



**Society of  
Broadcast Engineers  
Newsletter  
Chapter 24  
Madison, Wisconsin**

**August 2007**



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**Next Meeting**

**Wednesday, August 15**

**Loudspeakers: Demystifying  
the "B" Chain**

*This month, Program Chair Steve Paugh will give a quick introduction to the hobby of loudspeaker design. Using the motion picture model for sound reproduction, we will explore the basic principles of sound reproduction for the home environment. Topics to be covered are amplifier sizing, driver and enclosure system fundamentals and how the principles of acoustics affect system design.*

**Dutch Treat Dinner, 5:30 p.m.**

Griff's Restaurant & Frozen Custard  
 1233 McKenna Blvd., Madison  
 (Across from Elver Park  
 No reservation - just gather together)

**Meeting and Program, 7 p.m.**

WISC Conference Room B  
 7025 Raymond Road, Madison  
 (Park in the front parking lot &  
 enter via front lobby entrance)



**Coming Up**

**Thursday, Sept. 13:** TBD

**Wednesday, Oct. 10:** Broadcast  
 Clinic/History of WHA Radio

**Wednesday, Nov. 14:** Low-Cost  
 Digital Audio Consoles

# FCC Seeks More Information on ownership rules

*By Tom Smith*

In the last month, the FCC has announced a number of actions concerning the broadcast ownership rules. On July 19, the FCC announced that it would hold the sixth on a series of hearings on broadcast ownership rules and localism in broadcast program in Chicago on September 20. The FCC has not given the time and location of the hearing or the agenda and the speaker's list. The commission usually doesn't announce the final plans until a few days before the event. The FCC had planned on six of these hearings, so this should be the last one until the next required review of the ownership rules.

On July 31, the FCC announced that it would seek comment on 10 studies on ownership and localism in broadcasting. The titles of the studies are:

1. How People Get News and Information
2. Ownership Structure and Robustness of Media
3. Television Station Ownership Structure and Quantity and Quality of TV Programming
4. News Operations
5. Station Ownership and Programming in Radio
6. The Effects of Cross-Ownership on Local Content and Political Slant of Local Television News
7. Minority and Female Ownership in Media Enterprises

*Ownership >>> continued pg. 6*



**<<6th meeting, Chicago, Sept. 20>>**


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**Meeting Minutes**

July 2007

Chapter 24 of the Society of Broadcast Engineers met on July 17, 2007 at the Broadcast Center for the Educational Communications Board. There were 20 members present of whom 16 were certified. There were three guests present.

Chair Dennis Baldrige called the meeting to order at 7 p.m. Guests attending the meeting introduced themselves. Minutes were approved on a motion by Steve Paugh and a second by Tom Weeden. Treasurer Leslie Franzen gave the current balance in the chapter's checking account and gave a brief rundown of the yearly treasurer's report; he then submitted the printed report to Chair Dennis Baldrige. The report was accepted by the chapter on a motion by Leonard Charles and a second by Clif Groth.

Sustaining Membership Chair Fred Sperry announced the recent renewals of the following sustaining members; Alpha Video, Belden Electronics Division, Roscor, Token Creek Mobile Television, Midwest Video and Madison Video Repair. The total number of sustaining members stands at 24.

Certification Chair Jim Hermanson announced the next certification exam will be held on August 10-20 and that there was one person taking the AM directional antenna exam. The next local exams will be held November 9-19 with the application deadline on September 21.

National Liaison Leonard Charles reported that there was an RF Safety course being held as a webcast for SBE chapters. The cost was \$110 per person for three or less, with the price falling to \$75 for four or more members.

Frequency Coordinator Tom Smith reported that there were no coordination requests or other coordination activity for the last month. Program Chair Steve Paugh announced that he would be presenting a program at the August meeting on loudspeakers, there was no program for September, and the speaker for the October meeting at the Broadcaster's Clinic would be Randall Davidson, the author of a book on the history of WHA radio.

Steve also announced the Channel 3 would be holding "Dumpster Dive" at its station in order to give away some surplus equipment. Jim Hermanson announced that Pro Video was looking for a part-time engineer.

The meeting was adjourned and Tom Sibenaller of Roscor introduced Steve Strassberg of Strassberg and Associates, who presented a program on transmitting digital audio including 5.1 surround sound and dial norm level control.

Respectfully Submitted, Tom Smith, Secretary

## September SBE Chapter 24 newsletter

**Copy deadline: Friday, August 31**

**Folding party: Wednesday, September 5**



E-mail submissions to John Salzwedel  
at [tcp@tokencreek.com](mailto:tcp@tokencreek.com)

Please submit articles as Word or text documents or by pasting copy into the body of an e-mail. Pdfs also accepted. For graphics, jpgs preferred.

## FCC issues white spaces study

By Tom Smith

The FCC has issued two reports on equipment tests concerning interference from proposed devices to allow broadband Internet transmissions in the so called white spaces in the TV band. One of the reports was on tests to measure interference from the broadband devices into TV's connected to cable systems. The second was on tests of two prototype devices on their ability to detect off-the-air DTV signals and wireless mike transmissions.

In the test for interference to reception to cable TV reception, the report stated that the sets received interference for the test generator at both 2 and 10-meter distances. This interference varied depending on the orientation of the set in relation to the test generators antenna. The tests were very real world and were conducted in a single-family home and a townhouse with gypsum firewalls between the set and the generator. They used three different sets and a cable box to receive the cable signal. The generator emitted a 5 MHz wide OFDM carrier similar to that of a WIMAX transmitter. They also conducted a test outdoors with no structure between the set and the generator.

The second report was on the test of the two prototype WIMAX transmitters and receiving devices. These tests were to test sensing systems to be used to detect over-the-air NTSC and DTV signals and wireless mike operation. Neither prototype was able to reliably detect transmissions from TV stations, even when there was a nearby set receiving the station reliably. Neither device meets the minimum threshold level that the FCC has specified even though one box was somewhat better than the other. In detection of wireless mikes, one device was unable to detect wireless mikes and the second device,

*White spaces* >>> continued pg. 5



## Amateur Radio News

compiled by Tom Weeden, WJ9H

### BPL Fight Continues

On July 31, the American Radio Relay League filed its reply brief at the U.S. Court of Appeals for the District of Columbia Circuit. This brief follows the FCC's brief that attempted to rebut the ARRL's challenge to the FCC's Broadband over Power Line (BPL) rules enacted in late 2004 and affirmed by

the agency in 2006. According to ARRL General Counsel Chris Imlay, W3KD, "The FCC's brief does not accurately describe ARRL's arguments concerning harmful interference." The ARRL, in its reply brief, accuses the FCC of, "engaging in misdirection – rebutting hyperbolic arguments ARRL never made, refusing to address the precedents ARRL cited and attempting to rewrite the Orders as if they made factual rather than legal determinations."

- The ARRL's reply brief looked at four main points:
- The FCC's failure to reconcile the Orders with the FCC's decades-old interpretation of Section 301.
- The FCC's failure to justify its nondisclosures of portions of the studies on which the Orders were expressly based.
- The FCC's failure to justify its refusal to consider contrary evidence, as well as a proposed alternative to its extrapolation factor for measuring interference.
- The FCC's failure to justify its summary dismissal of an alternative that could have accommodated BPL without causing the same harmful interference.

The ARRL's brief states that this case "is about an unlicensed operator's legal duty to cease harmful interfer-

ence once it arises, not the standard for authorizing unlicensed transmissions."

For decades, the FCC has interpreted Section 301 to mandate two restrictions on unlicensed operators: The proposed operations will not have a significant potential for causing harmful interference, and; if harmful interference does occur, the unlicensed operations are to cease immediately. For the first time ever, the FCC excluded mobile operators from the second part of the mandate.


ARRL asked the Court in its brief "to enforce the FCC's 'duty to consider responsible alternatives to

its chosen policy and to give a reasoned explanation for its rejection of such alternatives.'" Pointing out the "multiple legal errors in the Orders," the ARRL stated in the brief that the FCC "require[d] a remand.

When the Court remands the Orders, it should direct the FCC to give this alternative the careful consideration required by law"

*Excerpts from the American Radio Relay League's Web site at arrl.org.*

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## From the Chair

Dennis Baldrige



Why should you attend the monthly SBE meetings? After all, who needs another night out, especially after putting in a full day at work?

Attendance at regular chapter meetings and special events offers you a chance to expand your technical knowledge through industry presentations, tours and the sharing of practical tips and tricks with your peers. It is also a great place where colleagues can become lifelong friends. The business meeting, program and interaction with fellow SBE members provide an atmosphere for professional development.

When we think of improving our broadcast knowledge, we rarely consider a business meeting an integral part. However, this part of the meetings can provide pertinent FCC and technical updates. The frequency coordination updates, SBE National activities, plus a host of other topics addressed, often yield relevant information keeping attendees informed of the most up-to-date standards.

The programs arranged by our local program committee are always a highlight of the evening. Some presenters are from nationally recognized manufacturers and cover state-of-the-art topics or equipment. Others discuss the implementation of new broadcast standards, their advantages and challenges.

Frequently, the social interaction between members encourages learning. Fellow members can be our mentors. I am continually amazed at how often I hear someone talking about a particular topic or problem along with potential solutions and then encounter a similar situation myself the next week. What a tremendous asset to have colleagues with whom to "knock" around ideas.

The month's meeting is by one of our own members, Steve Paugh. The topic is Loudspeakers & the "B" Chain. I believe this will be an excellent opportunity to sharpen our skills on speakers and the essential parts of a playback system. Come and bring a friend!

## FCC issues 700 MHz rules

By Tom Smith

On July 30, the FCC issued rules and a new band plan for the 700 MHz frequencies that will become available with the end of the DTV transition. The 700 MHz band covers TV channels 52 through 69. Channels 52-59 are divided into 6 MHz bands, with three blocks of frequencies taking two channels and two blocks have only one channel. One 12 MHz, or two-channel block, has been auctioned by the FCC, as has one 6 MHz block. That block was sold to Qualcomm and is being used for the MediaFlo service.

The biggest change for the channel 52-59 band is that the FCC has reduced the size of the market areas allowing for more licenses to be auctioned. There were a number of changes to channel 60-69 band. The two 12 MHz paired blocks of the public safety band has been moved down in frequency by a megahertz to place a one MHz guard band at the top of upper half of the public safety band. Each half of the public safety band was divided in half with the bottom half being allocated to one nationwide broadband license and the other half to narrowband licenses to public service entities. The broadband license will be auctioned to a private license holder that will provide commercial broadband service in return for provide a national broadband public safety system. Commercial use would be interrupted when needed for public safety. This action is in response from a proposal by a company called Frontline. Former FCC Chairman Reed Hundt is one of those involved in the formation

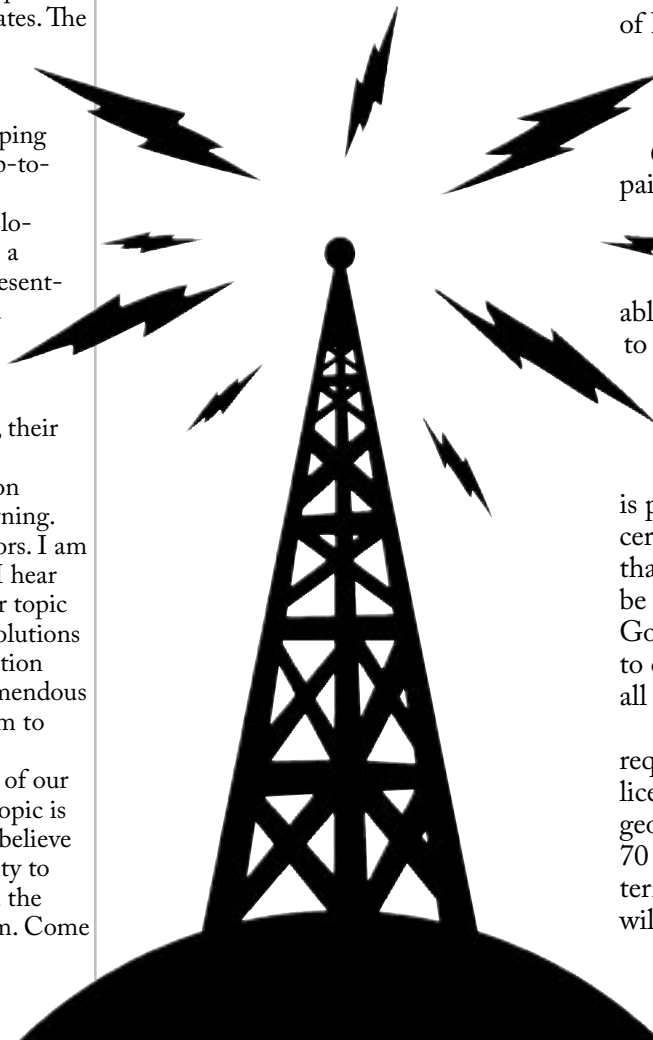
of Frontline and former FBI director Louis Freed was hired to promote its public safety agenda.

Another part of that channel 60-69 band was divided into a pair of 11 MHz blocks. The FCC will require that this band to have open access. That means that you would be able to purchase any device suitable to work on that band from any manufacturer and it would be allowed access by the subscriber.

This would be different than the current way wireless service is purchased, where you have to buy certain devices to work on the network that you are subscribing to. There will be 12 licenses auctioned for that band. Google has been the major proponent to open access and may bid on some or all of the licenses.

The FCC has set build-out requirements. The FCC will require licensees to cover 35 percent of their geographic area within four years and 70 percent by the end of their license term. The licensees of the band that will require open access will have to

700 MHz >>> continued pg. 6







# FCC Rulemakings

compiled by Tom Smith

## PROPOSED RULEMAKINGS

*MB Docket No. 07-148  
DTV Consumer Education Initiative*

The Commission has adopted a Notice of Proposed Rulemaking concerning various proposals raised in a letter to all the Commissioners from Congressman John Dingall, Chairman of the House Committee on Energy and Commerce, and Edward Markley, Chairman of the House Subcommittee on Telecommunications and Internet. The letter was dated May 24, 2007 and expressed concern about the public's knowledge of the DTV transition. They stated that they did not want people to wake up on February 18, 2009 and not know why their television was not working. They likened it to the Y2K preparations. They discussed the fact that the FCC had asked for only \$1.5 million for consumer education to inform a nation of 300 million people, while Berlin, Germany spent nearly \$1 million to educate 3.4 million people. They also chastised Chairman Kevin Martin for saying it was the National Telecommunication and Information Agency's responsibilities, not the FCC to conduct consumer education. They asked the FCC Chairman to update them on his plans for DTV education by June 11.

The Commission seems to be handling the Congressmen's letter like a petition for rulemaking as the items in the proposed rulemaking are the same as the actions that were requested in the letter. The rulemaking asks for comments on requirements for broadcasters to provide public service announcements on the transition, including screen crawls. They ask when and

how often the announcements should be made, if stations should report on their education efforts, if all stations should be required to provide the same level of effort and if penalties should be assessed for non-compliance. For cable and satellite providers, the Commission asks if they should be required to insert information about the transition in the bills. For consumer electronics manufacturers, the rulemaking would require them to insert information in their packaging. Finally, the Commission asks about training programs for retailers and their staffs on the NTIA coupon program.

Commissioners Michael Copps and Jonathon Adelstein issued statements saying that the deadline had been set a year and half ago and there had been little action on education until the now. Copps noted that a recent survey by the Association of Public Television Stations found 61 percent of the population unaware of the DTV transition, while 80 percent of British people were aware of their transition, which occurs regionally between 2008 and 2012.

The Commission adopted this rulemaking on July 21 and released the notice on July 30. Comments will be due 30 days after publication in the Federal Register with replies due 15 days later.

*From FCC Releases (www.fcc.gov)*

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*White spaces >>> continued*

while able to detect wireless mikes, it was not able to do so reliably. Both devices were examples of something in early development and rather crude. Considering the resources of the companies interested in getting the devices to market and the pressure they have been exerting to get the TV white spaces open, they do not seem to be very far along in their research and development. The writers of the report stated that there should not be any further consideration and testing of these devices for the time being. With the earlier FCC report concerning interference susceptibility to DTV sets not showing great improvement over NTSC sets, it would seem that the move to open the TV white spaces to unlicensed devices should be slowed down or put on hold. We should know by the end of October, as that is when the FCC had proposed to issue the rules on unlicensed devices. The FCC is asking for comments on these reports by August 15, with replies by August 27.

*Links to the reports are available on the FCC's home page.  
From FCC Releases (www.fcc.gov)*

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Ownership >>> continued

- 8. The Impact of the FCC's TV Duopoly Rule Relaxation on Minority and Women Owned Broadcast Stations 1999-2006
- 9. Vertical Integration and the Market for Broadcast and Cable Television Programming
- 10. Review of the Radio Industry, 2007

Comments are due on October 1 with replies due on October 16. Democratic FCC Commissioners Michael Copps and Jonathon Adelstein issued statements objecting to the length of the comment period. They stated the more time should be allowed for those wishing to comment to prepare their comments due to the volume of the studies. In one final action concerning ownership rules, the Commission issued a Second Further Notice of

Rulemaking at the request of the Diversity and Competition Supporters (MMTC), which filed a motion of withdrawal of an earlier Further Notice of Proposed rulemaking and for a revised issuance of the Notice of Rulemaking. The FCC did not rescind the earlier notice, but will seek comments on 13 proposals that the group has filed with the FCC. MMTC consists of 18 groups that represent minority media and policy organizations. These groups represent Latinos, Native Americans, African-Americans and women. The comment period is the same as that for comments on the 10 studies. Further information can be obtained from links to the various notices and studies on the home page of the FCC's Web site.

*From FCC Releases (www.fcc.gov)*

700 MHz >>> continued

reach 40-percent coverage in four years and 75-percent coverage at the end of the 10-year license term. If the four-year coverage requirement is not met, a license term could be reduced from 10 years to eight years; if the required build-out is not made by the end of the license term, the unserved areas could be reauctioned.

The remaining part of the rulemaking concerns the method of auction and the setting of reserved prices. The full Report and Order has not been released and should provide more detail than a five-page press release.

*From FCC Release (www.fcc.gov), with additional information from the Washington Post (www.washingtonpost.com)*

### Green Bay Flight Service Station closed

The FAA has closed the Green Bay Flight Service Station, which was the FAA notification point for all tower light outages and restoration reports. For all Wisconsin-based towers, the new reporting number for tower light outages now changes to 877-487-6867. Stations with current open notifications to the Green Bay FSS will need to call this new number when the notification can be cleared.

new number  
**877-487-6867**



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## SBE Chapter of the Air

HamNet meets the second Sunday of each month at 0000 GMT on 14.205 MHz. Hal Hostetler WA7BGX is the Control Station. Any amateur operator is welcome and encouraged to participate.

## Using the SBE logo

SBE chapters and members may use the SBE logo on business cards, letterhead and chapter newsletters. When referring to a chapter, it must be used with that chapter's name or number adjacent to the logo. Members must put "Member of" or "Certified by" adjacent to the logo.

The proper logo must be used in any case. The correct logo can be obtained only through the SBE National Office. Send your request to Angel Bates at abates@sbe.org.

## Certification Exam Session Dates

The SBE National Certification Committee has announced exam session dates. Check the list below for the exam period that is best for you. For more information about SBE Certification, see your Chapter Certification Chair or contact Megan Clappe, Certification Director at the SBE National Office at (317) 846-9000, or mclappe@sbe.org.

Exam Dates	Location Application	Application Deadline
November 9-19, 2007	Local Chapters	September 21, 2007




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## CHAPTER 24 SUSTAINING MEMBERS

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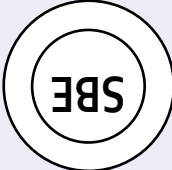


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Contributors this month: Tom Smith, Tom Weeden, Steve Paugh and Dennis Baldridge. Thanks to Leonard Charles for his work on the Chapter 24 Web page.

FIRST CLASS MAIL

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