



March 2007

Society of Broadcast Engineers Newsletter

Chapter 24
Madison, Wisconsin

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Next Meeting

Thursday, March 15

Optimizing Networks for HD-Radio & Nominations

Dylan Oliver of Primaveraity will give us a brief refresher on general networking topics, followed by some specific techniques used to optimize your network for HD-Radio applications

This will also be the last chance for nominations of officers prior to the April elections. The following nominations have been made so far: Chair, Dennis Baldridge; Vice-Chair, Clifford Groth; Secretary, Tom Smith; Treasurer, Leslie Franzen.

Dutch Treat Dinner 5:30 p.m.

Qdoba Mexican Grill
5601 Caddis Bend, Fitchburg
Intersection of Fish Hatchery
& Caddis Bend; no reservation

Meeting & Program 7 p.m.

Clear Channel Radio Facility
2651 S. Fish Hatchery Rd.,
Fitchburg

Upcoming Events

Wed., April 11: Loudspeakers: Demystifying the "B" Chain/Elections

Wed., May 16: Discovery Media Works Tour

Thurs, May 16: SBE Summer Picnic

EAS Encoder Updates for DST start/end dates

*Researched by Gary Timm, Broadcast Chair
Wisconsin State Emergency
Communications Committee*



WARNING: All manufacturers I was able to speak with advised me that users should NOT simply change the Time-of-Day readout on the front of their EAS unit on DST day. This will cause the internal UTC clock to be incorrect, causing you to possibly miss receiving alerts due to the UTC-based times sent in EAS Alerts. If your unit requires an upgrade, you are best advised to do nothing until a proper upgrade for your unit is received. The time readout on the front of the unit, as well as TV crawls, will show the incorrect time, however. Most manufacturers will be posting instructions on their Web sites regarding changing the time manually if you choose to do that, but these procedures must be followed very precisely to avoid having an incorrectly set internal UTC clock.

TFT The TFTAAS911 unit does automatically adjust for Daylight Savings Time, so an upgrade will be needed. TFT is currently in beta testing on a new set of chips. The upgrade will be firmware Version V.87.0, which they expect to have available on March 1, 2007. The upgrade kit is a set of two EPROMs, which will cost \$130, plus S&H. There is a 10% discount for orders of 10 or more upgrade kits. This upgrade also includes other operation improvements. Order forms will be posted on their Web site when the upgrade kit is available. A procedure to change the time manually will be posted on their Web site, if you desire to go that route. Contact TFT at: 408-727-7272, or info@tftinc.com

SAGE The Sage ENDEC unit does automatically adjust for Daylight Savings Time, so an upgrade will be needed. The firmware developer expects the upgrade to be available during the first week of March. The new firmware is Version 6.2. The cost to upgrade to this new version depends on your current firmware version. To find your current firmware version, reboot the Sage

unit and the version number will print. To upgrade from Version 6.1, the cost is \$50 plus S&H. To upgrade from Versions 5.x, the cost is \$200 plus S&H. If you are running either Endec Pro or Endec DJ software, read the documents below before upgrading. The Harris documentation below states that in the new version you will be able to enter the DST start/end dates yourself, so this new chip will be good for any future changes as well. The documentation also gives instructions for properly resetting the time manually if you do not receive the upgraded chip by DST day. A document will also be placed on the Harris Support page. Harris is accepting orders now, to be filled as the upgrade becomes available. Contact Harris at 800-622-0022, or the Sage Help Line: 217-221-7560, or tsupport@harris.com

GORMAN-REDLICH The Gorman-Redlich EAS unit does automatically adjust for Daylight Savings Time, so an upgrade would be needed for the time to

continued on page 5

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February 2007 Meeting Minutes

On February 15, 2007, Chapter 24 of the Society of Broadcast Engineers met at the studios of WMTV, Channel 15 in Madison, Wisconsin. There were 13 members present of whom 10 were certified. There were also 5 guests present.

Chairman Cliff Groth called the meeting to order shortly after 7 p.m. Leonard Charles asked for a correction to the minutes of the last meeting. The minutes stated that he noted that the National Meeting of the SBE at the NAB convention was to be held at 7 p.m. on that Tuesday of the Convention. The time he had given is 5 p.m. of that Tuesday. The correction was noted and Steve Paugh motioned that the minutes be accepted as corrected with a second by Stan Scharch.

Treasurer Leslie Franzen gave the current balance in the Chapter's checking account (\$4,660.44).

Frequency Coordinator Tom Smith noted that he had gotten an inquiry from WMSN-TV concerning wireless mics and operation on channels 51 through 69. Tom stated that it was unclear if the FCC would allow operation of wireless mics on those channels after February 17, 2009, but operation on channel 55, on which Qualcomm is launching its MediaFlo and on the four channels that are assigned for public safety, could be in use before the DTV deadline.

Nomination Chair Steve Paugh noted that Tom Smith would run again for Secretary and Leslie Franzen for treasurer. Cliff Groth and Dennis Baldrige were planning on possibly swapping positions as Dennis has completed his two-term limit as vice-chair.

Vicki Kipp gave the certification report on behalf of Jim Hermanson. There is one re-certification application being processed. The local Chapter exam period from February 9-19 is underway with applications being no longer accepted. Applications for the April 17 exams at NAB are being accepted through March 2. The next local exams are June 1 through June 11, with the application deadline being April 20.

Vicki also gave the sustaining membership report for Fred Sperry. The newest sustaining member is Brain Stumpf with Ross Video. Recent renewals are Scharch Electronics, Sound Devices, Entercom Madison, WMTV-TV and Wisconsin Public TV. There are currently 24 sustaining members.

Rich Wood related a problem with an arcing transmission system on a Rhineland FM station's tower.

Vicki Kipp introduced Mike Franch who had worked as an MCO at WMTV and at other stations.

Paul Stoffel asked if anyone had any knowledge concerning the ending of analog cellular service.

Leonard Charles updated news on SBE National, noting that the SBE would have a reception after the Tuesday National Meeting. He also mentioned that the MSTV would be conducting regional meetings on the DTV transition, which will be arranged through the state broadcast associations. He also gave an update on the progress and issues concerning the 2 GHz transition.

Chair Cliff Groth mentioned the WBA program for distributing IDs to broadcast engineers for travel to maintain transmitters during times of emergency crisis.

The meeting was adjourned and Tom Weeden of WMTV gave a demo of the RadioMobile freeware program to predict and analyze RF paths. Tom showed how this program, written for hams, can be used for broadcast applications.

Respectfully submitted,
Tom Smith, Chapter Secretary

Amateur Radio News

Compiled by Tom Weeden, WJ9H

Application avalanche

The avalanche of Amateur Radio license and license upgrade applications, prompted by the FCC's elimination of Morse code as a licensing requirement, is well under way, with no end in sight. American Radio Relay League's Volunteer Exam Coordinator Manager Maria Somma, AB1FM, reports that paperwork from upward of 450 Amateur Radio exam sessions, most held since the new rules went into effect February 23, arrived last week, more than her department sees in a month under "normal" circumstances. The ARRL VEC has had to add personnel and schedule extended hours to keep up with the workload.

New Amateur Radio rules are driving the demand for new licenses and upgrades. Effective February 23, the FCC no longer required Amateur Radio applicants to pass a Morse code test to earn operating privileges below 30 MHz. As of February 25, there were approximately 324,200 Technician licensees in the United States – more than any other license class.

Protocol comments

The ARRL is seeking comments from amateurs concerning development of an open-source (non-proprietary) data communications protocol suitable for use by radio amateurs over high-frequency (HF) fading paths. A Request for Proposals may or may not be forthcoming depending on evaluation of the information received.

Specifically, the League is asking for comments and information on issues such as whether Orthogonal Frequency-Division Multiplexing (OFDM) or other technologies be considered, what data rates and throughputs are achievable at various bandwidths up to 3 kHz, how to determine whether a frequency is busy prior to transmission, and what are suitable, practical and affordable hardware platforms for amateur stations. The ARRL's deadline for submission of comments for a new HF data protocol is May 15.

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

AM Bandwidth Studied

By Tom Smith

The National Radio System Committee, a standards group sponsored by the Consumer Electronics Association and the National Association of Broadcasters, has released a study of listeners reaction to the use of different audio bandwidths in AM radio transmissions. The NRSC first studied the frequency response of 30 AM radio receivers. They found that the average frequency response of the 30 AM receivers showed a response curve that was down to -3 db at 2450 hertz and down to -10 db at 4100 hertz.

The next part of the study had 40 people, divided evenly between males and females between the ages of 19 and 71, listen to music, news, sports and commercials at bandwidths of 5 KHz, 7 KHz and 10 KHz. The results of the study showed that for music, commercials and sportscasts, the listeners found little difference in sound at either 7 or 10 KHz with little or no impairments. With speech, the listeners preferred the bandwidth to be 5 or 7 KHz, as noise and interference was less apparent.

Overall, the NRSC determined that noise in the audio was the listener's main objection and that at higher bandwidth, music and sports programming mask it better than in speech programming. Because of the noise and interference masking, listeners preferred audio that had a bandwidth of either 5 or 7 KHz, and most often said that 7 KHz audio was equivalent to 10 KHz audio.

The committee is considering the possibility of reducing the AM bandwidth standard to something less than the current 10 KHz. Many stations have reduced their audio bandwidth to 5 or 6 KHz already to reduce interference or to convert to digital transmissions.

The study was issued in December 2006 with a report of over 100 pages; a five-page summary of the results is also available. The reports are on the NRSC Web site.

*From NRSC documents
(www.nrsstandards.org)*



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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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DTV transition milestone

By Tom Smith

March 1 marked another milestone in the DTV transition. On that date, all devices with an analog NTSC tuner will now have to be manufactured with a digital tuner. This includes all TVs, VCRs, DVD recorders and digital video recorders (Tivo, etc). With the cost of including a



With the cost of including a digital tuner, will we start to see home-recording devices disappear?

digital tuner, will we start to see home-recording devices start to disappear?

A check of manufacturers and retail Web sites showed a limited number of VCRs with Sony only listing refurbished units and Best Buy only listing one Panasonic model that was out of stock. JVC and Panasonic had two or three VCRs and a few DVD/VHS models.

Circuit City and Crutchfield had a few of each type of machine available. The number of DVRs is already limited because of enforcement of exclusive patent rights with Tivo and Replay selling devices requiring subscriptions for program guides; most of the other DVRs included in cable or satellite tuners which also require a subscription.

If there are not any replacements for the VHS VCRs and they fail to upgrade DVD recorders, the movie industry may get its wish and end consumer recording of TV programs and movies.

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Another unlicensed TV band bill

By Tom Smith

With reply comments due on the FCC rule-making that would allow unlicensed devices to operate on the TV broadcast band, another bill is being prepared in the House of Representatives. TV Technology reported that Rep. Jay Inslee (D-Wash.) is likely to introduce a bill to allow unlicensed devices in the TV broadcast band. Rep. Inslee co-sponsored a bill in the last session of Congress called the "American Broadband For Communities Act" (HR5085). Other co-sponsors of the bill included Representatives Marsha Blackburn (R-TN), Tammy Baldwin (D-WI), Paul Gillmor (R-OH), and Rick Boucher (D-VA).

From (www.tvtechnology.com)

SBE Notes

February follow-up

As a follow-up to Tom Weeden's February presentation, following is the URL for the the free Radio Mobile software download: www.cplus.org/rmw

A tutorial on installing and using Radio Mobile can be found at: www.pizon.org/radio-mobile-tutorial/

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 an e-mail with your request to Angel Bates at abates@sbe.org.

FCC holds third ownership meeting

By Tom Smith

On February 8, the FCC announced the third hearing in its series of hearings on media ownership. The hearing was scheduled to be held in Harrisburg, Penn. on Friday, February 23. On February 16, the FCC announced the timetable and location of the hearing. The hearing was to be held on the Whitaker Center for Science and Arts in Harrisburg. The hearing was to be held from 9 a.m. to 2:30 p.m., with opening comments from the commissioners from 9-9:30 a.m., panel discussion from 9:30-11 a.m., and public comments from 11 a.m. to 2:30 p.m., with a break from 12:30-1 p.m.

On February 21 the FCC announced the panelists. They were: W. Cody Anderson of ACG Associates and WURD-AM 900, a minority-operated station in Philadelphia; Bill Hall of Hall Communications, which owns WROZ-FM, WLPa-AM and WSJW-FM; Jim Haigh of Community Papers Association; Bishop Benjamin F. Peterson, Jr. of the Restoration Ministries; Lauri Lebo of York Daily Record and WWII 720 AM; H. Joseph Lewin, WHTM-TV; Beth McConnell, Director of PennPrig, a consumer and public interest group with a published comment against further consolidation of broadcasting; and Paul Quinn, WGAL-TV. All of those representing broadcast facilities are officers and managers of their stations or groups.

In the opening statements of the commissioners, the two Democrats, Michael

Copps and Jonathan Adelstein, discussed the decrease of coverage of state capitol and local government while Chairman Kevin Martin suggested programs to allow small broadcast programmers to lease spectrum from larger broadcasters such as DTV multicast channels.

An article in Harrisburg's The Patriot-News reported that in the morning public comment period was dominated by more than 50 TV reporters, anchors and nonprofit partners speaking on the good work they do. The Harrisburg paper also reported that Richard Wyckoff, the president of the Pennsylvania Association of Broadcasters, stated that the testimony at the previous two ownership hearings were unbalanced in its look at the industry. Television Week reported that consumers questioned the fact that local media gave little advanced reporting on the hearing and that along with excessive coverage of Anna Nicole Smith and Britney Spears instead of coverage of local issues and government actions was an effect of media consolidation.

There are a least three more hearings planned, but dates and locations have not been released.

*From FCC releases (www.fcc.gov),
Television Week (www.TVweek.com)
and The Patriot-News
(www.pennlive.com)*

EAS Updates

continued from cover

display correctly. However, Jim Gorman told me he is holding off on producing an upgrade chip until he is more certain that this DST date change is permanent. He notes that Congress only authorized the date change for 2007, 2008, and 2009. If the date change becomes permanent after that point, he will pursue offering an upgrade chip.

BURK

The Burk EAS unit does not automatically adjust for Daylight Savings Time, so no upgrade is needed. DST is adjusted manually by "setting a flag" in the menu, which Burk users should already be familiar with.

MTS

The MTS System 3000D EAS unit does automatically adjust for Daylight Savings Time, so an upgrade will be needed. MTS expects the upgrade to be available in the first week of March. Watch their Web site, call 919-553-2995 or send an e-mail

to skip@mts-comm.com. The other MTS product, the Encoder II computer software program, relies on the clock in the computer it resides on as the time reference.

HOLLYANNE CORPORATION

The Hollyanne Model HU-961 EAS unit appears to not automatically adjust for Daylight Savings Time, so no upgrade would then be needed. Per their Web site, they no longer manufacture the HU-961 EAS unit. A phone call to their number, 308-428-4705, yields a recorded message stating they are no longer making the EAS unit. Current users are advised to contact the dealer where they purchased the unit. On the Hollyanne support site, a document showing how to set date and time makes no mention of DST. This is the basis of my presumption above that no upgrade is needed. Users of the unit will no doubt be aware of whether the unit does automatic DST updating or not.

Local Legals

Compiled by Tom Smith

PROPOSED

WTLX (FM) 100.5 MHz Monona, WI (Columbus, WI)

WTLX as filed an application to move its transmitter so that it can serve its new city of license. WTLX was previously license to serve Columbus. The stations owners, Good Karma Broadcasting, LLC, has received permission from the FCC to move its commonly owned station WTTN 1580 AM from Watertown to Columbus, leaving Watertown with one station WJJO (FM). With the move of WTTN to Columbus, Good Karma sought and received permission to move WTLX to Monona. They were required to finalize an application for a changed transmitter site in order to meet required coverage of Monona within 90 days of October 20, 2006. The application was filed on January 17, 2007.

Good Karma is seeking permission to construct a transmitter at 43-08-04 degrees Latitude and 89-23-56 degrees Longitude. This transmitter site is located at the Mendota State Hospital and the antenna is to be mounted on a 20-foot pole on top of a 120-foot water tower. This would place the antenna at 43 meters (141 feet) above average terrain. They propose to mount a two-bay antenna with half wave spacing on the pole. The station would operate with 6 kilowatts ERP. The station currently operates with 6 kW at 100 meters from a site located about a mile south of Highway 60 and a mile east of Highway N near the Dane-Columbia county line.

—From FCC release (www.fcc.gov)

DTV transition could be delayed

By Deborah M. McAdams

According to a report from the National Journal, House Energy and Commerce chairman John Dingell, D-MI, shocked the broadcast industry last week when he suggested that the switch to digital television, scheduled for Feb. 17, 2009, could be delayed.

Dingell is the highest ranking lawmaker to publicly state that the DTV transition deadline may not be met.

Talking to journalists following a speech to the NAB, Dingell expressed reservations as to whether all of the 1700 stations and hundreds of millions of consumers would be fully prepared for the transition. His main concern focused on the Republican-created plan to offer vouchers to curb the expense of new technology required to keep older televisions operational — namely set-top boxes.

"We don't yet have technical standards for the boxes. We don't know when the boxes will be ready. We don't know how much personal information consumers must disclose on the application," Dingell told the audience.

He also said he was concerned about retailers having the necessary supply on hand and being able to redeem coupons in a timely manner, as well as whether the \$1.5 billion that Congress set aside for the program would be enough. Neither Dingell nor Energy and Commerce Telecommunications and the Internet Subcommittee chairman Edward Markey, D-MA, thinks it will be sufficient.

"We share a lot of the concerns of Chairman Dingell on the funding being inadequate to serve all of these television sets that could go dark," NAB spokesman Dennis Wharton said, adding, "We want to avoid a train wreck."

According to Wharton, "broadcasters are ready" to meet the DTV transition deadline unless Congress delays it, which would require Congress to change the law itself.

National Telecommunications and Information Administration chief John Kneuer, who is charged with implementing the voucher plan, will testify before Markey's subcommittee in the coming weeks at an oversight hearing.

Delaying the deadline would not only affect the approximately 20 million households with 73 million analog televisions, but also electronics manufacturers and broadcasters, many of whom have based business plans on the ability to offer multiple digital signals.

Reprinted with permission from the March 2, 2006 edition of TV Technology newsbytes.



John Dingell

What is Real-Time Captioning?

By Anne Schulman

Real-time stenographic broadcast captioning (known as "real-time captioning") is the method used to simultaneously provide visual access to the audio portions of television broadcasts. Real-time captioning is used to caption live broadcasts, such as sports, political speeches, city council meetings and other events; national and local news; 24-hour live networks such as CNN and the Weather Channel; emergency broadcasts, such as those for severe weather and late-breaking stories; and other programs that have no script.

Prior to becoming real-time captioners, most captioners trained and worked

as court reporters. Then, only the most highly skilled court reporters are able to receive additional training to become real-time captioners. Frequently working off-site

from home offices and using their stenowriters, computers and specialized software, the captioner will listen to or watch a broadcast and produce the captions, which are then sent via phone lines to a device called an "encoder." The encoder is housed at the receiving entity — a television station, production truck or other production facility. There the captions join the video signal and are transmitted via an over-the-air, cable or satellite signal to the viewers.

Even the best real-time captioning will contain occasional errors due to the speed of transmission and content-specific vocabulary of the program being captioned. Errors may also occur when a captioner misstrokes a key, mishears a word, has a poor audio signal, or is presented with unfamiliar and/or unexpected program content. It is not uncommon for an expert real-time captioner to caption up to 250 words per minute with 98-99% accuracy.

Real-time captioning makes live television broadcasts accessible to viewers who are deaf or hard of hearing, and also to viewers watching television in noisy venues such as restaurants and sports bars. Since January 1, 2006, the FCC's Telecommunications Act of 1996 requires that most television broadcasts be captioned, with few exceptions; see www.fcc.gov/cgb/consumerfacts/closedcaption.html.



April SBE Chapter 24 newsletter Important dates

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

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.



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
June 1-11, 1007	Local Chapters	April 20, 2007
August 10-20, 2007	Local Chapters	June 8, 2007
November 9-19, 2007	Local Chapters	September 21, 2007

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.

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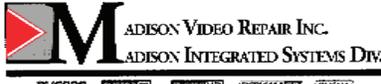
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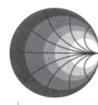


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