



April 2007

Society of
Broadcast Engineers
Newsletter
Chapter 24
Madison, Wisconsin

In this Issue

Candidate Bios	2
Set-top rules	3
Minutes	4
FCC Rulemakings	5

Next Meeting

Wednesday, April 11

Loudspeakers: Demystifying the "B" Chain & Elections

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 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 needed

Meeting & Program 7 p.m.

WISC Studio 3
7025 Raymond Rd., Madison

*Park in front parking lot; enter via Stage
Door located on south side of main building*

Upcoming Events

Wednesday, May 16: Discovery
MediaWorks Tour

Thursday, June 22: SBE Summer
Picnic

Tuesday, July 17: DTV Audio



CAST
your
vote

*By Steve Paugh,
Nominations Chair*

Enclosed with this newsletter is the official ballot for the SBE Chapter 24, 2007 election of officers. The deadline for returning your ballot to the nomination chair is Monday, April 23, 2007. The nominations committee will count the ballots on the evening of Wednesday, April 25, 2007 at WISC-TV.

You may turn in your ballot in person during the April 11, 2007 chapter meeting. If you are unable to attend the April meeting, you may mail your ballot directly to me at:

Steve Paugh C/O WISC-TV
Ballot
7025 Raymond Road
Madison, WI 53719

Please indicate "Ballot" on the envelope and we will hold your ballot unopened until the official counting process. Your ballot must be in our possession before we begin the counting on April 25. Remember that your membership must be current to be eligible to vote. Your membership number must be entered on the ballot for it to be valid. Thanks to the nomination committee members Jim Hermanson and Leonard Charles.

ballot enclosed • candidate bios on 2

Chapter 24 Officers

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Clifford Groth (Clear Channel Radio)
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Tom Smith (WHA-TV)
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Treasurer

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Candidate Biographies

Dennis Baldrige – Candidate for Chairperson

Dennis has been working in the field of broadcasting for over 29 years. He started as a service technician for broadcast and two-way communications equipment and now is self-employed as a contract engineer for several AM & FM stations in southwest Wisconsin. He is presently certified as CPBE and CBNT with the SBE. Dennis has been a member of the SBE-24 for the past 12 years and is currently vice chair. Dennis has a Master of Arts degree in science. He teaches science courses related to the broadcasting field. These include college electronics, algebra, advanced mathematics and physics.

Dennis's hobbies include amateur radio and music. He is a former member of the Madison Symphony Orchestra and La Crosse Orchestra and teaches music courses several times a year at the International Academy of Music in Indianapolis, Indiana.

Clifford (Clif) Groth – Candidate for Vice Chair

Started in radio in 1958. Obtained First Class License in 1964, working as CE and later VP Engineering for Goetz Broadcasting while doing contract work. Became Director of Engineering for Marathon Media when they purchased the Goetz properties. Short affiliation with NRG Broadcasting. Currently CO/Engineer for Clear Channel Radio Madison. SBE member since 1965.

Tom Smith – Candidate for Secretary

I am running for Secretary of Chapter 24. I previously held the positions of chairman and vice chairman and am completing a second year as serving as Secretary. I have also been the Chapter 24 Frequency Coordinator since 1992. I have been a member of SBE since 1970 and am a Certified Professional Broadcast Engineer. I started as a broadcast engineer in 1969 and have worked in TV and radio stations in Fond du Lac, Wausau and Madison. I have also done contract technical services for radio stations, video and audio facilities. I have been on the engineering staff of WHA-TV for the last 31 years where I am a maintenance technician and also do some videotape editing. I have attended numerous schools and conferences and have been involved with the Broadcasters Clinic serving on the Program Committee as well as doing audio and video for over 15 years.

I am married and have two daughters, one who is married and is a physical therapist and the other who is a UW student. My wife is a bank teller for the Bank of Sun Prairie and has spent nearly 34 years putting up with me working the weekends and nights that this industry requires. I would like to remain involved in the leadership of Chapter 24, as I believe this is one of the best chapters in the country and I would like to help it remain so.

Leslie Franzen – Candidate for Treasurer

My name is Leslie Franzen, and I am currently treasurer of SBE Chapter 24. I would like to continue on in this position for another year. Presently I am employed at WMTV as an Operations Technician. In my free time, I like to cook, read, and write. Thanks for your support.

On March 12, the National Telecommunications and Information Administration released the rules for the DTV set-top box coupon program. Starting January 1, 2008 all U.S. households will be eligible for two \$40 coupons to be used toward the purchase of up to two digital to analog converter boxes. This program will last until \$990 million allocated for the program is available. After that, another \$510 million will be available for use by homes that rely on over-the-air TV only and no cable or satellite service. The money will be released by Congress after the initial money is spent.

The NTIA released three fact sheets, one for consumers which explains the DTV transition and how the coupon system works. The second fact sheet is for retailers and explains their obligations such as training employees and tracking the processing of the coupons. The retailer's fact sheet also explains how they can be certified to participate in the program. The consumer fact sheet is two pages long and the retailer's is one page long.

The third fact sheet is for manufacturers of the set-top boxes and nine pages with the appendixes. The fact sheet directs the manufacturers to the appendixes for the specifications for the boxes and gives the directions for getting technical approval which will require each manufacturer to submit a notice of intent, a description of the set-top box and finally two set-top boxes.

Appendix one describes the minimum requirements for the set-top box which includes interference and sensitivity standards, and output standards. The output standards require the box to support all aspect ratios, program guide information, closed captioning, RF and composite video and audio out, a remote control and have a tuning range of channels 2-69. There is also a requirement for a LED light it indicate the box is on and an energy requirement that the box use tow watts or less when in the sleep mode. An owner's manual and RF cable must also be supplied.

In the second appendix, a chart is given of what extra feature are allowed or disallowed. Some extras that are allowed include a smart antenna interface, RF pass through for analog signals, s-video out, stereo audio in the RF output, video cables and an upgraded universal remote control. What they may not have in the set-box is a video display, any recording capability, analog component, computer or digital output connectors. In other words, the set-top box cannot support HDTV and only have a standard definition output.

In recent hearings by the House committee overseeing the DTV transition, there are still questions if the coupon program would cover all the TV sets using over the air signals and there were questions by some if after figuring for those who don't apply for coupons, will there be more coupons then needed. There was discussion on the lack of action in properly informing the American Public of the transition.

Thomson's RCA Division has announced that they are readying a set-top box that will meet the government's requirements. The DTA800 will include on-screen program information, parental controls, closed captioning and the smart antenna interface. Pricing and availability with depend on retailer interest.

—From NTIA Releases (www.ntia.doc.gov), Thomson-RCA, with additional information from TV Technology (www.tvtechnology.com)



for more info, visit www.ntia.doc.gov

March 2007 Meeting Minutes

On March 15, 2007, Chapter 24 of the Society of Broadcast Engineers meeting at the studios of Clear Channel's Madison Broadcast Group. There were 12 members present of which 9 were certified. There were also 4 guests present.

Chair Cliff Groth called the meeting to order at 7:05 PM. The minutes were for the February meeting were accepted on a motion by Stan Scharch and seconded by Leonard Charles and Steve Paugh.

In an item of new business, Cliff announced that the NAB had asked for a reprint of Gary Timm's article from the last newsletter on EAS Encoder Updates for DST. As this was Gary's article and he had published it in the Milwaukee newsletter, it was felt that it was up to Gary to authorize any republication.

Treasurer Leslie Franzen reported on the current balance in the chapter's accounts (\$4,886.94) and noted that a couple of expenditures were paid.

Frequency coordinator Tom Smith gave a report on the current status of the proposed use of unlicensed devices in the TV bands.

Nomination Chair gave an update on the slate of nominees for office in the upcoming chapter elections. The following nominations were made as of the meeting; Dennis Baldrige for Chair, Cliff Groth for Vice-chair, Tom Smith for Secretary and Leslie Franzen for Treasurer.

It was announced that that the newsletter deadline for April would be March 30th with the folding party on April 4th.

Vicki Kipp reported on certification stating that Jim Hermanson had completed review of one re-certification application. She also said that applications were concluded for the April 17th certification test at NAB and that the application deadline for the June 1-11 test period would be April 20th.

Sustaining membership Chair Fred Sperry reported that Maney-logic had renewed its membership and that there are currently 24 sustaining members.

Leonard Charles gave the report and a handout on the SBE activities at the NAB and a report on the activities of the Association of Maximum Service Television (MSTV) and the Wisconsin Broadcasters Association. He noted that the MSTV held a web conference on the DTV transition and would give a presentation for managers and engineers at the WBA summer conference as part of their regional conferences on the DTV transition. In other SBE news, Chuck noted that the Association of Woman in Broadcasting had named Lucinda Hunter Cavall as Woman Engineer of the Year.

In WBA news, Chuck gave the program for the engineering day at the WBA Summer Conference. The morning session will be a presentation on HD radio by Broadcast Electronics and a presentation by Jerry Whittaker from the ASTC on DTV. The afternoon session will be on engineering management by Terry Baun.

In stations announcements, Fred Sperry announced that Terry Baun would become the new Director of Engineering for the Educational Communications Board.

The meeting was adjourned and the evening's program presented. The program was on Optimizing Networks for HD-Radio and was presented in three parts with Dylan Oliver of Primavera giving a presentation on basic networking fundamentals, Kevin Campbell of APT giving a presentation on audio compression and Anton Kapela of 5nines Data giving a presentation on data transmission redundancy.

*Respectively submitted,
Tom Smith Secretary*

USDTV folds

By Tom Smith

On March 5, USDigital Inc. announced that it was ceasing operation of the pay-TV service USDTV. This ended a four-year attempt to provide a subscription service using a portion of the digital spectrum of over-the-air TV broadcasters. The service was shut off on Monday, March 12 and left 7,000 subscribers in Salt Lake City, Albuquerque, Las Vegas and the Dallas-Fort Worth area without service. USDTV provided 12 channels normally supplied by cable or satellite services to homes using a proprietary DTV box. This box provided the USDTV service as well as local DTV programming. The channels that USDTV subscribers received at a cost of \$19.95 a month were ESPN, ESPN2, Discovery, TLC, The Disney Channel, Toon Disney, Lifetime, Lifetime Movie Network, HGTV, The Food Channel, Starz and Fox News.

On the company's Web site, they offered their subscribers a \$50 gift card if they signed up for DirecTV or Dish Network's satellite services or, for Utah customers, free installation and an additional outlet for free for the first six months when signing up with Comcast Cable. For \$30, they also offered to have a technician come to the subscriber's home and convert the set-top box to continue to receive local DTV broadcasts. Some early boxes that were sold at Wal-Mart stores were designed to operate on local broadcasts without any special authorization according to early information about the USDTV service with later boxes rented and requiring

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continued from previous page

authorization from USDTV to operate.

The original operators of USDTV ran into financial problems in July of 2006 having received financial backing from a number of media groups earlier that was purchased by NexGen in September of 2006. Due to fourth quarter loss in 2006 by another NexGen business, they were no longer able to fund USDTV.

Within a few days of USDTV's announcement, another pay-service using the TV broadcast band was sold. MovieBeam, Inc. sold Moviebeam, which uses a portion of the PBS datacast service on PBS analog TV stations, to Movie Gallery for undisclosed terms. To receive the MovieBeam service, subscribers must purchase a set-top box for \$199, which is preloaded with 100 movies with 10 new movies replacing older movies each week. They then pay per view starting at \$1.99. Movie Gallery plans to extend the service to IP and Internet delivery. MovieBeam is available in 29 cities

All this happened as articles came out in the *Washington Post*, *Boston Globe* and *Newsweek* about receiving the best HDTV via an old-fashionws TV antenna from over-the-air broadcasts and the Washington Post article even mentioned that over-the-air DTV could give a larger selection of viewing choices than analog TV because of multicasting.

—From USDTV Web site (www.usdtv.com), *Desert Morning News* (www.desertnews.com), *TV Technology* (www.tvtechnology.com), *CED Broadband Direct* (www.ced.com), *Washington Post* (www.washingtonpost.com), *Boston Globe* (www.boston.com)



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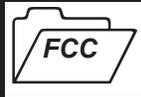
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FCC Rulemakings

Compiled by Tom Smith

MB docket No. 99-325

Digital Audio Broadcasting System and Their Impact in the Terrestrial Radio Broadcast Service

On March 22, the FCC adopted the final rules in digital audio broadcasting. Stations have been operating their digital audio services under interim authorization. In this action the FCC formally adopted the IBOC standard as the digital technology for AM and FM stations.

Other actions in this final rulemaking include the following:

- Refrains from imposing a mandatory conversion schedule for stations to start digital operations.
- Allows FM stations to operate in the extended hybrid mode
- Requires that each station simulcast its analog signal in digital in at least the same audio quality.
- Adopts a flexible bandwidth policy to allow stations to transmit high quality audio, multicast and datacast at the station's discretion.
- Allows stations to lease digital bandwidth to third parties.
- Applies existing regulation for programming and operations to the free digital program streams.
- Allows nighttime digital operations for AM stations.
- Dismissed several petitions for reconsideration and rulemakings.

Finally, the notice requests comments on limits to subscription services a station may offer and if any new public interest requirements should be adopted.

The full Report and Order has not been released, so until then we will not know what the exact requirements will be for these rulings. The two issues that the FCC ruled on that will have the most interest will be AM nighttime operation and the flexible bandwidth operation.

—From FCC release (www.fcc.gov)

WT. Docket No. 99-87

Private Land Mobile Radio Systems Transition to 6.25 kHz Narrow Band Technology

In this action, the FCC declined to set a fix date for private land mobile radio systems in the 150-170 and 470-512 MHz bands to transition to 6.25 KHz narrowband technology. Currently users are being adopting 12.5 KHz technology with later migration to 6.25 KHz bandwidth. The FCC did move the date to start certification of 6.25 KHz technology from January 1, 2005 to January 1, 2011. The FCC suggests that users start using the technology by January 1, 2013, but set to date to start. The FCC set the later date so manufacturers had time to develop and test equipment after finalization of the rules in the near future.

While broadcasters using the auxiliary bands in this frequency groups will be allowed to use wider bandwidth, these rules will determine how the bandwidth is partitioned.

—From FCC release (www.fcc.gov)

Unlicensed bills introduced

By Tom Smith

Two new bills were introduced recently to allow unlicensed operation on the broadcast TV band. The first was introduced by Congressman Bobby Rush of Chicago and is called the "Interference Production for Existing Band Devices Act of 2007." This bill acknowledges the widespread use of wireless mics and the need to protect them. The bill will allow fixed location certified devices to operate on TV channels between 54 and 698 MHz in rural areas, no sooner than February 17, 2009. The bill requires the equipment to be certified by the FCC and as part of the certification, the device may not cause interference to incumbent certified low-power auxiliary devices, prohibits use on any TV channel in use by an incumbent certified low-power auxiliary device, and requires the FCC to find additional ways to protect incumbent certified low-power auxiliary devices, such as reserving certain channels for exclusive use by these devices. The bill would not allow the use on non-fixed devices no sooner than 36 months after the FCC's first approval of fixed devices.

A certified device would be any unlicensed device that is tested under the FCC's testing requirements and is then certified by the FCC. An incumbent certified low-power auxiliary device is any certified wireless microphone, personal wireless monitor or other audio auxiliary equipment operating in the TV band for use for entertainment, religious, newsgathering, governmental, business or consumer purposes to provide audio transmission over distances of 100 meters. This bill defines a rural area as any rural service area or rural statistical area as defined by the FCC.

From the language in the bill, it would seem to expend the allowable use of broadcast auxiliary use to beyond those allowed under part 74, which is what

has happened anyway by the lack of enforcement by the FCC.

The bill, HR 1320, has been endorsed by Shure, which is headquartered near Congressman Rush's district.

The second bill introduced is one that was expected from Congressman Jay Insee. The bill, the "Wireless Innovation Act of 2007," would require the FCC to complete its proceedings and issue a final order on ET Docket No. 04-186 "the Matter of Unlicensed operation In the TV Broadcast Bands," no earlier than 180 days after the bill is enacted or by October 1, 2007, which was the FCC's own deadline. The FCC would be required to permit unlicensed non-exclusive use of eligible frequencies between 54 and 698 MHz at the earliest feasible date, but no later than February 18, 2009, establish technical standards to protect incumbent licenses from harmful interference, have unlicensed devices comply with certification processes, including accepting applications for certification by December 1, 2007 with a 180-day requirement to review and dispense such applications.

The FCC would also be required to conduct whatever interference tests it deems necessary for determining the potential for harmful interference to incumbent licenses and shall permit both fixed and personal/portable unlicensed devices by the earliest technically feasible date, but no later than February 18, 2009.

Co-sponsors of Islee's bill include Tammy Baldwin (D-WI); Marsha Blackburn (R-Tenn.); Mike Rogers (R-Maine); Rick Boucher (D-VA), and Paul Gilmore (R-Ohio). The bill has not received a number yet. A similar bill in the Senate, sponsored by John Kerry (D-Mass.) and Gordon Smith (R-Ore.), is S 234.

On March 12, the City of New York

filed with the FCC reply comments on ET Docket 04-186 expressing its concern about the use of unlicensed devices in the TV bands and the effect on wireless mic usage and the need to protect the multitude of users in New York. The city noted that over 400 wireless mics are used in the Broadway Theater district alone. They asked the FCC to conduct extensive testing before allowing unlicensed wireless devices in the TV bands. Disruption of the use of wireless mics could have an economic impact on all the Broadway, TV and film production that occurs in New York.

On March 13, *The Washington Post* did an article on the proposed operation of unlicensed devices on the TV band. This article talked mainly on allowing TV's "white space" to be used for Internet access and noted that the idea was being pushed by a coalition of six partners, which include Microsoft, Google, Dell, Hewlett-Packard, Intel and Phillips. The article barely mentioned the interference issues.

—From Congressional Releases (Thomas.loc), *Washington Post* (www.washingtonpost.com)
FCC Release (www.fcc.gov)



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May SBE 24 newsletter

Copy deadline: Friday, March 30
Folding party: Wednesday, April 4

E-mail submissions to John Salzwedel
at tcp@tokencreek.com



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.

- CHAPTER 24 SUSTAINING MEMBERS**
- THANKS TO OUR SUSTAINING MEMBERS**
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 - Belden-Networking Division
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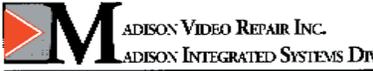
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Contributors this month: Tom Smith and Steve Paugh.
Thanks to Leonard Charles for his work on the Chapter 24 Web page.

FIRST CLASS MAIL




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