



White Space Legislative Update August 9, 2013

Background

For 35 years, wireless microphone technology has allowed users unrestricted on-stage movement and has created sophisticated sound. Nonprofit performing arts organizations, commercial theaters, schools, and performers rely on this equipment which operates within the “white space”—frequencies between broadcast channels of the television band. Wireless systems are also integral to backstage communications used by stagehands to execute complex technical activity. Interference to these backstage communications could compromise the safety of performers, technicians, and audiences.

On September 23, 2010 The FCC ruled that portions of the broadcast spectrum called white space would be shared by wireless microphones used in the performing arts and by new white space devices (aka TV Band Devices) yet to be developed. Because interference between wireless microphones and white space devices could be a concern, the FCC ordered several protection measures including the establishment of a geo-location database which would allow the new devices and wireless microphones to share spectrum. Wireless microphone users would register their needs in the geo-location database including channels needed with specific locations, dates, and times. The database would prevent new white space devices from operating on those channels at the same time. The FCC has now approved nation-wide operation of both the geo-location database and operation of white space devices. While there are only one or two fixed white space devices in operation at this time, it is expected that scores more will be on the market in time for Christmas 2013.

What's At Stake

Threats to safe-haven channels designated for wireless microphones:

In the current spectrum auction and repacking rulemaking, the FCC indicated it was considering eliminating these two designated channels. Some wireless microphone users have advocated that they would have to compete for bandwidth with a growing number of mobile broadband devices and other heavy spectrum users. If these two reserved channels are eliminated, interference for wireless microphone users would increase and they would no longer be able to depend on this vital technology to do their work and serve the public.

Reliable geo-location database:

Given the thousands of performances held by arts organizations each year that rely on wireless devices, it is essential that the FCC's interference protection works successfully. A reliable geo-location database will avoid interference between wireless microphones and TV Band Devices.

High cost of replacing equipment to operate in new spectrum:

Our nation's nonprofit performing arts organizations make substantial financial investments in their technical equipment, including wireless microphones and backstage communications devices. In 2010, these organizations were subject to an FCC rule that required wireless microphone users to cease using equipment that operated in the 700 MHz band of spectrum. Many performing arts organizations were required to relocate to another band of spectrum which brought unanticipated expenses of \$25,000-\$100,000 to purchase new equipment that could operate in another band of spectrum.

In an effort to raise federal revenues, the Administration and Congress have authorized spectrum auctions, putting up for sale the rights/licenses to use certain bands of spectrum. After auctions, the FCC will reorganize and repack the spectrum that has been made available and may require wireless microphones to relocate to a different part of the spectrum. If that happens, performing arts organizations may yet again have to purchase new, expensive equipment. The valuable public benefits produced by our nation's performing arts sector should be considered in any future plan to reallocate or “repack” the broadcast spectrum as a result of these auctions.



What We Are Asking Right Now

Preserve Two Safe-Haven Channels for Wireless Microphones

In light of the overwhelming benefits of wireless microphones, and the increased potential of interference from mobile broadband, it is essential that the FCC retain the two channels that are designated for wireless microphones. To provide vital, reliable services via wireless microphones, users such as theatres, churches, sports leagues, and others need to be able to continue to use wireless microphones for clear, reliable, and safe communications and must have adequate access to spectrum.

A Reliable geo-location database

We urge the FCC to closely supervise the implementation of the geo-location database and be responsive to any concerns raised by the wireless microphone community. We encourage the Commission to ensure that the database protects wireless microphones and technologies for performers, performing arts organizations, venues, and educational facilities.

Expanding eligibility for licenses to theatres and other wireless microphone users

The FCC is considering rules that would permit large theatres and other users to apply for licenses. Licensed wireless microphone users (broadcasters and movie studios) have immediate access to database registration. Unlicensed users, including users in the performing arts, need to demonstrate their need for registration and must wait 30 days for public comments. We encourage the Commission to allow these licenses so that users in the performing arts would have the flexibility they need.

Off-set the Cost of Replacing Wireless Microphones

As the FCC reviews options for rulemaking on the recently approved spectrum auctions, we urge Congress to consider the burden already borne by the performing arts community. Should another move in the broadcast spectrum be deemed necessary, the performing arts community has conservatively estimated that it would cost at least \$17.5 million to replace their equipment. We suggest two possibilities for offsetting these costs: (1) Congress could appropriate funds to defray the costs of wireless microphone replacement, or (2) the FCC could rule that auction winners help pay the cost of displacing wireless microphones from the spectrum they have purchased.

What You Can Do

Registration Launched Nationally for Geo-location Database

To provide interference protection for wireless microphones, the FCC has developed a national geo-location database in which venues may register the frequencies in which they operate equipment. The database will then instruct any white space device within 400 meters of a registered device to refrain from operating on those frequencies. Registration has been launched nationally.

We anticipate white space devices will reach the market, in time for Christmas 2013 and since the FCC has launched the geo-location database, it is important that performing arts organizations are up-to-speed with the new procedures and register their intended spectrum use. Please view this public notice (http://hraunfoss.fcc.gov/edocs_public/attachmatch/DA-12-1514A1.pdf) from the FCC which thoroughly explains the geo-location database, the registration process, answers questions, and provides FCC contact information. Performing arts organizations using large numbers of wireless microphones are urged to inform their sound engineers and production staff and advise them to register in the database. If you encounter any difficulties, please report back to your respective arts service organization.



Recent Activity

These are the interference protections available to wireless microphone users, adopted by the FCC:

- The FCC has set aside two national "safe harbor" channels for entities using wireless microphones which are expected to permit 12 to 16 wireless microphones to operate in any one location.
- Additional channels in most markets have been made available by the FCC for wireless microphone use. These channels, which are occupied by or adjacent to broadcast television stations, are unavailable to TV Band White Space Devices.
- If a wireless microphone user needs more than these interference-free channels, it will be permitted to register its uses in a geo-location database which would provide an interference protection mechanism. Registration requires that a user prove that the available channels are insufficient for its needs. The registration must be submitted to the Commission 30 days in advance of the intended use to permit public notice and comment.
- Wireless microphones used in the performing arts will continue to operate under Part 15 as legitimate users of the broadcast spectrum.

Requirements for registration in the geo-location database:

- Performing arts organizations would have to 'certify' that they have exhausted the two safe-haven channels and other channels available in their area to participate in the database.
- Performing arts organizations can submit their needs for an entire year (ex: for multiple productions) if needs exceed the safe-haven channels. They should submit requests at least 30 days before their first production.
- Performing arts organizations should only request the channels they actually need; the FCC will not allow the warehousing of channels. Organizations may switch channels if necessary and the database will be quickly updated.
- Performing arts organizations are not competing with each other for spectrum; the database is intended to protect against interference from White Space devices, not from other wireless microphone users. Therefore, wireless microphone users are encouraged to form coalitions and pool their collective wireless microphone needs. If your coalition needs more than the two safe-haven channels and additional channels in your area, you should request the additional channels together. Sound engineers will have to coordinate with each other to eliminate interference within the coalition.