

FREQUENTLY ASKED QUESTIONS ABOUT THE 800 MHz CONSENSUS PLAN

Defining the Problem

How pervasive is the 800 MHz interference problem? There have been documented interference cases throughout the country, but those reported instances are just the “tip of the iceberg.” The fundamental nature of frequency assignments and use in the 800 MHz band is such that nearly every licensee in the band is potentially subject to interference. Many interference problems in the field go unreported. Worse, interference is often undetected as it can result in a radio communication never being received (how do you know if you miss a call?). Interference is also dynamic, as its location and the impacted frequency can change constantly with changes in both commercial and public safety frequency use. Thus detecting the problem is extremely difficult.

Why should agencies that do not have interference problems support the Consensus Plan? As noted above, most agencies are subject to potential interference, and interference often goes unreported. Thus, most agencies with no reported interference problems probably have areas in which interference can or does occur. Moreover, the interference problem is getting worse, as use of Nextel and other cellular systems grow. The added channel traffic, and proliferation of cell sites, greatly increase the future potential for interference. Agencies that may not have interference today are likely to have it in the future.

Defining the solution.

Why is re-banding necessary to deal with the interference problem? Interference needs to be addressed in a pro-active fashion to prevent it from occurring in the first place. The interference in the 800 MHz band is a function of the interleaving of public safety and cellular-type operations within the same portions of the band. The only way to prevent such interference is to separate those diverse systems through the re-banding process. That will prevent most of the intermodulation problems in the band, and eliminate the out-of-band emissions problems.

Nextel has fixed interference in some situations, why aren't similar case-by-case solutions sufficient to address the problem nationwide? These approaches are inherently re-active, leaving open the potential for interference to occur in a life-threatening situation. Knowing how to fix the problem afterwards is insufficient. The case-by-case approach also requires the on-going devotion of substantial public safety staff resources to monitor for problems, search out and identify problems, and work through the variety of potential technical corrections. The dynamic nature of cellular-type systems is such that fixing a problem at one site will merely create a new problem at another site. Finally, the “technical toolbox” for fixing interference is often inadequate, as some problems simply cannot be eliminated absent frequency changes such as proposed in the Consensus Plan.

Will the future equipment improvements proposed by Motorola solve the problem? Only a small number of existing radios can be upgraded to include these improvements. Thus, complete deployment must await replacement of all existing 800 MHz radios. Even then, some systems would not see the benefits of the improvements without other system upgrades (e.g., adding transmitter sites). Finally, the Motorola improvements only address interference created by intermodulation, not interference from out-of-band emissions, a major source of 800 MHz band interference.

Do all 800 MHz public safety licensees need to shift frequencies under the Consensus Plan? No. Licensees in the 70 Public Safety Pool channels in the interleaved portion of the band (809.75/854.75-816/861 MHz) can stay on existing channel assignments. Those at the high end of those channels (814-816/859-861 MHz) will have the option of shifting to slightly lower frequencies to provide additional interference protection. Public safety licensees in the “General Category” channels below 809/854 MHz will need to shift frequencies, as will licensees of NPSPAC (821-854/866-869 MHz) channels.

Will licensees get equivalent replacement channels in the re-banding process? Yes. The Consensus Plan recommends adoption of FCC rules similar to those that have governed prior mandatory frequency shifts, which require that replacement channels be equivalent in all respects (including separation from co-channel and adjacent-channel licensees.) Furthermore, the NPSPAC channels will be shifted as a block, maintaining the same relative assignments for each region.

Will public safety licensees need to buy new radios under the Consensus Plan? No, except in rare instances. All of the radios used on public safety channels below 816/861 MHz can be re-tuned to new channels, and do not have to be replaced. The vast majority of radios used in the NPSPAC channels can also be re-tuned. However, certain older model radios used on NPSPAC channels will need to be replaced due to software reprogramming problems. Nextel estimates that these radios represent 1% of those in use, while Motorola estimate is 30%. In either event, the cost of those radios are to be covered by Nextel under the Consensus Plan (see below).

Will interference still occur after re-banding? If so, how will that be fixed? Re-banding will eliminate nearly all interference. For those rare instances where interference may still occur, Appendix F of the Consensus Plan recommends new rules that would require Nextel (or other cellular provider causing interference) to take all necessary steps to fix the interference. Re-banding will also make it easier for Nextel to address those lingering interference problems, as it will have greater flexibility to select which channels are used at which site. In the long-run, re-banding will also allow equipment manufacturers to develop radios for public safety that have a much narrower range and are far less susceptible to interference.

What is wrong with the “Balanced Approach”? The Balanced Approach, which Nextel’s competitors, utilities, and some others support, is largely reactive to interference. It proposes tools for trying to fix the problem after it occurs, not a comprehensive plan to prevent interference from occurring. As discussed above, that is extremely difficult and does little to prevent interference in the first instance, which could be a life-threatening situation. Many of the proposed “fixes” have been proven inadequate and some could actually increase the potential for interference. Most importantly, the Balanced Approach does not include a mechanism to pay the substantial ongoing cost of correcting interference problems.

Funding and Implementation Issues:

Who pays for the re-tuning and (where necessary) replacement of radios to implement the Plan? Nextel has committed itself to paying up to \$850 million to pay the entire cost of the re-tuning.

What happens if Nextel is unable to fund the \$850 million that it has committed? Nextel recently announced that it would secure the entire \$850 million through a combination of an escrow account and a irrevocable letter of credit from a major financial institution.

Why does the Consensus Plan include a cap of \$850 million that Nextel must pay? The Consensus Plan was developed by public safety and private wireless organizations, as well as Nextel, which is a signatory to the Plan. Nextel has stated that, as a publicly traded company, it cannot agree voluntarily to an open-ended financial commitment. However, many observers believe that the FCC will require either a much larger financial commitment, or an unlimited commitment to pay the cost of re-banding.

Will \$850 million be enough? The \$850 million reflects a reasonable estimate based upon extensive study of existing systems and the actual per unit costs of retuning (or, where necessary, replacing) radios.

What happens if \$850 million turns out to be insufficient? Assuming that the FCC does not impose a higher, or unlimited obligation, the Consensus Plan includes some safe guards to limit the impact. The re-tuning process will be done on a region-by-region basis, with no regional re-tuning started unless full funding is secured for that region. First priority would be given to those regions that have reported the most severe interference problems (taking into account the need to coordinate adjacent regions). Thus, in the unlikely event that the funds run dry, no region will be left “half-done.” Nextel also has an incentive to avoid that situation and finish the job, as it will benefit from having uniform frequency assignments across the nation.

Will state or local governments be required to spend public funds and then seek reimbursement from Nextel? No. Licensees will be able to choose whether they want Nextel to pay all costs directly, or whether they prefer a reimbursement method. Thus, there is no need for state or local governments to expend public funds. A fundamental

element of the Consensus Plan is that public safety agencies do not have to pay to implement the Plan.

Who will actually do the retuning, agency personnel or contractors hired by Nextel? This is entirely up to the licensee. If agency personnel are involved, Nextel should pay the equivalent of what it would cost for outside contractors to perform the re-tuning.

Will there be a contract to govern the process? Yes, there will be a period of time allowed for Nextel and the licensee to negotiate a contract to define what work will need to be done, who will do it, and the payment for that work.

What about the cost of engineers, attorneys, or other experts that a licensee may need to assist in the process? The Plan calls for, and the FCC is expected to authorize, reimbursement (or direct payment) for such costs, at least up to 2% of the total cost for each licensee's implementation.

Will re-tuning disrupt critical public safety radio operations? The Consensus Plan calls on the FCC to require that re-tuning be done without causing such disruption. The precise methods and procedures for re-tuning will vary depending upon the specific design of the system and the role of the channels that require re-tuning. In most cases, re-tuning takes just a few minutes per radio and can be done on a "rolling basis" to maintain seamless communications and interoperability.

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