



## FCC Releases White Space Rules

On November 14, the FCC released the Report and Order (“R&O”) that contains the text of Rules that allow unlicensed radio transmitters to operate in the broadcast television spectrum (“white spaces”). The FCC states in the R&O that their action will make a significant amount of spectrum available for new and innovative products and services, including broadband data and other services for businesses and consumers. The R&O also states that the Commission will closely oversee the development and introduction of these devices to the market and will take whatever actions may be necessary to avoid, and if necessary correct, any interference that may occur. Below is a brief summary of the some of the new rules.

- Rules authorize both fixed and personal/portable devices to operate in the TV white spaces on an unlicensed basis.
- A fixed device must employ both geo-location/database access and spectrum sensing capabilities that enable the device to listen for and identify the presence of signals from other transmitters.
- A personal/portable device must either 1) be under the control of a fixed device or a personal/portable device that employs geolocation/database access and spectrum sensing or 2) employ geo-location/database access and spectrum sensing itself.
- Unlicensed devices must first access the database to obtain a list of the permitted channels before operating.
- The FCC will have a public notice process to solicit interested parties to establish and administrate the database.
- Fixed devices may operate on any channel between 2 and 51, except channels 3, 4 and 37, and subject to a number of other conditions such as a restriction against co-channel operation or operation adjacent TV channels pending consideration of further information that may be submitted into the record in this proceeding.
- Fixed devices may operate at up to 4 watts EIRP (assumes a 6 dBi gain antenna).
- Personal portable devices may operate on any unoccupied channel between 21 and 51, except channel 37.
- Personal portable devices may operate with a transmitter power of up to 100 milliwatts (assumes a 0 dBi antenna), except that operation on adjacent channels will be limited to 40 milliwatts.
- Fixed and personal/portable devices must also have a capability to sense TV broadcasting and wireless microphone signals as a further means to minimize potential interference. However, for TV broadcasting the database will be the controlling mechanism. The required sensing detection thresholds are.
  - ATSC signals: -114 dBm, averaged over a 6 MHz bandwidth.
  - NTSC signals: -114 dBm, averaged over a 100 kHz bandwidth.
  - Wireless microphone signals: -114 dBm, averaged over a 200 kHz bandwidth.
- To Protect Wireless Microphones:

- o The locations where wireless mics are used, such as entertainment venues and sporting events, can be registered in the database.
  - o Channels 2 – 20 will be restricted to fixed devices, and the FCC anticipates that many of these channels will remain available for wireless microphones that operate on an itinerant basis.
  - o For the 13 major markets where 14 – 20 are used for land mobile operations, the FCC will leave 2 channels between 21 and 51 free of new unlicensed devices and therefore available for wireless mic use.
  - o As noted above, the unlicensed devices will be required to include the ability to listen to sense wireless microphones.
- All white space devices are subject to equipment certification by the FCC Laboratory. The Laboratory will request samples of the devices for testing to ensure that they meet all the pertinent requirements.

For more information see the complete Report and Order on the FCC's Webpage at [http://hraunfoss.fcc.gov/edocs\\_public/attachmatch/FCC-08-260A1.pdf](http://hraunfoss.fcc.gov/edocs_public/attachmatch/FCC-08-260A1.pdf).

