



The Society of Broadcast Engineers

Fox Valley Wisconsin SBE Chapter 80
PO Box 1519
Appleton, WI 54912-1519

June 2015

Like us on FaceBook - [facebook.com/sbe80](https://www.facebook.com/sbe80)

Our website sbe80.org

Twitter: [@sbechapter80](https://twitter.com/sbechapter80)

Our next SBE Chapter 80 meeting will be at the WBA Summer Engineering Conference at the Kalahari on June 17th

Chairman's Corner

Greetings everyone, members and guests are welcome to our upcoming Chapter 80 meeting which will take place on WEDNESDAY, JUNE 17, 2015. This will be integrated with WBA ENGINEERING DAY at Kalahari Resort, Wisconsin Dells. We hope to see you at the 12:00 noon lunch break in the Bamboo Room.

Our last meeting was on May 19, where we enjoyed a presentation by Mr. Hamish McMillan of Vitec, who also picked up our meal tabs.

Please visit our Chapter website www.sbe.80.org for more items of local, regional and national interest.

Regards,

Steve Konopka



Upcoming meetings:

June 17 – WBA Summer Engineering Conference – WBA at the Kalahari (see more info below)

Register: <http://www.wi-broadcasters.org/events/summer-conference/>

July 21 – Chapter 80 summer site picnic

August 18 – Bob Sobiek – Cellcom – Broadcast to Cellular interference

September – Open

October 13-15 – Broadcasters Clinic and National SBE meeting

November – Open

December – Open

Certification Application Deadlines Approaching

2015 EXAM SESSION APPLICATION DEADLINE

August 7-17 June 5, 2015

November 6-16 October 2, 2015

If you have any questions contact the Certification Director, Megan Clappe.

Click [HERE](#) for the certification applications. If you have any questions contact the Certification Director, [Megan Clappe](#).

FCC Field office update

Thanks in large part to the hard work of the state broadcaster associations, NAB is excited to let you know that we have been able to put together a deal with the FCC to mitigate some of the damage that would have happened had Chairman Wheeler's original plan to gut its field offices come to fruition. Over the past several days, we have been working with the FCC, Members of Congress, public safety and the wireless industry to develop a plan that would ensure better enforcement than under the initial proposal. The FCC is in the process of making public its new proposal, which includes the following:

- The FCC will maintain field offices and/or personnel presences in NYC, Columbia (MD), Chicago, Atlanta, Miami, Dallas, LA, SF, Portland (OR), Denver, Boston, New Orleans, Hawaii, Anchorage and San Juan (the last seven were due to be cut altogether).
- Equipment will be repositioned in KC, SLC, PHX, SEA, and Billings, MT.
- Kansas City will get a "rotation" of FCC field staff visiting once a month for a few days.
- The FCC will deploy two "tiger teams" instead of just one on the East Coast. The new team will be located in Denver.
- The FCC will employ a new, defined escalation process for RF complaints.
- Chairman Wheeler has agreed to work directly with NAB to step up enforcement on pirate radio stations, including holding a roundtable with broadcasters within 30 days.
- The field operation will have the first claim at any money saved by the closing of field offices.



Thank you again for all of your help!

Rick Kaplan
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Legal and Regulatory Affairs
National Association of Broadcasters
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Ennes Scholarship Deadline Is July 1

Applications to receive an Ennes Scholarship in 2015 are due to the SBE National Office by July 1. Presented by the Ennes Educational Foundation Trust, the scholarships are granted to individuals who aspire to, or further their career, in broadcast engineering or a related technical field. There will be four \$1,500 scholarships awarded in 2015, in time for the fall semester.

[Scholarship applications](#) and details are available at the SBE website. For additional information, contact Debbie Hennessey at the SBE National Office at 317-846-9000 or dhennessy@sbe.org. The Ennes Educational Foundation Trust is the non-profit, charitable arm of the SBE.

JOB NOTICES

Television Broadcast Engineer

Is troubleshooting digital broadcast systems in your DNA? Do you believe that infrastructure documentation is the life blood of an engineering department? Does SDI mean more to you than IT, but you understand the importance of both in the modern broadcast plant environment? If so, we'd like to talk to you.

WISC-TV is searching for a broadcast engineer who can read, understand, create, and maintain custom station documentation that is critical to the entire engineering department. We use Autocad to create and keep our documentation up to date. If you know AutoCAD, or can learn it, we'd like to talk to you.

If you have integration on your resume we absolutely want to talk to you. We need an engineer that understands every connection necessary to successfully integrate a new piece of equipment or system, and can design projects in documentation for others to help install.

Our engineering staff has been with us for a very long time. That's because we value and appreciate their contribution and they like it here. You'll be filling the shoes of a retiring engineer and we'd like him to spend some time with you before he leaves. If you are still reading this, you need to know that Madison, WI is a great place to live. We get all four seasons and the area has lots of curb appeal. You owe it to yourself to contact us to check out this opportunity. Openings like these don't come around very often.

We offer a professional, challenging work environment, competitive compensation, and we encourage our employees to grow professionally with us. To learn more about this opportunity send your cover letter, resume and salary requirements to the address below and we'll be in touch.

Morgan Murphy Media

Attn.: HR / Eng

7025 Raymond Rd

Madison, WI 53719

hr@wisctv.com

Equal Opportunity Employer

Visit our website at www.channel3000.com

Picture of the month



AMCI [in minutes to be SES3]

Radio engineering position

Broadcast Engineer

Location: Madison, Wisconsin

Wisconsin Public Radio seeks an experienced electronics technician to provide technical services such as design, construction, installation, repair, maintenance of electronic and mechanical broadcast equipment and systems in Wisconsin Public Radio facilities. Requires: 5 years experience in broadcast engineering, proven ability to install & maintain equipment; effective organization and communication skills. Desirable: Training in electronics troubleshooting and repair; computer/network support; SBE certification; personal means of transportation.

Details and application instructions can be found at:

http://wisc.jobs/public/job_view.asp?annoid=82963&jobid=82477

Questions about the application process may be directed to:

Joann Johnson at (608) 262-2546, joann.johnson@uwex.edu.

Questions about the nature of the job may be directed to:

Steve Johnston at (608) 262-5584, steve.johnston@wpr.org.

CHAPTER 80 ELECTED AND APPOINTED OFFICERS

Chairman	Steve Konopka	WPNE TV/FM	920-336-3541	skonopka@ecb.org
Vice Chairman	Tim Laes	WGEE WIXX WNCY WROE	920-435-3771	tlaes@new.rr.com
Treasurer	Steve Brown	WHBY WAPL WKSZ WZOR	920-733-6639	sbrown@wcinet.com
Secretary	Keith Kintner	UWO	920-424-7357	kintner@uwosh.edu
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Membership Chairman	Mark Friedman	WPNE TV/FM	920-336-3541	mfriedman@ecb.org
Sustaining Membership	Stu Muck	Muck Broadcast services	920-960-0045	MBSFDL@yahoo.com
Frequency Coord. < 1 GHz	Tim Laes	WGEE WIXX WNCY WROE	920-435-3771	tlaes@new.rr.com
Frequency Coord. > 1 GHz	Bill Hubbard	UW Green Bay	920-465-2510	hubbardw@uwgb.edu
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Board of Dirs/SBE Liaison	Keith Kintner	UWO	920-424-7357	kintner@uwosh.edu



engineering day

June 17, 2015

Kalahari Resort, Wisconsin Dells

8:40 AM - 4:30 PM: WBA Engineering Day Sessions Location: Banyan

8:45 AM Session: AM Directional Rebuild, a Case Study

KSJB in North Dakota built a new AM array on the same site as the old array while not losing any airtime. This session will show us how that was accomplished.

Speaker: Richard wood, Resonant Results

9:30 AM Session: Broadcast and LTE Coexistence

It's happening to Radio and Television alike. When the FCC tells you that your signal is interfering with a nearby cell phone broadband installation, what happens next? This session will take us through one case step by step.

Speakers: Bill Hamilton, WBUW-TV and Tom Smith

10:15 AM: Break

10:30 AM Session: Spectrum Challenges of Wireless Mics

The answer to what happens with spectrum we all use for our wireless mics and appliances is a moving target. This session will bring us up to date and look at new developments in technology to help us through the spectrum future.

Speaker: Sennheiser

11:15 AM Session: Design and Troubleshooting an AoIP Network

The world, and your studio, is moving to all Audio Over IP. This session will discuss the grass roots issues with this conversion and include tools to making it work as efficiently as it can and should.

Speakers: Greg Dahl, Second Opinion Communications and Jason Mielke, WCLO/WJVL

12:00 PM: Lunch Location: Bamboo Room

1:30 PM Session: Modern Surge Suppression Technology

How much power protection is enough? How much is too much? There's new technology in surge suppression that will be explored in this session.

Speaker: Eric Marshall, Emmerson Network Power

2:15 PM Session: Ask a Manager (Panel Discussion)

Did you ever wonder what goes on in your company's executive office and the affect that has on engineering resources? Do you have questions about how finances and budgeting are accomplished and how that affects what the company purchases? Back by popular demand, this session will have a panel of Broadcast Management who will field questions from the audience.

Panelist: Greg Bell, Woodward communications; Tom Koser, Koser Radio Group; Tom Langmyer, E.W. Scripps Company and Don Vesely, WMTV-TV

3:15 PM: Break

3:30 PM Roundtable Discussions

This session will split the attendees into smaller groups to discuss at length relevant topics to the broadcast industry. These subjects will be discussed:

Table 1	Table 2	Table 3	Table 4
POTS Demise	Text to SAP	Expanded RDS	Network Security

Following the group discussions a representative of each group will deliver the highlights of and conclusions to each subject.

5:00 PM - 7:30 PM: Exhibit Reception Location: Guava, Tamar, Port., Wist

7:30 PM - 10:00 PM: Dinner Location: d/e Convention Center

**Save the date for the 2015 Broadcasters Clinic:
October 13 - 15, 2015**

*The WBA and the Wisconsin SBE Chapters are pleased to announce that
the SBE National Meeting will join the 2015 Broadcasters Clinic.*

FCC Delays Requirement for Aural Representation of Visual Emergency Information on Secondary Audio Stream

May 27, 2015 By Chris Imlay, SBE General Counsel

On May 26, 2015, [FCC issued a memorandum opinion and order](#) addressing two petitions for waiver of Section 79.2(b)(2)(ii) of the FCC's rules, which requires among other things that emergency information provided visually during non-newscast video programming be made audibly accessible to individuals who are blind or visually impaired through the use of the secondary audio stream. Broadcasters refer to this requirement as the "Audible Crawl Rule."

The FCC granted a waiver of the rule for hybrid cable systems if they provide free equipment to analog customers who are blind or visually impaired to enable access to the digital secondary audio stream. The FCC also waived the compliance deadline for analog-only cable systems until June 12, 2018.

For broadcasters, the FCC granted only a six-month waiver of the compliance deadline. However, the FCC agreed to waive the requirement to aurally describe visual but non-textual emergency information, such as maps or other graphic displays for a period of 18 months. Broadcasters are, however, permitted to exclude school closings information from the Audible Crawl Rule. These three waiver provisions were granted at the behest of the National Association of Broadcasters in a March 27, 2015 petition for temporary partial exemption and limited waiver. The NAB Petition was strongly supported by SBE.



The six-month waiver (until Nov, 30, 2015) of the compliance deadline for video programming distributors of all sorts to comply with the Audible Crawl Rule by providing aurally on the secondary audio stream emergency information presented visually in non-newscast programming, was granted as a matter of necessity. The FCC was convinced that the technical means necessary for broadcasters to aurally transcribe emergency information text crawls on the secondary audio stream were not available from manufacturers in time for broadcasters to obtain and implement them by May 26, 2015, which had been the deadline. The FCC said it was persuaded by the NAB and the other broadcast industry comments that a six-month extension of the compliance

deadline was needed for broadcasters to purchase, install, and test equipment and systems that will effectively communicate emergency information to their viewers who are blind or visually impaired.

About this, the SBE had noted that a 2013 report and order and further notice of proposed rulemaking in Docket 12-107 established rules for Text-to-Speech (TTS). These rules state that the three-beep alerting tones will be transmitted on both the main and secondary audio programming (SAP) channels. Currently, devices used to produce alerts and emergency crawls only provide alerting beeps on one set of audio channels. Also, the current rules state that the alerting tones are required on both audio channels. However, the actual text-to-speech would be required only on the SAP channel. The TTS audio cannot be mixed or ducted over program audio. Rather, it must completely override it. This override requires a complex series of switching audio paths. The problem is compounded by the fact that most modern stations use embedded audio in their Serial Digital Interface (SDI) video paths. In

that circumstance, audio would have to be disembedded; switched to its proper path; and then re-embedded into the video signal for its output to the transmitter. Some stations may choose to run separate AES audio paths. However, this does not lessen the need to perform complex switching of audio, given the language of the current rules.

Few stations, however have one device that performs all its emergency crawl and alerting needs. A station may have one device that performs EAS tests and warnings; another that handles weather information; and a third that handles news bulletins.

Vendors for these products have not to date created devices or sub-systems to perform the TTS required by the Commission. At the present time, no industry or other standard, voluntary or mandatory has been established to determine how each vendor will perform and execute the TTS functions. Stations therefore need time to test and evaluate the specifications of each vendor's product to engineer a switching solution for each particular station configuration. Vendors are only just now making products available for testing or purchase.



With respect to the FCC's 18-month waiver of the requirement to aurally describe visual but non-textual emergency information (e.g., maps or other graphic displays), in part for the reasons stated above, the FCC agreed with the NAB, SBE and others that radar maps and similar moving graphics do not contain text files that can be converted to speech and, therefore, an automated TTS system cannot be used to aurally describe them at the present time. Technical solutions to this can be developed within the Disability Advisory Committee. This is timely because visual but nontextual emergency information is generally duplicative of emergency information contained in an accompanying on-screen crawl, which can be aurally transcribed on the secondary audio stream.

About this, the SBE said in comments that there is currently no mechanism to perform this function. Compliance with the requirement by the former deadline would have required stations to input written descriptions of the map or graphics into the crawl information for the TTS to convert to audio. Most systems automatically produce crawl information either from the National Weather Service (NWS) or from the creator of an EAS alert. To insert the written descriptions, stations would have to manually modify crawl alerts and emergency text information. Currently, that would require manually retyping alerts and emergency messages. The additional time was needed to modify systems to perform those functions and to create new work flows so the requirement can be implemented. Stations in smaller markets that do not yet require video description service (VDS) will have to build these systems in their plants to allow the TTS service to be used. Such an added requirement could not have been accomplished by the former May 26, 2015 deadline under the circumstances.

Finally, the requirement to include school closings information aurally on the secondary audio stream was waived pending reconsideration of the requirement in Docket 12-107 pursuant to a further notice of proposed rule making released earlier in May. Broadcasters argued that an alternative solution is needed because audible crawls of school closings would continue for long periods of time and preclude other programming. The SBE said that this is because all TTS announcements must be repeated twice as they are crawled across the screen. Furthermore, school closing crawls in particular have two inherent characteristics that make implementing this problematic as a practical matter: 1) they are very long; and 2) they are often changed and updated in real time. According to the rules now in place, every change or update to school closing information would have to be announced twice. While this can be performed by the system, it makes the SAP channel otherwise unusable as a source of audio programming for viewers using it as a second language channel or for sight-impaired people to use it

as a video description service (VDS) channel. The TTS announcements could possibly last for periods of 30 or 45 minutes, or even an hour at a time.

The short waiver periods granted by the FCC show that the Commission is committed to implementing these rules as soon as possible. The FCC waited until the very last second to grant the Audio Crawl Rule waivers, but the relief from the waivers is important because there was in fact no way to comply with the requirements as a technical matter. It remains to be seen if the situation improves markedly in the next six months.

Read the SBE [comments filed with the FCC](#) supporting the NAB's filing.

Broadcast Spectrum Incentive Auction

On May 18, the SBE provided a Regulatory Update to members regarding FCC public notice, [DA 15-580](#), (released May 13). The notice concerns the upcoming broadcast spectrum incentive auction and two aspects are of particular importance to television broadcast engineers.

First, the FCC has previously established that all auction eligible stations should review information set forth in the FCC's databases, including the Consolidated Database System and Antenna Registration System, and correct any errors in that information. **The deadline for this review is May 29, 2015.**

Second, sometime shortly after May 29, likely no later than June 15, the FCC will issue a public notice listing all stations eligible for participation in the auction or protection in the repacking process. *All eligible stations, regardless of whether or not they intend to participate in the auction, are required to complete and submit [FCC Form 2100, Schedule 381](#).* The form requires licensees to certify that their facilities are correctly described in the FCC's database, or to explain any discrepancies. It also requires certain technical information regarding station facilities to be provided.



The SBE suggests stations take the following actions as soon as possible:

- Carefully review the information set forth in the FCC's databases and confirm it is accurate. If it is not accurate, correct it immediately.
- The engineering parameters set forth in the databases will define the facilities that will be eligible for protection following the auction. If certain engineering specifications, for example antenna pattern rotation, are incorrect, this could potentially result in a loss in coverage if the station is repacked after the auction. Review the parameters shown in the databases and **make any corrections before May 29.**
- Review Schedule 381 and begin gathering information needed to complete this schedule for all stations.
- Look for the Eligibility Public Notice that will be released sometime in early to mid-June.
- Complete and file Schedule 381 for each station within 30 days of the release of the Eligibility Public Notice.

FCC Announces Incentive Auction-Eligible TV Facilities

Listed stations must file their pre-auction technical details by July 9, 2015.

On June 9, 2015, the FCC released a [public notice](#) regarding stations eligible for protection in the repacking process and for relinquishment in the reverse auction. Also included was an eligibility list of stations attached as [Appendix A](#). Only full-power and Class A TV stations are on that list. For full-power or Class A stations not shown on the list, the SBE recommends contacting the licensee's FCC counsel ASAP and find out why. The notice states that any station listed in the Appendix must file [Form 2100, Schedule 381](#) by **July 9, 2015**.

A licensee, by filing this form, states that it has verified and certifies the accuracy of its authorization. The four-page public notice describes in detail what is required of a full-power or Class A licensee. What follows are the SBE's minimum recommended efforts:

Confirm accuracy of authorization. This includes call sign, facility ID, Antenna Structure Registration (ASR) number, coordinates, heights, ERP, antenna make, model and pattern orientation for directional antennas. It is also worth comparing the coordinates on the Antenna Structure Registration to ensure they agree. Remember, coordinates on the license authorization will be in NAD27 and those on the ASR should be in NAD83. It may be necessary to use NADCON to compare the coordinates. Comparing this data across the two databases takes time. Don't wait until July 8 to start working on the form completion. If the information in the Appendix is correct, check the first box on the Schedule, then complete the remainder of the form. If information is missing or incorrect, a licensee should contact its FCC counsel and possibly employ the services of a consulting engineering firm to look into getting the corrections made. The accuracy of this data cannot be overstated. The FCC will perform its calculations for interference with this data. Stations that plan on remaining on the air after the repack will be responsible to build a facility with the assigned parameters. Incorrect data could lead to loss of coverage in the future.

Additional details are [posted on the SBE website](#).

Links:

- [FCC Public Notice](#)
- [FCC Appendix A list of stations](#)
- [FCC Form 2100, Schedule 381](#)

