments of the Consensus Parties" Filed in the 800 MHz Public Safety Interference Proceeding-WT Docket No. 02-55, January 3, 2003.

existing services, and that all relocation costs incurred by all public safety entities are fully reimbursed.

I. BACKGROUND

2. The PSWN Program has been actively following the several proposals that have been offered by different parties to reorganize the 800 MHz band to address interference issues and to provide additional spectrum to support the needs of public safety agencies. The Commission must make certain that once the process has begun, rebanding is fully executed. In addition, any plan selected must have cost estimates and migration schedules verified to ensure accuracy and feasibility of implementation. The PSWN Program is optimistic that these objectives can all be accomplished by adoption of an objective, well-timed, and well-funded initiative that promotes sufficient protection from interference and improves reliability of public safety communications.

11. DISCUSSION

3. The proposed reorganization of the 800 MHz band has now been under consideration for more than a year. After the proffer of more than 500 documents in this proceeding, licensees remain polarized in their views of how best to accomplish the Commission's stated goal of "Improving Public Safety Communications in the 800 MHz Band." The PSWN Program acknowledges that developing the right solution for this dilemma will necessarily entail considerable time and research to provide a plan that all parties will accept and endorse. The needs of the public safety user community are straightforward —

- * The Commission must resolve harmful interference to the extent technologically possible.

³ To date, 568 comments, reply comments, notices, and other documents have been filed in this docket. *See* Improving Public Safety Communications in the 800 MHz Band [and] Consolidating the 900 MHz Industrial/Land Transportation and Business Pool Channels, WT Docket No. 02-55 (800 MHz Band Reorganization Proposal).

- All relocation costs incurred by public safety entities must be fully funded from identified and confirmed sources.
- The reorganization contemplated in the chosen plan must take place nationwide and uniformly to be successful.
- Public safety and critical infrastructure protection personnel can experience no loss of services during implementation of the plan.
- Idle spectrum or channels vacated by incumbents to effect the relocation plan should be reserved for public safety access whenever possible to help support immediate needs, especially in jurisdictions where spectrum overcrowding is rampant.
- Rules must be reviewed to ensure protection from interference will meet user expectations, and that enforcement will be expedient and objective.

4. The PSWN Program agrees that steps must be taken to alleviate the present conditions experienced by public safety communications personnel in the 800 MHz band. To implement the kind of sweeping change under consideration in this docket will require the cooperation and support of the many user communities that operate 800 MHz band communications systems. The PSWN Program asks that the Commission carefully weigh the comments received by all participants in this docket to ensure that the needs and concerns of these diverse interests are addressed. As much as possible, the plan that is adopted should provide better quality and reliability for all wireless users in this band.

III. RECOMMENDATIONS

5. The original objective of this rulemaking was to resolve and prevent any further interference to public safety communications in the 800 MHz band. The PSWN Program has noted since its first comment on this docket that interference was a serious problem and that the accepted resolution must guarantee the elimination of this harmful interference.⁴ To believe that one plan will guarantee a 100 percent nationwide solution would be naive, and several parties

⁴ See PSWN Program Comments to the First Notice of Proposed Rulemaking (NPRM), In the Matter of Improving Public Safety Communications in the 800 MHz Band [and] Consolidating the 900 MHz Industrial/Land Transportation and Business Pool Channels, WT Docket No. 02-55, May 3, 2002, at p. 6.

have voiced their concerns regarding how their interests would be affected under the proposed Consensus Plan. In order for the reorganization of the 800 MHz band to succeed, the solution must guarantee that the time and funds expended to resolve interference will be used to provide a definitive and effective remedy to the interference currently being experienced.

A. Rights and Obligations of 800 MHz Band Licensees Must Be Clarified and Enforced

6. One commenter notes that through a prior Commission waiver, Nextel's predecessor, whose operations would become the primary cause of commercial mobile radio service (CMRS)—Public Safety interference in the 800 MHz band, was allowed to operate in a band not designed for cellular use.⁵ Part of the terms of that waiver included the understanding that no harmful interference would be caused to public safety communications. To prevent further conflicts from arising in the future, the PSWN Program again requests that the Commission articulate clear rules to govern users rights and responsibilities.

7. Sufficient resources must also be devoted to enforcement and protection of public safety communications from sources of interference. Parties contributing to the interference problem must be held accountable, and the Commission's actions in response should be swift and decisive. No price can represent the value of the lives unnecessarily put at risk when public safety officers' communications are compromised by interference. If it is determined that, as now, CMRS providers cause interference while in compliance with the Commission's Rules, the rules must be reevaluated and revised until a solution that establishes appropriate power levels and other protection from interference is determined. Any standard that is developed that permits operation to occur and does not deter interference, even though the licensee is in compliance with the Commission's Rules, is pointless, and completely without merit.

⁵ See the Comments of ALLTEL Communications, Inc., AT&T Wireless Services, Inc., Cingular Wireless LLC, Sprint Corporation, Southern LINC, and United States Cellular Corporation, In the Matter of Improving Public Safety Communications in the 800 MHz Band [and] Consolidating the 900 MHz Industrial/Land Transportation and Business Pool Channels, WT Docket No. 02-55, February 10, 2003 (*Comments of ALLTEL et al.*), at p. 6.

B. Complementary Procedures Should Be Adopted to Ensure Success of the Reorganization Plan

8. In addition to the reorganization of the 800 MHz band, other measures should be taken to resolve the interference problem. First, prior coordination between CMRS providers and public safety operators would help to further ensure that the optimal realignment arrangement could be implemented in each case.⁶ Although the spectral proximity of channels is quite possibly the greatest factor in interference as demonstrated by the proposed band realignment, other factors could increase the potential for interference such as system architecture, tower locations, and geographic impediments. By tailoring band realignments through coordination, the entities involved can be assured that the best solution was implemented and further mitigation will not be necessary.

9. Second, solutions should focus on the best practices developed to mitigate and resolve interference in the band.⁷ The Best Practices Guide,⁸ created by the partnership of Nextel and the public safety community, focuses on the need to customize solutions for each case of interference. The Commission should codify best practices and other engineering and procedural recommendations that will complement the migration of high-power, high-site architectures and low-power, low-site systems into separate blocks. Individual solutions engineered for particular situations have been shown to be effective, and the PSWN Program suggests that the resolution for the interference in the 800 MHz band must consider tailored solutions that take into account the entire radio landscape in that area.

⁶ See the Comments of the Public Safety Improvement Coalition, In the Matter of Improving Public Safety Communications in the 800 MHz Band [and] Consolidating the 900 MHz Industrial/Land Transportation and Business Pool Channels, WT Docket No. 02-55, February 10, 2003 (*PSIC Comments*), at p. 11.

⁷ See Comments of ALLTEL et. al., at pp. 16, 18.

⁸ See *Avoiding Interference Between Public Safety Wireless Communications Systems and Commercial Wireless Communications Systems at 800 MHz—A Best Practices Guide (Best Practices Guide)*, December 2000.

C. Guaranteed Funding Must Be Adequate to Complete the 800 MHz Band Reorganization

10. Adequate funding is needed to effect realignment of the 800 MHz band. For realignment to be successfully executed, funding must be guaranteed for all stages of the proposed realignment. As part of the Supplemental Comments, Ncxtel increased its funding commitment from \$500 million for public safety to \$700 million for public safety, and added \$150 million for other relocated incumbents. Although Nextel has researched the cost of the nationwide migration, there is concern that “a ‘cap’ on the funding may result in an incomplete realignment.”⁹ A maximum limit on the amount of guaranteed funding creates a precarious situation in which several National Public Safety Planning Advisory Committee (NPSPAC) regions might never receive the funding to realign. At this point, nationwide interoperability no longer exists in the 800 MHz band,¹⁰ and mutual aid across boundaries and regions may not be possible in daily emergencies or even during a terrorist incident. The Public Safety Improvement Coalition notes that a set funding limit on the realignment process “does not meet the goal of eliminating or mitigating public safety interference,” but merely limits Nextel’s liability.¹¹ If Nextel’s proposed funding is the maximum amount that can be anticipated, the Commission must verify other sources of funding or put a mechanism in place that can fully fund any expenses incurred that surpass the \$850 million cap.

D. The Reorganization Should Be Implemented at No Cost to Public Safety Users

11. One of the PSWN Program’s primary concerns since the initiation of this proceeding has been that public safety should not and could not pay for any of the costs associated with this realignment. That said, Motorola makes an important point that manufacturers will be required, in some cases *of* rebanding, to develop new software to support the NPSPAC channel relocation.

⁹ See Comments of the State of Florida. In the Matter of Improving Public Safety Communications in the 800 MHz Band [and] Consolidating the 900 MHz Industrial/Land Transportation and Business Pool Channels, WT Docket No. 02-55, February 10, 2003. (*Florida Comments*), at p. 1

¹⁰ See PSIC Comments, at p. 2.

¹¹ *Id.*

“Rebanding involves not only simple retuning, but in some cases actual development and reprogramming of a radio’s firmware (i.e., the operating system).”¹² In addition to the manufacturer costs, the Consensus Plan and Supplementary Comments of the Consensus Parties do not seem to consider necessary consulting and engineering fees associated with any large change to a radio system. **All of these** costs may weigh heavily on the **limited** budgets of public safety agencies and should also be underwritten so that no public safety agency spends any money in resolving the CMRS interference problem.

E. The Commission Must Verify the Estimated Costs Are Accurate

12. The PSWN Program also reiterates our previous request for an independent assessment of all the costs to move all public safety communications operations during this proposed realignment. **It is** crucial in **order** to gain the level of acceptance needed for this proposal. **If** the public safety community cannot verify that this plan will do what it says, i.e., “[f]or locations where public safety users are currently experiencing combined **Nextel/** cellular A-band **IM** interference in NPSPAC channels, relocating these channels as provided in the Consensus Plan would reduce **the** probability of post-realignment **IM** interference to the new-NPSPAC band by as much as 94%, depending upon the channels being used,”¹³ it would be imprudent to agree to implementing a plan that does not resolve these issues. For example, “if the money runs out for any reason, including the likely need to replace more than 1% of the public safety receivers, the public safety relocation will simply stop.”¹⁴ **As** noted, if the estimate of the replacement rate of public safety radios is off by just 1 percent, many regions would not receive funding for relocation, again preventing interoperable and interference-free operations in the 800 MHz band. The PSWN Program is also concerned about the second entity created by **Nextel** to assist the

¹² See Comments of Motorola, Inc., In the Matter of Improving Public Safety Communications in the 800 MHz Band [and] Consolidating the 900 MHz Industrial/Land Transportation and Business Pool Channels, WT Docket No. 02-55, February 10, 2003 (*Motorola Comments*), at p. 22.

¹³ See Comments of Nextel Communications, Inc., In the Matter of Improving Public Safety Communications in the 800 MHz Band [and] Consolidating the 900 MHz Industrial/Land Transportation and Business Pool Channels, WT Docket No. 02-55, September 23, 2002, at p. 22.

¹⁴ See Comments of ALLTEL et al., at p. ii.

funding mechanism for the realignment process. The creation of a second entity in this manner absolves Nextel of its liability and allows little recourse or enforcement if Nextel violates its agreement.¹⁵ The PSWN Program recommends that all parties that endorse a solution to the interference problem, or that have caused or contributed to public safety interference, should be held accountable by funding the realignment plan to its completion, no matter what the final cost.

F. Implementation of the Reorganization Plan Must Occur Without Any Loss of Public Safety Communications Services

13. The third area of focus for the PSWN Program is the actual implementation of the 800 MHz band reorganization. Because public safety services require communications 24 hours a day, 7 days a week, it is crucial that no loss of service is experienced during this implementation. Although the Supplemental Comments to the Consensus Plan state that many operators can be realigned without loss of communications or any need to **construct** a parallel system,¹⁶ “the Plan does not explain how Public Safety systems will be transitioned seamlessly without system interruption or degradation.”¹⁷ These questions must be addressed before any plan is adopted and in sufficient detail to confirm the continuous and reliable quality of public safety communications and the critical infrastructure protection that is also necessary to satisfy safety and security concerns.

G. Standards Must Also Be Drawn That Will Support Compliance

14. Part of the implementation process described in the Supplemental Comments to the Consensus Plan includes new receiver thresholds for the upper portion (851–859 MHz) of the newly proposed public safety band. The new thresholds would be required in a system to obtain

¹⁵ *Id.*, at p. 13.

¹⁶ See the Supplemental Comments of the Consensus Parties, In the Matter of Improving Public Safety Communications in the 800 MHz Band [and] Consolidating the 900 MHz Industrial/Land Transportation and Business Pool Channels, WT Docket No. 02-55, January 3, 2003, at Appendix A.

¹⁷ See Comments of the City of Baltimore, Maryland, Improving Public Safety Communications in the 800 MHz Band [and] Consolidating the 900 MHz Industrial/Land Transportation and Business Pool Channels, WT Docket No. 02-55, February 10, 2003, at p. 5.

interference protection. Today, many 800 MHz band public safety systems do not meet these requirements, and to comply with the proposed plan and receive interference protection, public safety users may be required to construct additional infrastructure and replace equipment at great cost.¹⁸ The public safety community cannot afford, and should not be required to pay, these additional costs in order to be protected from interference. The PSWN Program reiterates that all necessary public safety costs, including those incurred in building facilities or taking any additional measures needed to increase signal strength or any other requirements adopted by the Commission, must also be compensated. Public safety users should remain protected so long as they continue to operate within their licensing parameters.

15. The PSWN Program supports the use of receiver standards to help mitigate the interference issues in the 800 MHz band; however, receiver standards alone cannot ensure interference-free operations. Motorola notes, “Regardless of receiver design, there will always be a point at which interference will occur if the ratio of desired-to-undesired signal strength is low enough. The only effective way to reasonably ensure interference-free operation is to define the overall environment and to allow manufacturers to design equipment **accordingly.**”¹⁹

H. The Commission Must Continue to Participate in the Oversight Process

16. Finally, the PSWN Program is concerned about the oversight of the proposed Relocation Coordination Committee (RCC). As the Public Safety Improvement Coalition points out, “this is a process in a few private hands, most likely APCO, ITA, and **Nextel**. It needs a level of public scrutiny and phased approval by the FCC if it is to gain ultimate trust and acceptance.”²⁰ The PSWN Program agrees that because public safety is a key stakeholder in this matter, its interests should not be represented entirely by private entities. The Commission must take steps to ensure public safety interests are protected in an objective process that provides adequate supervision

¹⁸ See Motorola Comments, at p. 11.

¹⁹ *Id.*, at p. 17.

²⁰ See PSIC Comments, at p. 9.

and recourse for all affected parties. The Commission should not delegate its authority to another entity that is not answerable to the Commission and the public.

IV. CONCLUSION

17. The PSWN Program is grateful for the opportunity to voice its concerns for implementation of a reorganization plan that will have far-reaching repercussions on the manner in which public safety agencies conduct communications operations. The PSWN Program also acknowledges the many parties that have contributed observations and recommendations addressing the issues being considered in this rulemaking proceeding. The PSWN Program remains convinced that additional time should be spent to ensure that the proposed relocation can be executed for the amount budgeted by the Consensus Parties. All necessary relocation costs incurred by public safety entities must be provided, including replacement of necessary equipment if retuning is not successful, strengthening of signals transmitted from public safety antennas, or construction of additional antennas if required by the plan, in order for a band reorganization proposal to be acceptable. The PSWN Program is hopeful that these criteria can be met and a plan that satisfies all 800 MHz band users' requirements is adopted.

Respectfully submitted,



Steven Proctor
Executive Director
Utah Communications Agency Network
Executive Vice-Chair,
PSWN Executive Committee

**Before the
Federal Communications Commission
Washington, DC 20554**

Certificate of Service

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)	

I, Richard N. Allen, Senior Associate, Booz Allen Hamilton, 8283 Greensboro Drive, McLean, Virginia, 22102-3838, hereby certify that on this date I caused to be served, by first-class mail, postage prepaid (or by hand where noted) copies of the Public Safety Wireless Network Program's Reply Comments, *In the Matter of Improving Public Safety Communications in the 800 MHz **Band** [and] Consolidating the 900 MHz Industrial/Land Transportation and Business Pool Channels*, WT Docket No. 02-55, the original of which is filed herewith and upon the parties identified on the attached service list.

DATED at Fair **Oaks**, Virginia this 25th day of February 2003.

Richard N Allen

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