September 23, 2002

Marlene H. Dortch, Esq.
Office of Secretary
Federal Communications Commission
445 12th Street, SW
Washington, D.C. 20554

Re: Docket No. 02-055
Comments on Consensus Plan: "Improving Public Safety Communications in the 800 MHz Band – Consolidating the 900 MHz Industrial/Land Transportation and Business Pool Channels"

Dear Ms. Dortch:

The first round of comments on the Nextel re-banding plan occurred in May of 2002. Since then, some of the groups and individuals that replied to the FCC's first call, have grouped themselves together and developed what they call a "Consensus Plan." The groups represented do not include the public transit industry interests. The FCC has requested comments on the Consensus Plan ("Plan").

Dallas Area Rapid Transit ("DART") is a regional transportation authority providing multi-modal transportation services to thirteen member cities in the Dallas-Fort Worth Metroplex, and serving more than 200,000 patrons each day. DART is funded by a combination of local revenues and federal grant funds from the Federal Transit Administration. DART appreciates the opportunity to submit the following comments regarding the impact and effectiveness of the proposed Plan.

DART agrees that there is some interference experienced at present in some regions with public safety related licensees. At present, DART does not experience significant interference and has achieved a contiguous block of channels that serve DART's differing needs. DART agrees in principle that it could be desirable to group public safety users together and distance them from potential interference from cellular by separating the groups on the 800 MHz spectrum.

However, DART cannot support the current Consensus Plan without further information including: definition of current users and potential impacts to current and potential users; engineering study; and assurances of the technical effectiveness and funding of the Plan. DART would likely be negatively impacted, both the functional use of its licenses, and financially by the implementation of the proposed Plan under review by the FCC at this time.

The goals identified by the FCC in its Notice of Proposed Rule Making are not fully met by this plan. There is no guarantee that the grouping of safety users and the creation of a guard band would prevent or decrease interference, particularly instances of intermodulation. The Plan does not adequately identify or address impacts of disruption to current users nor does it adequately assure funding requirements resulting from implementation of the Plan. Finally, the Plan does not adequately anticipate future public safety needs.

Probable Impacts to DART

Should the proposed Consensus Plan be approved by the FCC, it is likely that DART will experience the following effects:

- DART channels 1-3 (811 – 813 MHz) are within the 800 MHz bands that the Plan sets aside for Public Safety uses, and two of DART's 800 MHz channels, 4 and 5 (814 & 815 MHz) are within the spectrum that would be re-designated as a guard band. The channels in the guard band could no longer expect to avoid interference from the proximity of the cellular band. This is not acceptable to DART as it would be required us exchange those channels (4 &5), which now fall in the guard band with two possibly non-contiguous channels from a lower part of the 800 MHz spectrum. It has been further suggested that "campus" radio systems (e.g. schools, factories, small business) be placed within the guardband, thus adding to the interference problem. In addition, the Plan indicates that retuning will not be occur unless funding is available (Plan page 20). There is no guarantee that DART would be in a region that would undergo retuning before funding ran out, or that DART would qualify for funding under the other criteria set out in the Plan. Without funding, DART may be forced to remain in the guard band and experience interference it is not currently experiencing.

- DART could lose the benefits of having contiguous channels. One benefit of having contiguous channels is the passive effect of limiting interference from adjacent channels.

- Costs to retune and purchase new equipment where retuning is not appropriate or possible, are estimated to be in the area of $564,000 for retuning, and approximately $6.6 million for purchase of new equipment. These preliminary estimates do not factor in transitional costs nor continuing costs of maintaining and training on new systems. The Plan indicates only NPSPAC channel users qualify for funding for these expenses resulting from the reallocation. Not all DART licenses are issued as public safety licenses. Public funds would have to be diverted from operating funding of public transportation to achieve the changes, fund logical upgrade of equipment from analog to digital, and to maintain the system in its new configuration.

- Possible disruption of public transportation services for our service area that could impact up to 200,000 riders.

- DART is currently in the design phase of a nearly $3 billion light rail system expansion. Its communication needs still to be determined, and its current licenses are already experiencing capacity limitations. Modification of DART's configuration on the spectrum in accordance with the Consensus Plan scheme would likely decrease the capacity for DART communications.

The impacts of this or any other spectrum re-banding plans will not be fully known until the plans are implemented. The unknown affects are too many to list and should not be limited by those mentioned above.

Weaknesses of Plan As Presented

The Plan does not include key users, such as public transit. It does not address entities such as DART, that fall into more than one category of use of the spectrum. DART uses include public safety spectrum, holding five licenses in the 800 MHz band for Public Safety, 12 channels in 900 MHz for the Bus, High Occupancy Vehicle (HOV) and Field Operations. DART also leases airtime from a local Specialized Mobile Radio (SMR) company to support its Paratransit operations. However, DART does not yet qualify for NPSPAC status. It is unclear whether DART would be treated as s NPSPAC user or would have some other status and therefore not be included in the Consensus Plan first choice of the new public safety spectrum. The Plan does not indicate what method would be used to determine how channels would be allocated. DART could lose the benefits of its current contiguous channel locations and be in a lottery of non-NPSPAC public safety or even commercial users. This would not be in the public interest.

For users such as DART, for whom radio spectrum is in short supply, an implementation that extends more than five years seems short-sighted and not in the traditions of the FCC. This extended implementation will require the FCC to create new rules for interference and fairness of distribution of spectrum during the implementation of the plan, and will require enhanced ability to enforce its rules during and after the transition. At the same time, the FCC role is decreased in determining where and when implementation will occur, according to the Plan where retuning priorities would be determined in part by "the most populous Regions, as agreed upon by Nextel and Public Safety Organizations." (Plan p. 14).

For areas where there is little or no problem with interference with Public Safety's use of the 800 MHz spectrum, the Plan represents great risk and expense to the licensees. The proposed plan would require DART to modify its contiguous licenses, a situation it planned and is utilizing for highly efficient and safe public communications. At the same time, the Plan does not guarantee that the new scheme will eliminate the problem of

interference. Instead, the Plan proposes that the FCC remedy situations of interference by utilizing regulations that are similar to those already in place [e.g. 47 USC 333, 47 CFR 90.173, and 47 CFR 90.403(e)]. The Plan proposes that FCC codify rules that

would require the user causing interference to remedy the situation. These are precisely the type of regulations in place to protect not only public safety but other licensees as well. Why would the situation be different if interference is experienced by those in the block of public safety?

The Consensus Plan would also limit certain types of technologies and radio system architectures available to public safety communication users in the future. There are currently systems, such as M/A-COM's OpenSky communications system, which utilize 800 MHz frequencies in much the same way cellular service providers. Under the Consensus Plan, public safety would not be able to take advantage of such an advanced communications system because of its similarity to cellular technology. There would be very little, if any incentive for equipment manufacturers to develop new technologies that may increase bandwidth efficiency. In addition it limits publicly funded users from taking advantage of potentially more economical, functionally efficient technologies.

The Plan utilizes the current need for public safety spectrum in its model, and provides more channels than are currently available for Public Safety. The additional space is set aside for public safety uses only for a short five years. In rapidly developing areas particularly, but potentially in any urban or rural area, public safety radio spectrum will face increased demand from existing public safety communication users, as well as new users. For instance, with the growth of the sunbelt regions, new towns and cities will create or increase the size of existing police forces. This in turn will increase demand for radio spectrum for public safety. The DART Transit Police force is currently experiencing a similar situation. It has grown from a handful of officers a few years ago to a force of over 100 officers. Current plans call for the Transit Police force to grow to over 300 officers within the next 2- 3 years. Future demand for public safety spectrum may not be known in a short five years. In addition, a broader definition of public safety for the purposes of licensing could be expanded to include all transit-related uses that serve public emergency preparedness needs such as evacuation.

<u>Suggested FCC Action</u>

Before the FCC considers or approves any plan, DART proposes that the following should occur:

- FCC sponsored engineering studies must be conducted to determine technological opportunities to prevent and cease interference on 800 MHz bands. This would include studies of uses of alternative equipment and further development of technology. For instance, the FCC could initiate an engineering study to determine why certain entities using the same *i*-DEN technology as NEXTEL, do not create or experience interference with public safety users (e.g. Southern Link).

- Engineering studies must be conducted on a region-by-region basis, before accepting a global fix for the issues. Individual regions have specific

requirements, physical terrain and other constraints that must be evaluated before a complete analysis of the proposal can be accomplished.

- The Consensus Plan indicates that cellular architecture must be considered in determining a solution to the problem of cellular interference with existing Public Safety and other license holders. DART submits that further engineering study could indicate that the relatively simple solution of requiring cellular providers to use high-site architecture could resolve much of the issue with public safety interference from low-site cellular transmitters. Further study of such solutions is warranted in the face of the current drastic restructuring proposals.

- The FCC should consider expanding the responsibilities of its engineering branch – The Office of Engineering and Technology (OET). The purpose of the OET is: to advises the Commission concerning engineering matters, to manage the spectrum and provide leadership to create new opportunities for competitive technologies and services for the American public.

- The FCC should step up the efforts of its Enforcement Bureau. The mission of the Bureau is: through firm, fast, flexible and fair enforcement of the Communications Act and the FCC's rules, promote competition, protect consumers and foster efficient use of the spectrum while furthering public safety goals. Enforcement is a key factor in the success of any plan for reallocation of radio spectrum, and for resolving current interference issues.

Conclusion

While DART does not oppose the concept of grouping Public Safety users in one area of the spectrum, the Consensus Plan has not taken into consideration all users and all of the probable impacts of the Plan on current and potential Public Safety users. Not all Public Safety users are included in NPSPAC. DART suggests that "hidden" users, including those public safety-related users that use commercial (SMR) and 900 MHz licenses, be identified and factored into the Plan. Further engineering studies need to be conducted, and alternatives involving technologies and equipment should be considered prior to a mass migration of licensees. Finally, the role of the FCC should not be decreased in the reorganization of the airwaves. The public interest must be protected and impartiality maintained in reallocating the public domain.

The Consensus Plan does not meet the goals it sets out to address. It does not guarantee the elimination of interference, but shifts the burden of resolving future interference issues to the Public Safety users – and public funds. The Plan does not identify or address payment of the total potential costs of retuning or upgrading existing equipment to operate on digital systems. The Plan does not provide sufficient spectrum for Public

Safety needs in the future. The Plan uses only current public safety needs as a benchmark for the future. With heightened requirements for public safety, evacuation and emergency preparedness, as well as requirements of development, the resources in the Public Safety spectrum are likely to increase. Transportation infrastructure for instance, can take longer than five years to develop to be able to identify its communication needs. The Consensus Plan does not take into consideration needs of public transit and the public safety aspects of the industry.

DART respectfully submits that the FCC maintain its primary role in distribution and allocation of the 800 MHz and 900 MHz spectrum and continue to enhance the enforcement of long-standing regulations pertaining to its use.

Respectfully submitted,

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