

# FCC Update



# Spectrum Repacking

Here We Go Again:

The FCC is reallocating 600 MHz

# Frequencies for Wireless Mics

30 - 45 MHz (8-m HF)

Antenna length ;  
RF-interference from (electric)  
appliances

174 - 250 MHz (VHF)

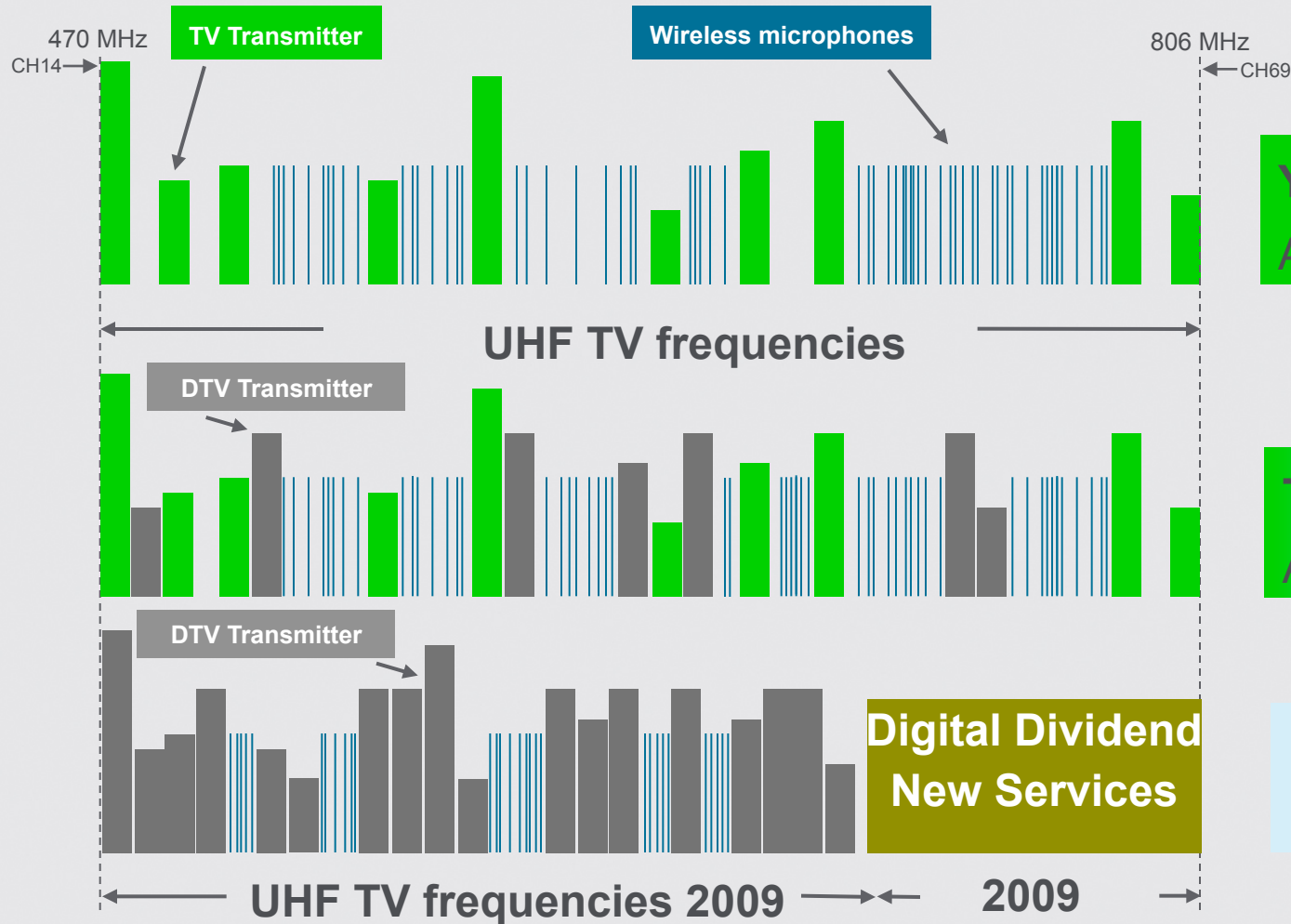
Good wave propagation; TV-transmitters;  
RF-distortions from digital equipment

450 - 960 MHz (UHF)

wide frequency range  
good wave propagation

2400 - 2485 MHz (ISM)  
IndustrialScientificMedical

poor wave propagation ;  
no exclusive frequencies  
(license free devices);  
interference from microwave-ovens



“White Space” channels 2 - 51 are open to unlicensed devices:

- Rural broadband internet
- Metropolitan broadband internet
- Multimedia services
- Home networking systems
- Consumer electronics: tablets, computers, media servers and cell phones w/ advanced features
- Future products

## FCC rules governing WSD include safeguards to avoid interference to wireless microphones:

- Reserved channels: 2 channels in each market are reserved for wireless mics
- WSD must use Geolocation/Database system or Spectrum Sensing (further in the future) to find channels that are not reserved for TV or by wireless mic operators



## Licensed

- Priority over unlicensed operation
- Can operate up to 250mW in UHF band.
- Direct access to reserve channels on the database system
- Broadcasters, cable TV operators, film and content providers are eligible to obtain a license.

## Unlicensed

- Limited to 50mW in both VHF *and* UHF
- No recourse if interference is experienced.
- Must make a request to the FCC to reserve additional channels in the database

## Licensed mic operators have direct access to reserve additional channels



site search .



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### White Space Plus for Operators & Users

Spectrum Bridge's vision is to empower the wireless Internet by improving the availability, access and allocation of wireless spectrum. In this pursuit, Spectrum Bridge has developed an FCC certified spectrum management platform to manage the White Space ecosystem. Spectrum Bridge offers two tiers of service designed to help you optimize the performance of your network:

**White Space Plus:** Spectrum Bridge's White Space Plus service provides advanced features designed to help you optimize the performance of your unlicensed network. This service includes planning tools to facilitate better network design and ensures the best performance in daily operation.

**White Space Basic:** This service provides radio devices with direct access to the database and channel lists, ensures FCC compliant operations and is offered for the lifetime of the device.



## Licensed mic operators have direct access to reserve additional channels

The screenshot shows a web browser window displaying the Telcordia website. The address bar shows the URL <https://prism.telcordia.com/tvws/main/home/faq.shtml>. The page features a navigation menu on the left with links to Home, FAQ, Channel Availability, and Registration Home. The main content area is titled "Frequency Asked Questions (FAQ)" and contains two questions. The first question asks how to check if a site/event/channel is receiving protection, and the answer explains the use of the Contour Visualization Tool and the Get Entities button. The second question asks if registration is needed if already registered with another TV Bands Database Administrator, and the answer states that no, registration is not needed. A map of the United States is shown, highlighting the New England area. The footer of the page includes the Telcordia logo and the text "© iconectiv, Inc. Home Legal".

Telcordia Interconnection Solutions is now doing business as iconectiv [Read more >](#)

We are here to help. [Contact us.](#)

**iconectiv**™ experience performance results

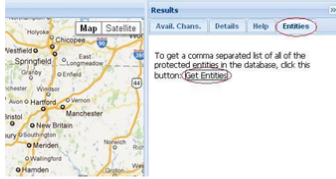
**Telcordia**

**NAVIGATION**

- Home
- FAQ
- Channel Availability
- Registration Home

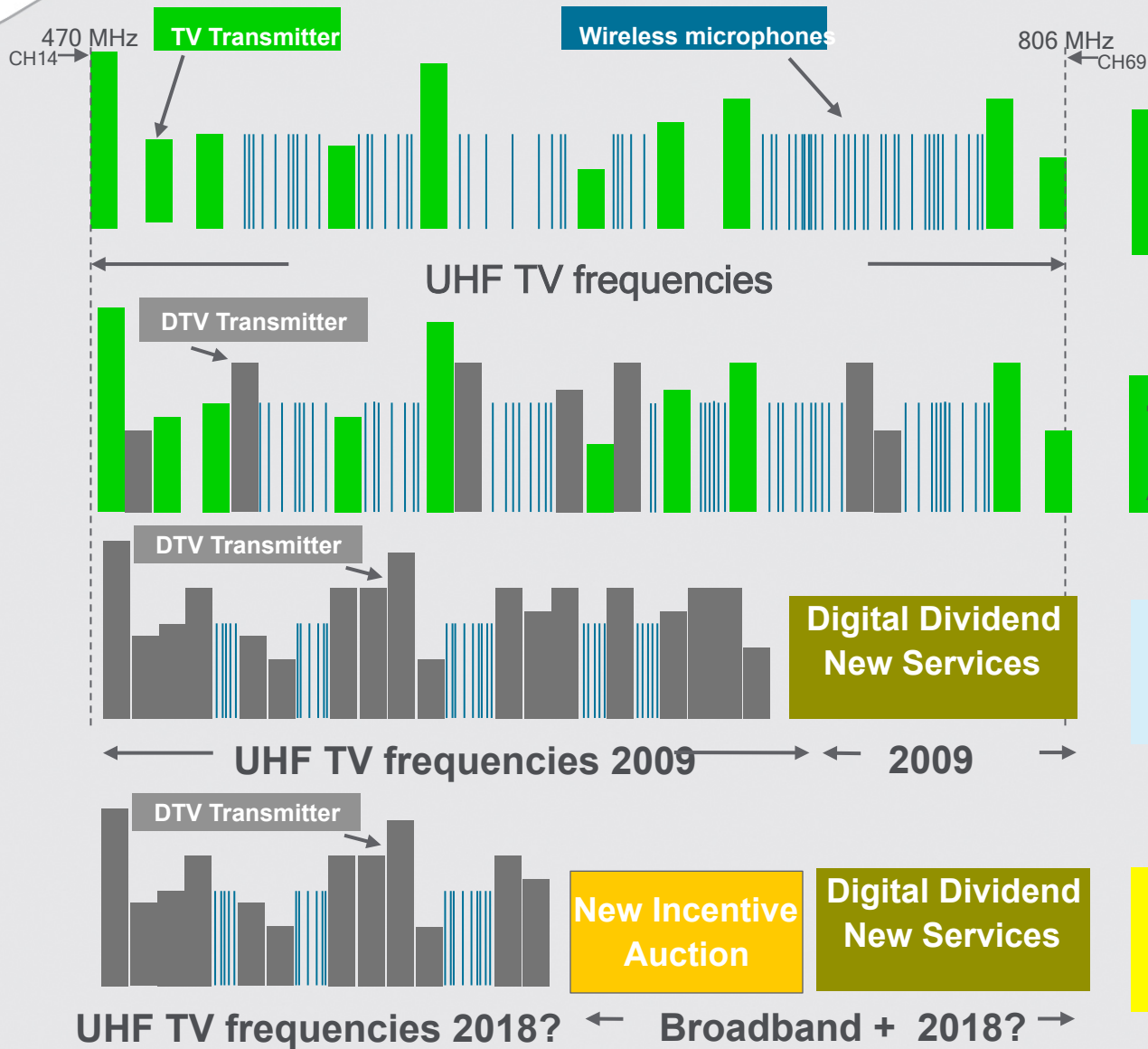
**Frequency Asked Questions (FAQ)**

- How can I check that my site/event/channel is receiving protection:
  - You can use our Contour Visualization Tool and go to your location and zoom in to see a contour for your protection IF it is during the active protection period. If it is before your event the contour will not be displayed but you can go to the Get Entities tab on the Contour Visualization Tool and click Get Entities download all the protections in the database, open the file with Microsoft Excel or another similar program and find your protection, see the picture below.



- I already registered my site/event with another TV Bands Database Administrator, do I need to register with Telcordia too?
  - No you do not. We receive registrations from all other FCC authorized TV Bands Database Administrators. See the FAQ on how to check that your site is protected with Telcordia.

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**~20 years ago:**  
Analog TV only

**Transition:**  
Analog & DTV

**Now:**  
Full Digital Scenario

**Future:**  
More Broadband services

The primary issues are

## **1) Incentive Auctions**

Basically a reallocation of the 600 MHz band, similar to the 700 MHz reallocation that occurred a couple of years ago.

## **2) Expanding eligibility for licensed operation**

This is potentially good for non-broadcast professional users such as Broadway and major touring productions.

FCC presented the auctions as a unique business opportunity for broadcasters because the broadcasters will share in the proceeds of the auction.

- Options for Broadcasters for reverse auction. Each option will have its own monetary incentive depending on market, spectrum, etc.:
  1. Give up your channel by participating in the reverse auction
  2. Move to VHF
  5. Share channel
  6. Accept additional interference
  7. TBD (Public suggestions are being considered)

Order and Report will be finalized in 2013.

Bidding and repacking auction scheduled for June 2014, afterwards payments and licensing will take place.

*How long before operators may have to vacate the 600 MHz band?*  
Probably at least: 5 years



# What Is Sennheiser Doing?

## Communicating & Innovating

Before the  
Federal Communications Commission  
Washington DC 20554

In the Matter of )

Expanding the Economic and Innovation )  
Opportunities of Spectrum Through )  
Incentive Auctions )

Docket No. 12-268

### COMMENTS OF SENNHEISER ELECTRONIC CORPORATION

Sennheiser Electronic Corporation responds to the Notice of Proposed Rulemaking released on October 2, 2012, in the above-captioned proceeding.<sup>1</sup> Sennheiser is also filing

