FCC 4.9 GHz Band Workshop Recap

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Today, the **FCC** held a workshop on the 4.9 GHz Band, a Spectrum Dedicated to Public Safety for Broadband Use. The workshop consisted of two panels discussing how the 4.9 GHz band currently supports public safety interoperability, and what can be done to increase use of it. The most consistent comment that GovWin observed both from the state and local agency representatives, as well as the manufacturing community, was that the 4.9 GHz band is best used for systems with video capabilities.

The first panel discussed the current public safety use of the 4.9 GHz band. There was heavy state and local representation on panel one, with panelists from Brookline, Massachusetts; Virginia Department of Transportation; Missouri Department of Public Safety; and Los Angeles County, California. All gave an interesting perspective on how their municipality used 4.9 GHz system capabilities. Scott Wilder of Brookline, Mass. explained that the city deployed the 4.9 GHz broadband network for public safety agencies. They have been using the system 24/7 for three years. Wilder mentioned that the city also uses a 2.4 GHz band as backup in case of a catastrophe. Compared to Brookline's 6.8 square miles, Lt. Mark Wilkins from the Los Angeles County Sheriff's Department offered another perspective. The county covers roughly 4,000 square miles and will be deploying the 4.9 GHz band for all public safety agencies using downlink video, surveillance, and backhaul capabilities. One thing Wilder and Lt. Wilkins both echoed is that video is the biggest driver for 4.9 GHz band use.

Missouri Department of Public Safety's Stephen Devine offered some suggestions to the FCC to better utilize 4.9 GHz. He explained that 4.9 GHz is not practical for mobile use, long-term or high traffic use. Event applications seem to be a better use. Devine recommended improving use of band so that tools are made available to allow coordination of use on both a state and regional level. He would like to see a loosely based coordination requirement of 4.9 GHz licensees to allow a national database, with real site locations, (not just license – but technical elements associated).

Finally, the panel also included two perspectives from the vendor community with Mark Jules of Avrio RMS Group and Martin Levetin of Strix Systems.

Jules explained that 4.9 GHz band is most useful in areas like cities, universities, ports and stadiums. Jules suggested the band be accessible for special events, for example, inaugurations, the Democratic National Convention, G-20, and the Super Bowl. A big plus to the system is its quick installation.

Levetin gave real-world case study examples where a 4.9 GHz band would excel. He described the different situations, how they set up the network, and the deployment hurdles his agency overcame. He explained that because 4.7 has more bandwidth than a 700 MHz system, if video is a bid player, like during the Beijing Olympics, 4.9 GHz would be the preferable choice.

Panel two discussed what the FCC can do to increase use of the 4.9 GHz Band. David Buchanan of the National Public Safety Telecommunications Council (NPSTC) started the conversation describing a survey that NPSTC conducted regarding 4.9 GHz band usage. He highlighted the fact that the majority of respondents use or want to use the band for point-to-point communications.

Brett Kilbourne of the Utilities Telecom Council (UTC) explained that utility companies are interested in gaining access to the 4.9 GHz band. Kilbourne suggested that changing eligibility requirements will promote the use of the 4.9 GHz band.

Dr. Nancy Merritt of the DOJ's National Institute of Justice (NIJ) gave more of a social science view of 4.9 GHz. Looking from more of a social standpoint, Dr. Merritt was interested in playing a part of the standards development process. The NIJ would like to be a resource of information for agencies.

Pam Montanari of Pinellas County, Florida described different ways that the County tried to look at using the 4.9 GHz band. In looking into an ad hoc system, the county realized that it would take a lot of pre-configuration and it was also cost prohibitive. Montanari estimated that under the ad hoc system, it would cost $500 per car. The other system was a fixed network. The county used off-the-shelf technology with a multitude of vendors. Montanari was pleased to report that the system got pretty good throughput. The system was less reliable to keep tower equipment operational, but streaming video the best use of the 4.9 GHz system. She recommended system capability tracking on regional basis. Montanari agreed with what Kilbourne has

suggested earlier, and explained that the FCC should consider different types of licensing (permanent scale, ad hoc, fixed etc.) and extend to utilities. That cooperation could save lots of money for an agency working with a utility.

Joe Ross of Televate LLC explained that one of the major challenges of 4.9 GHz is that there have been a lot of uncoordinated activities. He explained the best use for 4.9 GHz is pre-planned so the band will have appropriate reliability. Interference in reliability creates potential risk. Ross suggested four things that the FCC could do:

- Advertise what's been done well/effectively
- Develop 4.9 GHz planning guidelines for regions
- Help/guidance with frequency plans
- Provide more education to vendors and agencies

Finally, Edmond Thomas of Wiltshire & Grannis had only one proposal for the FCC with regard to the 4.9 GHz band. He would like the FCC to seriously consider opening the band to commercial interest, but with secondary capabilities. This would mean that the commercial use of the 4.9 GHz band could be shut down to prevent interference, giving public safety the priority. This proposal would both increase volume of the band and also maintain its supremacy.

GovWins Take: Overall, the workshop highlighted some of the positive capabilities of the 4.9 GHz band (larger bandwidth has better video capabilities), and some of the problems (4.9 GHz does not work well in buildings). GovWin will continue to stay abreast of any developments. For government agencies, GovWin suggests analyzing the amount of bandwidth that your agency is using to determine what system is best. If you plan on having a lot of video and surveillance capabilities, it may be useful to look into a 4.9 GHz band. For vendors, GovWin suggests investing in research and development to provide interoperable 4.9 GHz and 700 MHz capabilities in a single device. If a single vendor had both on a single platform, it could eliminate many headaches. Vendors should also get involved in any standards development that allows them to have a say in the process. With the increased use of video and more complex data uses, the need for a system to handle all different utilities is necessary.