

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of)
)
Amendment of Part 90 of the Commission’s Rules) WP Docket No. 07-100
Rules)

**REPLY COMMENTS
OF
CITY AND COUNTY OF DENVER, COLORADO
SAN BERNARDINO COUNTY, CALIFORNIA
AND
GOVERNMENT WIRELESS TECHNOLOGY & COMMUNICATIONS ASSOCIATION**

The City and County of Denver, Colorado (“Denver”), San Bernardino County, California (“San Bernardino”) and the Government Wireless Technology and Communications Association (“GWTCA”), through counsel and pursuant to Section 1.405 of the Commission’s Rules, 47 C.F.R. §1.405, hereby respectfully submit their Reply Comments in the above-captioned matter. Denver, San Bernardino and GWTCA are concerned with the Commission’s proposal to permit sharing of the 4.9 GHz band by non-public safety users.

The City And County Of Denver’s Use Of The 4.9 GHz Band

The 4.9 GHz band is licensed by Denver under FCC call sign WPYR555. Denver and the Denver International Airport (DIA) use the 4.9 GHz band for numerous operations to support Public Safety and other City Agencies within Denver County and DIA.

There are numerous types of equipment used by Denver agencies that utilize the 4.9 GHz frequency band. Network equipment using 4.9 GHz provides connectivity to mobile command vehicles to support Wi-Fi, phones, internet access etc. during events and critical incidents. The Denver Police Department (“DPD”) High Availability Location Observation (“HALO”) camera

network is a video network connected using both 4.9 GHz point-to-point links and mesh connectivity. There are numerous links used to connect cameras throughout Denver.

The Aerobahn system tracks aircraft on the ground at DIA. Airport B Tower ramp operators use Aerobahn for ramp operations. To provide the accuracy needed for ramp operations, B Tower added thirty-five (35) additional sensor stations, of which nine (9) are connected using 4.9 GHz frequencies.

The Denver Police Bomb Unit has bomb robots. The robots are connected utilizing the 4.9 GHz band for remote control and network connectivity for video transmission back to the operator. These units are deployed on site as needed for incidents. The Denver Fire Department (“DFD”) RadWin Network – DFD uses the 4.9 GHz band for 38 Fire Station throughout Denver County and DIA. The system provides connectivity and station alerting, Vocalarm notifications to DFD stations, telemetry monitoring at DFD stations and for some dispatch operations.

San Bernardino County, California’s Use Of The 4.9 GHz Band

San Bernardino County, including incorporated jurisdictions within the County, have utilized since inception, and continue to actively utilize the 4.9 GHz Public Safety Band. Usage characteristics are varied through the County, supporting daily public safety operations as well as disaster recovery and emergency support communications. 4.9 GHz operation delivers a reliable, high-speed cost effective platform supporting high-speed data communications requirements. 4.9 GHz equipment is available from multiple manufacturers, and the band offers a good balance of link margin, interference-free operation and cost. Due to a relatively lower path loss at 4.9 GHz compared to higher microwave bands, the 4.9 GHz frequency range provides predictable propagation characteristics in all type of environment and weather conditions without the requirement of large dish antennas.

Daily communication requirements being successfully met by 4.9 GHz operation for San Bernardino include interconnection of automatic license plate readers (“ALPR”) installations back to control centers. The ALPR readers have proven to be an effective tool in crime fighting by providing real time notification to law enforcement officers when a vehicle of interest passes through a specific area or street intersection, enabling officers to quickly locate the vehicle. ALPR equipment connected with 4.9 GHz links are a positive impact on community safety. 4.9 GHz equipment is also utilized to interconnect security cameras in public areas, such as busy street corners and public utility installations in parks and airports, which improves the safety and security of the public, as well as protection of community owned infrastructure. The superior bandwidth allocated to the 4.9 GHz band allows the real time monitoring of high definition surveillance cameras that are installed in areas of high crime, or in isolated areas. In both cases of ALPR systems and security cameras, especially those installations within areas underserved by wireline communications options, the 4.9 GHz band bridges the gap, allowing wireless interconnection where wired connections, including fiber, are not feasible or possible. In similar cases, 4.9 GHz links are used to connect nodes of mission critical, Project 25 LMR radio sites back to their system controllers, enabling Law, Fire, and EMS communications emergency radio communications.

Beyond meeting the daily, more routine applications noted above, the 4.9 GHz band is also used in San Bernardino County on a temporary basis to meet disaster recovery and emergent communications need. The County has installed 4.9 GHz equipment at several high elevation locations in the county, strategically placed to allow a companion vehicle equipped with 4.9 GHz equipment to establish a temporary high-speed link supporting VOIP telephone and internet access. This capability essentially delivers a county office to a field location, especially useful during times of crises. This application for 4.9 GHz has been used during wildland fires when

evacuation centers are opened, quickly giving staff full wireless access to county information systems that greatly expedite service to the displaced public. This application was also utilized during the terrorist event that tragically rocked San Bernardino in December, 2016. Early in that response, a need was identified to maximize connectivity back to County information and database systems. The 4.9 GHz band provided that capability, giving responders quick access to critical information as the event unfolded. 4.9 GHz temporary interconnection links are quick and easy to set up, and offer a good bandwidth to extend full service enterprise system into remote locations.

San Bernardino County and its incorporated jurisdictions greatly rely on the 4.9 GHz Public Safety band for both ongoing and emergency communication needs. 4.9 GHz equipment is readily available and offers a quantity of bandwidth that insures speedy data transfer. The region's ability to protect and serve the public, on a daily basis and during times of emergency, would be frustrated without continued access to the full bandwidth currently available in the 4.9 GHz allocation. While there are many valid business cases for wireless bandwidth, government's business case for using established bandwidth in direct service to the public, especially in times of emergency, remains a compelling and top priority for the County.

The Government Wireless Technology And Communications Association

GWTCa is a non-profit trade association created to advocate on behalf of government and non-government users of wireless technology and communications in the public service industries, such as public transit.¹ GWTCa's membership includes government agencies, manufacturers, engineers and consultants working on a variety of issues impacting represented users, and members of the Association are users and licensees in the 4.9 GHz band.

¹ www.gwtca.org.

Reply Comments

Denver and GWTCa are concerned with the Commission's tentative conclusion that the 4.9 GHz band is significantly underutilized. The Commission's analysis was apparently performed with a numerical review of the Commission's licensing database. However, simply counting the number of licensees in the database does not provide the Commission with a true picture of the scope of utilization of the 4.9 GHz band. While such review may be appropriate where every license was issued for the same coverage area (for example, BEAs), and for the same bandwidth, or to the same type of entity, the fact is that the 4.9 GHz band is a hodgepodge of different licensing formats. There are site based licenses and geographic licenses, with the geographic licenses issued for a variety of service areas. There are licenses issued for the entire available bandwidth, and there are licenses issued for only portions of that bandwidth. With licenses issued at the State, County and local levels, a single license could represent hundreds of users and dozens of uses.

In addition, the difficult beginnings of frequency coordination and licensing in the 4.9 GHz band delayed the growth in usage. Eligible entities are still implementing systems, and the Commission should not treat this band as a "mature" band. In this regard, Denver, San Bernardino and GWTCa fully support the Comments submitted by the National Public Safety Telecommunications Council ("NPTSC").

Advancements in technology, including digital signaling, have certainly led to the ability to increase spectrum utilization, including advances in frequency coordination. This has led to the ability to break down prior barriers regarding types of users. Denver and GWTCa support the continued review of those situations where previously "barricaded" spectrum can more appropriately be shared between like services (as opposed to like licensees). For example, the

Commission's rebanding effort at 800 MHz as the result of its action in WT Docket No. 02-55 has resulted in public safety users "sharing" spectrum with utility and other enterprise users. However, "sharing" in the case of 800 MHz is not shared use of the same spectrum, it is use of the same frequencies in adjacent service areas. Here, the Commission is moving towards "sharing" of a different variety, the use of collision avoidance technologies to share the same frequencies at the same location (similar, but more sophisticated than Wi-Fi). This technology is in its nascent stage, and is not appropriate for use in public safety bands at this time.

However, Denver, San Bernardino and GWTCA do believe that additional usage in the band can be achieved through the eligibility rules, specifically permitting utility usage in the band (as suggested by NPSTC). Utility users have spectrum use remarkably similar to public safety users, and therefore make appropriate spectrum "partners." Similarly, transportation agency use in the band should permit transportation entities that are not government owned to be included as eligible entities.

Expansion of eligibility in the band should be accompanied by greater emphasis on frequency coordination in order to truly exploit spectrum availability. Denver, San Bernardino and GWTCA suggest that coordination not be performed by voluntary groups, such as Regional Planning Committees ("RPC"), because applicants may be delayed by an RPC meeting schedule or subject to potential bias against non-public safety entities. Rather, coordination should be performed by frequency coordinators that should be certified by the Commission and subject to the same rules and speed-of-service requirements as current Part 90 frequency coordinators. It may be appropriate for frequency coordinators to consult with a Regional Planning Committee in certain geographic areas where the Committee is particularly active and involved, but such a requirement would be difficult in other geographic areas.

WHEREFORE, the premises considered, it is respectfully requested that the Commission act in accordance with the views expressed herein.

Respectfully submitted,

CITY AND COUNTY OF DENVER, COLORADO

SAN BERNARDINO COUNTY, CALIFORNIA

GOVERNMENT WIRELESS TECHNOLOGY
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Date: August 6, 2018