

Narrative Statement

Sennheiser, a leading manufacturer of professional wireless microphones, is developing a Wireless Multi-Channel Audio System (WMAS) to improve spectrum efficiency and help counter a severe spectrum shortage. The system digitally combines multiple wireless microphone signals onto a single 6 MHz channel—more devices than the channel can accommodate with the devices transmitting individually.

The present rules, because they limit wireless microphone devices to a 200 kHz bandwidth, do not permit WMAS operation. Sennheiser filed a Petition for Rulemaking on August 17, 2018, to allow bandwidths up to 6 MHz when transmitting the signals of multiple wireless microphone devices. (The petition has not yet been assigned an RM number.)

Sennheiser is scheduled to demonstrate the WMAS system to OET at FCC headquarters on November 1, 2018. We respectfully request two STAs: one for the period October 31 – November 2, 2018, to cover this demonstration, and the other for the period October 28 – November 1 for preparations at the Sennheiser office at 1 Enterprise Drive, Old Lyme, CT 06371. Sennheiser has ascertained that the 6 MHz channels specified in the applications are not in use for TV broadcasting at the respective locations.

Both STAs will cover a single WMAS device with average power of 2 dBm, 4.15 dBm EIRP, peak power 20 dBm. (At startup, the prototype momentarily transmits at 12 dBm average.) The transmission bandwidth fits within a 6 MHz TV white space channel.

| Location | Coordinates | Frequencies | Time Period |
|-----------------------------------|--------------------------|--------------------|----------------------------------|
| 1 Enterprise Drive Old Lyme CT | 41-19-01 N 72-15-58 W | 566-572 MHz | October 28 – November 1, 2018 |
| 445 12th St. SW Washington DC | 38-53-01 N 77-01-45 W | 500-506 MHz | October 31 – November 2, 2018 |