



1894 E William St #4-197
Carson City, NV 89701
855-891-0911

March 5, 2016

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

Re: WP Docket No. 07-100, PS Docket No. 06-229, and WT Docket No. 06-150

Dear Ms. Dortch,

Presidential Partners Consulting may be a small public safety consulting firm, but its partners have considerable experience in public safety technology policy to include spectrum use. We were part of the first to advocate for the need to change public safety spectrum policy and part of the first to advocate for shared spectrum use for public safety spectrum.

As three past presidents of the Association of Public Safety Communications Officials International (APCO) we led the discussion on shared spectrum for APCO and personally sat as board members of the Public Safety Spectrum Trust (PSST), National Public Safety Telecommunications Council (NPSTC) and the Public Safety Alliance (PSA). Because of this experience, combined with over 90 years of collective public safety technology experience, we understand public safety needs, spectrum use and how today's technology can benefit public safety. As the public safety community debated what technology should be used for broadband and was grid lock we, collectively, along with APCO past President Bill Carrow, endorsed and publicly advocated that LTE should be the broadband technology for public safety. Today, we see the high value of that decision.

We would like to offer these comments related to the 4.9GHz spectrum that has been allocated to public safety and for the most part sits fallow across the nation. The FCC's has commented and said that the spectrum has "fallen short of its potential" and we believe that it is time for the Next Paradigm shift in public safety spectrum use.

It is our firm belief that public safety will not use 4.9 GHz to its fullest potential because of the large number of other commercial options. Today, carriers with 5th generation LTE are talking about low cost very high speed wireless, city's such as Lafayette, Louisiana have deployed significant fiber in the community to support their needs, and cable companies are offering high bandwidth at low cost. We are not seeing significant public safety deployments, but that can change with the proper public policies that support public safety's use, priority and preemption within the 4.9GHz public safety allocation.

We believe that the NPSTC plan is flawed in that the process to create regional plans is slow and at many times ineffective in maximizing use and it drives to carve up the spectrum among the NPSTC participants. The simple fact remains that if public safety had a high demand and need for this spectrum they would have found ways to deploy it. As a final observation, the report is approaching three years old and much has changed in the technology world since then.

APCO made the following statement that we fully agree with: “public safety 4.9 GHz equipment can be developed in such a way that it leverages the much broader consumer marketplace for Wi-Fi and related products and services supporting broadband communications, including 4G (LTE). Technology providers need to be incentivized to develop technology that integrates 4.9 GHz into devices operating in other unlicensed and 4G spectrum to assist in accessing the larger consumer market. This in turn would provide public safety with a dedicated band to support their localized and particular broadband communications needs including during emergencies, potentially decrease costs, lead to commercial off the shelf (COTS) equipment capable of utilizing both the 4.9 GHz band and other unlicensed and LTE bands, and enable handoffs between public safety 4.9 GHz networks and other networks (including commercial wireless services and the FirstNet network).

The commercial development and deployment of dual SIM, Quad chipset handsets is indicative of the ever evolving nature of wireless communications systems, services and equipment. Utilization of this type of technology in North America allows for multiple uses from a single, commercial, off the shelf product. Inclusion of the 4.9 GHz band, along with Band Class 14 (FirstNet) and commercial cellular frequencies, would allow for multiple uses across networks and single devices (access points, handsets, etc.) for both public safety and commercial applications while driving down costs and incentivizing manufacturers and carriers.”

Although we are not technical consultants we have discussed with those who are who state that the technology does exist today to leverage a technology such as unlicensed LTE (commonly referred to as LTE-U) to create a chip set design aligned with 3GPP that will allow for shared spectrum use in the same way FirstNet is deploying public safety LTE broadband. Our vision is that the 4.9 GHz public safety spectrum could be deployed for public use much in the same way home WIFI works today and that designs in the chip set could allow for shared spectrum use with public safety. This new chip set would allow for priority and preemption when in range of a public safety device with automatic authorization and authentication of the device and user. This would overcome the issues of devices today having to be logged into public Wi-Fi. The tradeoff here is that the public gets use and access to additional spectrum for the growing commercial market and public safety gets free network access to spectrum that has been allocated to public safety.

What would be created with this approach is a broader network for public safety which over time would provide significant in-building coverage with greater location accuracy for first responders. We also believe this can be accomplished with little harm to the current public safety users. We have for many years had the shared use of 2.4 GHz spectrum for in-building hot spots and for use as point to point. That technology is in use today and when point to point is properly deployed with directional antennas and proper elevation operates well. Even today multiple Wi-

Fi networks operate together in close proximity because of the intelligence of the software to manage the spectrum as needed. As noted in the September 28, 2015 APCO filing 95% of the public safety use is for backhaul which can be protected with proper licensing and coordination.

As an additional recommendations we believe that all point to point be coordinated by an authorized and qualified public safety coordinating organization to allow for tracking of point to point and to ensure proper usage. We also believe that FirstNet should be engaged to work on shared policy use and coordination of 4.9Ghz with FirstNet licensed spectrum. As a final recommendation we would suggest that there be a process developed / established that would allow for the payment by chip manufactures, possibly in the form of a royalty or licensing fee, a per chip fee that would go directly to a public safety grant funding to support projects such as the purchase of user equipment, FirstNet to pay for cost related to the integration of 4.9 GHz and public safety technology research. We would anticipate because of the high volume and to encourage use this fee would be only a few cents per chip.

Conclusion

As noted our observations are not as casual observers of the process, but rather as very active participants engaged in the debates, discussion, process and decisions that ultimately became FirstNet. We believe that our historical knowledge and experience gives us a unique insight into the true operational goals and objectives for public safety spectrum. Now is the time to marry the 4.9GHz spectrum with the 700 MHz broadband spectrum and FirstNet.

Respectfully Submitted



Richard Mirgon
Partner

Willis Carter
Partner

Chris Fischer
Partner