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FCC Statement for the Record

General Discussion

I have been working in the wireless industry for over thirty years holding positions as Radio Frequency Coordinator and or Wireless Microphone and Intercom System Operator for multiple large special events and live television broadcasts. These include many Super Bowls, Rose Bowls, Pro Bowls, NBA All Star Games, Latin and English Grammy and Billboard Music Award shows, Country Music Awards, Video Music Awards, Soul Train Awards, and the World Cup. All of these live broadcast events use hundreds of Low Power Auxiliary Devices.

In addition, I have designed and installed wireless audio systems for multiple broadcast studios, large theme park and attractions and other life safety critical Arts and Entertainment special events. I have also designed wireless intercom systems for ground force control for US military installations, Microsoft Campus and am currently designing systems for space vehicle launch pads and Nuclear power plant control. Clearly these are all life safety mission critical.

As you are aware, wireless microphones and life safety wireless communications devices are used in every aspect of American culture. From Film and Television production to Broadway Theater, to Large Sporting Events to Houses of Worship, millions of wireless microphones and intercom systems are currently deployed throughout the United States.

These Low Power Auxiliary Devices ARE the content of the very live broadcast or internet stream. And wireless intercoms provide the mission critical life safety and back stage communications needed to maneuver large set pieces and most importantly, save lives. Interference from digital consumer devices on to these life safety wireless intercom systems result in death or serious injury.

Past and Future Auction Impact on American Culture

Between the recent 700 MHz auction, the current white space TV band device initiative and the planned 600 MHz auction, low power auxiliary device operations will be reduced to less than 6% of the UHF spectrum that we have called home since 1962. At the present time, it is nearly impossible to coordinate a large event due to the UHF spectral congestion presented by the advent of Digital Television, the recent implementation of the 700 MHz auction and the fact that over 90% of wireless microphone and intercom systems on the market today operate in UHF and use wide band modulation of some type requiring a minimum of 300 kHz.

One Solution

Wireless intercom systems represent more than 50% of the low power auxiliary devices used on most large events. As operators and RF coordinators for large, multichannel special events, users, turned manufacturers, have spent millions upon millions of dollars and many years to fabricate wireless intercom systems in the VHF spectrum. In addition, we have designed narrow band extremely spectrally efficient amplitude modulation schemes in response to the UHF spectral congestion presented by the recent changes in the UHF band.

By designing low power auxiliary devices in the legal part 74 VHF radio spectrum, we are making an attempt to relieve the overcrowding of the UHF band. Since release in January of this year, these systems have been successfully deployed on most major events thus far including the Rose Bowl, Pro Bowl, Super Bowl, NBA All Stars, Latin Grammys and Billboard Music Awards shows.

In addition to contemplating the use of radio spectrum for Low Power Auxiliary Devices above the current 698 MHz band, I urge the FCC to reserve the low and high VHF bands for LPAD use. This includes 76-88 MHz and 174-216 MHz. In my experience as an RF Coordinator, these bands remain clean and should be used for communications grade wireless devices including intercoms and RF IFB.

The FCC should minimize broadcast television migration to the VHF band. In addition, I urge the FCC to expand the use of VHF for low power auxiliary devices. Currently, the band includes 76-88 and 174-216 MHz. I urge the FCC to expand this band to include 72-88 MHz and 168-225 MHz. By designing new technology, the additional few MHz of spectrum could deliver many wireless intercom systems thereby providing the relief needed to continue operations.

In the short term, these new VHF products including wireless intercom and IFB systems already introduced will provide a stop gap enabling wireless microphone manufacturers to be granted the necessary time to research and develop new higher band technologies above 698 MHz. Though the VHF spectrum is not suitable for wireless microphones due to fade noise, it is appropriate for wireless communications devices.

The FCC should be aware that this use of the VHF band is our current saving grace from UHF spectral congestion. There is a long history of successful deployment of VHF technologies and equipment in the band is in fact life safety related. Between 1962 and present, VHF has proven to be a reliable spectrum for low power wireless intercom operations.

Respectfully submitted,

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