

July 28, 2015

Via Electronic Comment Filing System (ECFS) and Email to Distribution List

Marlene H. Dortch, Secretary
Federal Communications Commission
Office of the Secretary
445 12th Street, SW
Washington, DC 20554

Re: RM-11738

Dear Ms. Dortch:

On July 24, 2015, Derl Rhoades, Michael Rosenthal and Alan McIntyre of Southern Company; Jeffrey Sheldon of Levine, Blaszak, Block & Boothby, LLP and counsel to Southern Company; George Uram and Robert Davis of Sensus USA Inc.; Professor Simon Saunders of Real Wireless Ltd and consultant to Sensus; and the undersigned counsel to Sensus, met with the members of the Wireless Telecommunications Bureau and the Office of Engineering and Technology who are listed below. With the exception of Sean Conway who participated by telephone, these individuals attended the meeting in person.

Southern Company and Sensus made the following points by way of introduction:

- First, it was noted that Sensus has put in the record material which could serve as the start of a technical solution (Sensus Comments, top of page 10, filed June 29, 2015). This is composed of two elements: (i) emission masks set at Real Wireless' "moderate" case, and (ii) harmful interference mitigation rules and procedures that have definitive deadlines and requirements. Southern Company and Sensus believe that Petitioners' Suggested Rule Section 90.1421 would not be effective in resolving harmful interference disputes.

Given the undefined nature of Petitioners' suggested deployment, it is difficult to model the effect of Sensus' technical solution on a FlexNet™ deployment. The preliminary estimate of Southern Company and Sensus is that even setting the emission masks at Real Wireless' moderate case could result in harmful interference to a substantial number of FlexNet™ base stations. This represents significantly more harmful interference than would be permitted if the emission masks were defined by Real Wireless' more conservative "challenging" case. Of course, Petitioners would need to resolve any such harmful interference under mitigation rules and procedures that are effective and actually mandate an immediate cessation to harmful interference.

- Second, it was noted that Petitioners are proposing an arrangement that in many ways is a replay of the long running Nextel/public safety saga. Nextel had a cellular, interference-limited system, and public safety systems were noise-limited. Both systems operated in compliance with the rules, but there was harmful interference between incompatible systems. Here, Pacific DataVision (PDV) would have an interference-limited system, if it is successful, while FlexNet™, the railroads and many in-band licensees in the 900 MHz Band, all have noise-limited systems. Based on recent comments, certain in-band CII systems have very low noise tolerance and, overall, commenters were nearly unanimous in expressing concern about harmful interference from the parsimonious protection levels suggested by Petitioners (*see, e.g.*, Reply Comments of Utilities Telecom Council, pages 5-8, filed July 14, 2015). Similar to Nextel/public safety, this raises the potential of the Commission having to mediate many complaints of harmful interference between incompatible systems if PDV is permitted to operate a broadband system using only the current Part 90 emission limits.

- During the discussion, FCC staff asked whether a 1 MHz guard band would be useful. Southern Company and Sensus agreed it would help in conjunction with an appropriate emission mask. A guard band gives filters more space in which to work.

- Finally, Southern Company and Sensus recommended that if the Commission were inclined to proceed, it would be preferable that a Notice of Inquiry be issued, rather than a Notice of Proposed Rulemaking, given the many unresolved issues.

Southern Company and Sensus gave three presentations, copies of which are attached.

- The FlexNet™ user base is large and growing, with new customers being added every month. George Uram of Sensus presented the attached map showing the FlexNet™ footprint of Sensus's larger customers, nearly all of whom operate on narrowband PCS channels adjacent to the spectrum that Pacific DataVision proposes to use to provide commercial broadband service. It was noted that FlexNet™ is increasingly used for control purposes, e.g., distribution automation and monitoring, and remote disconnect and reconnect, rather than just meter reading. This places a premium on reliability and low latency. Such "smart grid" applications enable outage minimization and faster supply restoration after failure or disruption, as well as improved security of critical infrastructure.

- Derl Rhoades described Southern Company's use of FlexNet™ for its Advanced Metering Infrastructure system, which covers a large geographic area, including many areas that are remote, rural and difficult to serve. Southern Company uses FlexNet™ for many grid management functions, including seeking to prevent outages by monitoring transformers, capacitor banks and line boosters. This effort is bolstered through near real time data flows from FlexNet™ traffic and would be limited by any harmful interference.

With FlexNet™, Southern Company is able to better track in real time where outages have occurred without direct customer interaction. This facilitates the deployment of trucks, linemen and other resources to restore power. Southern Company estimates that it fully restored power following a large storm in Tuscaloosa, Alabama (depicted on Slide 6) much earlier than it would have without FlexNet™. In addition to large-scale power outages, there are more frequent, isolated outages. Often, the customer is not able to call in the outage or otherwise does not make the call. FlexNet™ alerts Southern Company of each outage as it occurs and facilitates a more prompt restoration of power. Any latency in FlexNet™ radio messaging, caused by harmful interference, would affect the ability to use the system for emergency response purposes.

- Professor Simon Saunders presented the attached presentation demonstrating how Petitioners presented an overly optimistic case to the Commission. Prof. Saunders noted that Petitioners' Reply Comments (at page 11) confirmed their intent to deploy fixed remote units providing machine-to-machine service in "many of the anticipated PE/CII broadband applications." Petitioners' model was based on a mobile-to-mobile configuration where the probability may be low for multiple mobile units operating simultaneously in and around the same location. Petitioners' assumption was flawed from the outset because, at best, it would be a mobile-to-fixed configuration. With the confirmation of Petitioners' intent to provide machine-to-machine service, the configuration becomes both fixed-to-fixed and mobile-to-fixed. This eliminates the rationale for probabilistic analysis. In particular, probabilistic calculations of call location, call duration and body shielding effects are not appropriate for a fixed-to-fixed scenario.

Prof. Saunders also noted that the Petitioners did not respond to Real Wireless' "moderate" case in their Reply Comments. The moderate case is based on Southern Company's real-world deployment of FlexNet™ and their own experience with LTE systems. For example, the antenna height utilized in the moderate case closely matches the average antenna height of Southern Company's deployment of FlexNet™.

A copy of this presentation is being submitted electronically for inclusion in the public record of this proceeding and is being emailed to the distribution list below. Please contact me should you have any questions or require further information.

Very truly yours



Julian P. Gehman

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