



May 2007

Society of
Broadcast Engineers
Newsletter
Chapter 24
Madison, Wisconsin

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Next Meeting

Wednesday, May 16

Discovery Mediaworks Tour
& Ballot Collection

Joe Di Mario, Director of Technology for Discover Mediaworks, will give us a tour of their Madison facility. Discover Mediaworks creates and produces audio and video for the broadcast and corporate markets, using conventional and leading edge technologies.

We will also have the final collection of ballots for election of officers at this meeting

Dutch Treat Dinner 5:30 p.m.
Happy Wok
17 Eastpark Court, Madison
No reservation needed

Meeting & Program 7 p.m.
Discover Mediaworks
5100 Eastpark Blvd., Suite 100,
Madison

See page 2 for directions

Upcoming Events

Thursday, June 14: SBE Summer Picnic

Tuesday, July 17: DTV Audio

Wednesday, Aug. 15: Demystifying Loudspeakers

NAB NOTES

Musings from the walls and halls of NAB2007

By Steve Paugh



The all-day Saturday Ennes Workshop on "Everything Audio" was an excellent mix of old and current technology demonstrations. The practical examples of the use and miss-use of Dial Norm and Dynamic Range value settings when applied to Dolby Digital metadata was a real "ear" opener. A topic of considerable debate was the suggestion to build a fully 5.1 channel infrastructure for your audio plant.

The Sunday sessions covered the looming 2009 analog shut-off date. The presentations encouraged us to work with renewed effort, that the analog shut-off date is real and that if you don't assume it is real, you are in denial. If you are not nearing the completion of your digital build-out or have plans and confirmed contracted services scheduled, you are in trouble. A number of scenarios were presented on just how tight the time, materials and resource allocations are going to be as we get closer to the end date.

The one item of interest I saw in

the exhibit floor was a real-time lip-sync audio video analyzer. This box takes embedded SDI and compares the movement of the speaker's lips with the spoken audio and gives a reading showing the number of frames of error and whether it is leading or lagging. It gives readings with an accuracy of +/- one-half frame, and sells for less than \$2,000. All that is required is

a head shot of the talent and a normal speaking voice for about 10 seconds. No special scripted text is required. An HD-SDI version is expected soon at the same price point.

The only drawback of the annual NAB show is the sheer size of the event. The number of concurrent sessions, professional society meetings and special events offered makes attending all of them impossible. The best way to describe attending the NAB is to imagine the annual Madison Broadcast Clinic lasting six days and covering an area the size of the UW Engineering campus and Camp Randall Stadium. See you at the Broadcast Clinic!

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Meeting directions

Meeting & Program 7 p.m.

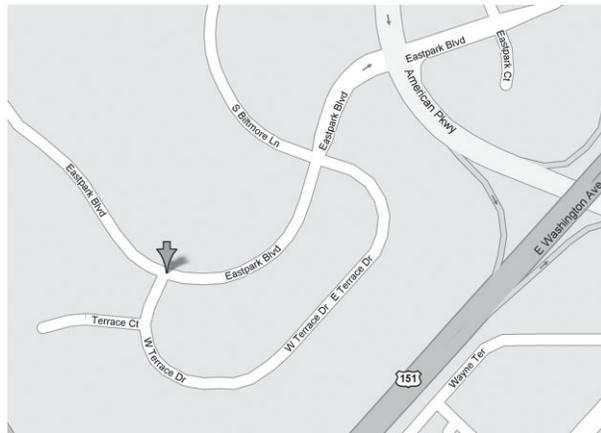
Discover Mediaworks
5100 Eastpark Blvd., Suite 100, Madison

From Madison: Take exit 98B, American Parkway. To get to Discover Mediaworks, get in the far left lane and turn left at the first stoplight onto Eastpark Blvd. (You'll pass under a sign over the road that says "American Parkway," it's a confusing place to negotiate.)

If you are going to the restaurant first, from American Parkway turn right onto American Family Drive at the first stoplight. Happy Wok is the first right off American

Family Drive; Eastpark Court is a dead-end street. Upon leaving Happy Wok, get back to the stoplights and go straight through the intersection.

Discover Mediaworks is on the right side of Eastpark Blvd., about a 1/2 mile from the lights.



Map courtesy of Google Maps

April 2007 Meeting Minutes

The regular monthly meeting of Chapter 24 of the Society of Broadcast Engineers for April of 2007 was canceled due to a severe snowstorm. In the agenda for that meetin'gs business session was the annual election of officers. The annual election of officers will be held at the May meeting of the Chapter. The program for that evening, which was to be presented by Steve Paugh on loudspeaker design, will be presented at the August meeting.

*Respectively submitted,
Tom Smith, Secretary*

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

FCC holds 4th ownership meeting

By Tom Smith

On Monday, April 30th, the FCC held the fourth of six planned hearings on broadcast and newspaper ownership. The sessions were held at the Tampa Bay Performing Arts Center and were scheduled to start with opening statements by the Commissioners at 4 p.m. The statements were to be followed by a panel discussion on a Market overview, Tampa Florida-Case Study followed at 5:30 p.m., with an hour of public comments. After a half hour break at 7:30 p.m., there was to be an hour-long panel discussion on Perspectives on Media Ownership followed by two hours of public comments. The whole hearing was to end at 11 p.m.. The meeting must have lasted to just past midnight, as the audio file of the meeting that is posted on the FCC Web site is slightly over eight hours.

The three Republican Commissioners comments were very short, mainly saying how great these hearing are with Chairman Kevin Martin's comments the longest at a full page. The two Democratic Commissioners, Michael Copps and Jonathan Adelstein, both gave three-page comments expressing their displeasure with the current ownership rules and the consolidation that followed their enactment. Their comments were similar to those at past hearings.

The makeup of the two panels was similar to the panels at past hearings and included broadcast and newspaper management, communication professors and interest group representatives.

According to Broadcasting and Cable, there were 300 people present with many complaining about consolidation and a few commenting on positive encounters they had with Tampa media outlets. From that article, the tone of this hearing was much the same as the past hearings.

The FCC has not announced the time or location of the next hearing.

—From FCC Releases (www.fcc.gov) and Broadcasting and Cable (www.broadcastcable.com)

WBA/SBE Summer Engineering Workshop

The program agenda has been set for the 2007 Summer Engineering Workshop on Wednesday, June 20 at The Waters Resort in Minocqua.

- 8:30 a.m. **REGISTRATION OPEN**
- 8:45 a.m. **HD Radio Session**
Presenter: Ted Lantz, HD Product Manager, BE Radio
Moderator: Clif Groth, Chief Engineer, Clear Channel Communications
- 10:15 a.m. **Break**
- 10:30 a.m. **DTV Update: Countdown to 2-17-2009**
Presenter: Jerry Whitaker, Vice President for Standards Development, Advanced Television Systems Committee
Moderator: Leonard Charles, Director of Engineering, Television Wisconsin, Inc.
- 12 p.m. **Lunch**
- 1 p.m. **Management Skills for Broadcast Engineers**
Presenter: Terrence M. Baun, CPBE, AMD, CBNT
Moderator: Kevin Ruppert, Maintenance Engineering Supervisor, WISC-TV
- 4 p.m. **WBA EXHIBIT RECEPTION**
 Refreshments & Hors d'oeuvres
- 6:30 p.m. **DINNER**
- 8-10 p.m. **AWBA FIRE PIT PARTY**
 Music by Jeff Calhoun

A special note to television chief engineers

You are urged to attend the Thursday session, MSTV DTV TRANSITION: THE RUBBER MEETS THE ROAD, with your general managers. David Donovan from MSTV will discuss the end of the DTV transition and everything stations need to know and do to make it happen. This session is from 2-4:30 p.m. on Thursday, June 21.

This year you can register online. Go to the WBA Web site at www.wi-broadcasters.org/events/Summer%20Conference/Engineers/engineering-sessions.htm



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Amateur Radio News

Compiled by Tom Weeden, WJ9H

Amateur applications remain brisk

It's been just a little more than two months since the FCC dropped the requirement that Amateur Radio applicants pass a Morse code test to earn operating privileges below 30 MHz. While the initial avalanche of applications immediately following February 23, when the no-Morse testing regime went into effect, has abated somewhat, business remains brisk for the American Radio Relay League (ARRL) Volunteer Examiner Coordinator staff.

"It's slowing down a little bit, but it's still substantially above what we usually see," observed ARRL VEC Manager Maria Somma, AB1FM. She estimated that new Amateur Radio applications were up by 35 percent, while upgrade applications were up by 150 percent over last year's volume.

"Smart radio" spurs action

In a recent Memorandum Opinion and Order (MO&O) on cognitive or "smart radio" systems, the FCC has affirmed its favorable policy toward the regulation of amateur software-defined radios (SDRs). A cognitive radio system is an SDR that can adapt its operating parameters by interacting with its RF environment. The FCC's April 20 MO&O was in response to petitions seeking clarification of the Commission's March 2005 Report and Order (R&O) in ET Docket 03-108. In that proceeding, the agency declined to adopt any new regulations for cognitive Amateur Radio transceivers or for digital-to-analog (D/A) converters.

ARRL Chief Technology Officer Paul Rinaldo, W4RI, says the

April MO&O indicates that the FCC intends to treat Amateur Radio SDRs the same as any other Amateur Radio equipment.

"This is welcome news from the FCC as it clarifies the matter of certification of amateur equipment," Rinaldo remarked. "It applies not only to terrestrial amateur equipment but also to amateur satellites, which increasingly are using SDR in their designs."

The Amateur Satellite Corporation, North America (AMSAT-NA), has announced it has revamped the design of its Project Eagle satellite to take maximum advantage of software-defined transponder (SDX) technology.

The "cognitive radio" proceeding is emblematic of the FCC's ongoing struggle to address thorny regulatory issues to keep pace with cutting-edge technology.

Cisco Systems had asked the FCC to revise its rules to better specify those classes of devices that do not require SDR certification. It also wanted the FCC to establish a policy that software that supports security measures not be made public if doing so could compromise security or enable illegal operation.

In response, the FCC revised §2.1(c) rules to state that only radios with software "designed or expected to be modified by a party other than the manufacturer" -- such as downloading from the Internet -- and that would affect frequency range, modulation type, maximum power output or the circumstances under which the transmitter operates legally, would have to be certified as SDRs.

(Excerpts from the American Radio Relay League's Web site, arrl.org)

SBE Offers New Certification

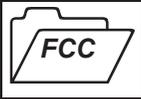
The National Certification Committee of the Society of Broadcast Engineers (SBE) is proud to announce its next specialist certification, Digital Radio Broadcast (DRB). This specialist certification will qualify an individual's knowledge of digital radio broadcasting including audio processing, studio-to-transmitter links and transmission of multi-channel digital program streams. The official roll-out of this specialist certification will be during the SBE National Meeting, held in conjunction with SBE Chapter 20's, Pittsburgh Regional Convention, October 10-11, 2007, in Monroeville, Penn.

The specialist will include knowledge of importers, exporters, the various methods of combining analog and digital transmitters to antenna systems, delivery of digital audio signals and data to transmitter sites, transmitter emission mask measurements, AM and FM FCC rules, monitoring of digital signals and bandwidth requirements for AM antenna systems.

Digital audio broadcasting (DAB) enhances a broadcast licensee's ability to not only better serve the public, but to provide means of additional revenue in this highly competitive industry. Station owners will rely on the knowledge and expertise of station technicians and engineers to implement this service for their companies. With this specialist certification, the engineer or technician carries the credentials needed for successful installation of digital radio transmission systems. The specialist certification will focus on the current in-band, on-channel transmission system being deployed in the U.S.

To apply for the SBE Digital Radio Broadcast specialist certification, applicants must currently hold SBE certification at the Broadcast Engineer, Senior Broadcast Engineer or Professional Broadcast Engineer certification level. The exam will consist of 50 multiple-choice questions and one essay question. Following the roll-out, the SBE will release an update to its CertPreview software of practice tests. To obtain an application for the Digital Radio Broadcast specialist certification, go to www.sbe.org/Specialist_Cert.php on the SBE Web site or contact the SBE National Office.

—From Short Circuits (www.sbe.org)



FCC Rulemakings

Compiled by Tom Smith

PROPOSED RULEMAKINGS

MB Docket No. 07-91

Third Periodic Review of the Commission's Rules and Policies Affecting the Conversion to Digital Television

The FCC has proposed a number of rules in order to complete the DTV transition. These proposed rules will establish procedures and deadlines so that stations will be ready for the February 17, 2009 analog shut-off and TV broadcast service to viewers is not interrupted.

In its press release, the Commission listed the following proposed deadlines and procedures:

1. Restrict the grant of future extensions of time to construct digital facilities.
2. Offer expedited processing to stations applying for a construction permit for their post-transition channel based on the new DTV Table of Allotments.
3. Examine the circumstances in which stations may reduce or terminate analog service to facilitate construction of post-transition facilities.
4. Permit stations that have different pre-transition and post-transition channels to devote their resources to building their post-transition channel.
5. Require stations by December 1, 2007 to file a form with the Commission detailing the current status of the station's digital transition, the additional steps the station must take before the transition deadline, and a plan for how the station intends to meet the deadline.
6. Establish February 17, 2009 as the construction deadline for stations with new channel allotments in the upcoming new DTV Table of Allotments.

The most critical issue concerning the DTV transition that will affect these proposals is the issuing of the final DTV Table of Allotments. Without this table, many stations will not be able to make their final plans for the transition. Many stations with out-of-core DTV channels still do not have their final DTV channel and stations that received construction permits after the DTV rules were issued on December 24, 1996 did not receive a DTV channel. These stations will either receive a DTV channel when the final table is issued, which could be their current analog channel or a different DTV channel. They will have to build new facilities, which will need to be ready to be activated on February 18, 2009.

The FCC took this action on April 25 along with other actions pertaining to DTV. The full report and

order has not been released as of the time this was written.

• • • • •

CS Docket 98-120

Cable Carriage of Digital Broadcast Signals

The FCC has issued a Second Notice of Proposed Rulemaking and is asking for comments on several rules pertaining to carriage of broadcast signals by cable systems. These rules are being made to ensure that broadcast signals are not disrupted by the DTV transition.

The proposed rules include requiring cable systems that provide programming with analog signals to continue to provide broadcast signals in analog also. They will require systems that are all digital to provide broadcast signals in digital. The proposed rules would also require that cable systems not to degrade HD signals. One way they proposed is to require the cable system to retransmit all the bits sent by the broadcaster. This would make the quality issue go from a subjective to objective measurement. This would also give broadcasters full digital must-carry. The final question the FCC seeks comment on is objective measurements in quality between cable and broadcast signals. Current rules prohibit cable systems from discriminating between broadcast and cable programming by providing the cable systems programming in higher quality form.

This action was taken on April 25 as part of a number of actions pertaining to the DTV transition.

• • • • •

FINAL RULEMAKING

MB Docket No. 03-15, RM 9832, Second Report and Order

Second Periodic Review of the Commission's Rules and Policies Affecting the Conversion to Digital Television

The FCC has issued a rule that will require retailers to label TV equipment with analog only tuners that they will no longer receive broadcast signals with the device after February 17, 2009. While TV equipment may no longer be manufactured or shipped with analog tuners only, there is still inventory on dealer's shelves. The FCC in this action will require dealers still selling devices with analog-only tuners to post the following notice:

FCC Rulemakings *cont*

Consumer Alert

This television receiver has only an analog broadcast tuner and will require a converter box after February 17, 2009, to receive over-the-air broadcasts with an antenna because of the Nation's transition to digital broadcasting. Analog-only TVs should continue to work as before with cable and satellite TV services, gaming consoles, VCRs, DVD players, and similar products. For more information, call the Federal Communications Commission at 1-888-225-5322 (TTY: 1-888-835-5322) or visit the Commission's digital television website at www.dtv.gov.

By this action, the Commission hopes to show its commitment to minimizing the impact of the transition to the public and furthers the opportunities of digital transmission.

This is another action the FCC took on April 25 concerning the DTV transition.

—From FCC Releases (www.fcc.gov)

Gearing up for Varsity

Token Creek Mobile Television Inc. is gearing up to roll out the red carpet for Varsity.

Varsity, an all-new 53-foot expando HD truck, is the third truck in the Token Creek fleet. Scheduled to be complete by September 1, Varsity's trailer is being built by Calutech Mobile Solutions.

Components include, but are not limited to:

- Grass Valley Calypso switcher
- Abekas HD DVEous
- Thompson Grass Valley cams LDK800
- QuStream HD/SDI router
- EVS server system

Token Creek
MOBILE TELEVISION
incorporated

- Chyron HyperX HD
- Calrec Sigma Bluefin audio console
- RTS/Telex ADAM intercom system

"With the industry moving toward HD and most networks airing the majority of their programming content in HD starting this fall, it was time for us to roll out a new truck," says Token Creek's president John Salzwedel. "We want to be ahead of the game. We aren't the first to move to HD, but we certainly didn't want to be the last."

Salzwedel is currently booking jobs for Varsity and is expecting to have a major college package this fall.

**June SBE
Chapter 24 newsletter**
Important dates

Copy deadline: Friday, June 1
Folding party: Wednesday, June 6

E-mail submissions to John Salzwedel
at 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.

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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.

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
August 10-20, 2007	Local Chapters	June 8, 2007
November 9-19, 2007	Local Chapters	September 21, 2007

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.

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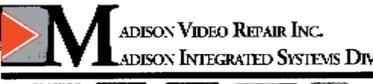
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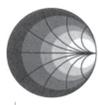
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Thanks to WISC-TV for maintaining the Web server for the Chapter 24 Web page.

Thanks to WKOW-TV for providing copying and folding facilities for the Chapter 24 newsletter.



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

FIRST CLASS MAIL




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