



A Full Fall of Spectrum Speculation, Frequency Fracas and Bandwidth Bedlam

The third quarter of 2014 ended with a rush of spectrum related actions from the FCC that are of crucial interest to broadcasters. All associated with the impending incentive auction in General Docket 12-268, the items below cover various aspects of the rules and regulations for broadcasters, wireless microphone users and white space devices:

Public Notice on Draft TV Broadcaster Relocation Fund Reimbursement Form

This Public Notice, released on September 25, previews a draft TV Broadcaster Relocation Fund Reimbursement Form. The FCC is seeking comment about the form prior to its submission to the Office of Management and Budget for form approval. Below are some summary highlights of the Public Notice:



- The Reimbursement Form will be implemented in conjunction with a Catalog of Eligible Expenses, which will provide a baseline cost for commonly purchased equipment and services.
- The FCC had previously circulated a Public Notice on a catalog of eligible expenses in September 2013, collected public comments (NAB's comments can be found [here](#)) and subsequently released a second public notice for comment in March 2014 on a related report from Widelity Inc., which produced a catalog of potential expenses and estimated costs under contract with the FCC (NAB's comments can be found [here](#)). While no further action has been taken on the catalog, the current Public Notice states that a final version of the catalog will be released prior to the incentive auction.
- Eligible broadcasters (full power and Class A) must file the Reimbursement Form no later than three months following release of the Channel Reassignment Public Notice, at which time they will submit their estimate of costs for the transition.
- The Commission will provide an initial allocation to broadcasters based on that estimate (up to 80% for commercial stations and up to 90% for non-commercial stations).
- An updated Reimbursement Form along with cost documentation for actual costs is to be submitted when seeking reimbursement against the allocation.
- A final Reimbursement Form showing total expenses must be submitted prior to the end of the three year reimbursement period as specified in the Spectrum Act.

- The Reimbursement Form will be filled out and submitted electronically and consists of context-specific questions, text boxes, etc. based on the answers to basic questions about facilities and equipment being replaced.

The Public Notice is available [here](#). Comments are due on October 27.

Notice of Proposed Rulemaking on the long term future of wireless microphones

On September 30, the FCC released a Notice of Proposed Rulemaking on the long term future for spectrum usage by wireless microphones. Following the incentive auction, there will be fewer frequencies in the UHF band available for wireless microphone operation and, as previously stated in the Incentive Auction Report and Order in May 2014, the closest two channels above and below channel 37, which had been reserved for wireless microphones, will no longer be reserved for this use after the incentive auction. The NPRM explores steps to address the future needs of wireless microphone operations in the post-auction environment.

- The NPRM asks for specific information from broadcasters and other users regarding wireless microphone uses and needs.
- The FCC proposes to adopt the European Telecommunications Standards Institute (ETSI) emission mask standards for out-of-band emissions from wireless microphones, which have more stringent out-of-band emission control than the FCC rules.
- Seeks comment on specifying separate emission masks for analog and digital microphones, or whether a single mask is sufficient.
- Requests comment on raising the power limit for wireless microphones in the VHF bands from 50 mW to 250 mW and the impact on the minimum co-channel separation distance from a TV channel assignment.
- Proposes that wireless microphones may operate co-channel closer to a television station than allowed by the current separation distance, including inside the DTV contour, in locations in which the co-channel TV signal is below a specified threshold, and requests comment on a threshold of -80dBm (measured over 200 kHz) or other suitable signal level.
- Steps that should be taken to facilitate a smooth transition for wireless microphones out of the 600 MHz band such as public education and outreach, or labeling requirements such as point of sale disclosure.
- Proposes prohibiting the manufacturing or marketing of wireless microphone devices intended for use in the repurposed 600 MHz band with an effective date of 18 months after the release of the Channel Assignment Public Notice.
- Based on current rules for wireless microphone operation in the 944-952 MHz band, proposes to make unused portions of the 941-944 MHz and the 952-960 MHz band available for licensed wireless microphone operations on a secondary basis.
- Explores use of various other frequency bands, and proposes wireless microphone operations in the BAS/CARS 7 GHz band for entities eligible to hold BAS or CARS licenses.

The NPRM is available [here](#). Comments will be due 45 days after publication of the NPRM in the Federal Register.

Notice of Proposed Rulemaking on unlicensed devices operating in the TV bands

On September 30 the FCC released a Notice of Proposed Rulemaking on amending its Part 15 rules for operation of white space devices in the television bands, the 600 MHz guard bands, duplex gap and channel 37. Some of the proposals include the following:

- Eliminates the prohibition on the use of channels 3 and 4 by fixed white space devices
- Eliminates the prohibition on personal/portable device operation on channels 14-20
- Seeks comment on whether personal/portable device operation should be permitted below channel 14
- Allows fixed devices to operate on adjacent channels to occupied TV channels (within their contours) at a maximum operating power of 40 mW EIRP, and seeks comment on a higher maximum power than 40 mW
- Allows fixed devices to operate with a maximum power of four watts EIRP at locations where there are two contiguous vacant channels by proposing that such operation would have to be within a 6 MHz band centered on the boundary between the two vacant television channels
- Proposes a series of tables providing co- and adjacent channel separation distances from the TV contour based on intermediate power levels in uniform 4 dB steps for fixed devices
- Seeks comment on whether to allow fixed white space device antennas at a height above ground of more than 30 meters in rural areas (defined as areas where at least half of the TV channels are unused for broadcast service) and whether to allow fixed white space devices in rural areas to operate with up to 10 watts EIRP
- Seeks comments on higher power operation for personal/portable devices in rural areas
- Seeks comments on relaxing the current adjacent channel emission limits
- Seeks comment on use of other propagation models to predict likely interference to TV reception
- Seeks comment on white space devices using geo-location methods less accurate than required by the current rules (+/- 50 meters)
- Proposes to organize the 11 MHz duplex gap in the 600 MHz band to start at the lower band edge with a 1 MHz buffer followed by 4 MHz reserved for licensed wireless microphones followed by 6 MHz channel reserved for white space devices and unlicensed microphones
- Proposes rules for unlicensed operation on channel 37
- Proposes operation of unlicensed wireless microphone on channels 2 to 51 at up to 50 mW with the same protection to co-channel TV stations as required for licensed wireless microphones and a requirement to meet the ETSI emission mask requirements for wireless microphones
- Proposes that unlicensed wireless microphones be allowed to operate in the 600 MHz guard bands and duplex gap at a maximum power of 20 mW
- Proposes that unlicensed wireless microphones that operate in the guard bands and duplex gap must rely on a database prior to operation and seeks comment on how to accomplish communication with the database.
- Proposes to require fixed and Mode II personal/portable white space devices to re-check the database at time intervals not to exceed 20 minutes (instead of the current once per day requirement) and elimination of the current rule allowing a white space device to continue operating until 11:59 pm on the following day if it cannot establish contact with the database

- Proposes that database administrators are required to share registration information between databases within 10 minutes (instead of the current once per day requirement)

The NPRM is available [here](#). Comments are due 45 days after publication in the Federal Register.

In addition to the above items, the FCC announced on September 26 several other related items slated for adoption at the October 17 open meeting of the FCC:

- **Aggregate Interference and Inter-Service Interference Second Report and Order and Further Notice of Proposed Rulemaking:** The Commission will consider a proceeding to address aggregate broadcaster-to-broadcaster interference and the methodology for predicting interference between broadcast and wireless operations in the same or adjacent channels in nearby markets during and following the Incentive Auction
- **Digital Low Power Television Third NPRM and Suspension Public Notice:** The Commission will consider a Notice of Proposed Rulemaking regarding measures to facilitate the final conversion of low power TV and TV translator stations to digital service, and mitigating the potential impact of the incentive auction and the repacking process.

The Commission will also consider a concurrent Public Notice suspending expiration dates and construction deadlines for all outstanding unexpired construction permits for new digital low power television and TV translator stations.

NAB Labs Futures Park Solicits Exhibitors



Know someone who might be interested in exhibiting their media-related technology R&D projects at the 2015 NAB Show? NAB Labs is now accepting applications to participate in the NAB Labs Futures Park at the Las Vegas Convention Center, Las Vegas, Nev., April 13-16, 2015.

NAB Labs Futures Park is a reserved area of the NAB exhibit floor that exclusively features media-related technology R&D efforts in progress around the world. For a quick look at last year's Futures Park, visit nablabs.org/projects. The Park is a popular venue for both exhibitors and attendees, and receives considerable press attention every year.

NAB supplies complimentary exhibit space to all organizations accepted for participation in Futures Park. Expressions of interest or questions should be directed to Katy Armstrong at karmstrong@nab.org. Applications for exhibition space must be received on or before December 5, 2014.

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NAB's Legal Guide to Broadcast Law and Regulation is available to keep you current on changes in the law, significant court decisions, FCC rules, agency policies and applied solutions. Buy it from NABStore.com.

Important Dates and Upcoming Events

[137th International AES Convention](#)

October 9 - 12, 2014

Los Angeles, CA

[2014 IEEE Broadcast Symposium](#)

October 15 - 17, 2014

San Antonio, TX