SBE Makes NAB Show Plans

The 2024 NAB Show is about two months away. As the date approaches, the SBE continues to finalize the details on all its planned activities for the convention. While you plan your time at the convention, take note of all the SBE events and include them in your schedule.

The SBE Ennes Workshop is the traditional kick-off for the convention. Once again, the Workshop will span two days on April 12 and 13. Part of the Broadcast Engineering and IT Conference sessions, the technology deep dive requires separate registration through the NAB Show website. Full details on the Workshop are noted in this issue of The Signal.

The spotlight event for the SBE at the convention is the annual SBE Membership Meeting, which will be followed by a Member Reception. The Membership Meeting will be held on Monday, April 15. Watch the SBE website or stop at the SBE booth on-site for the room location. The Membership Meeting provides up-to-date information on all the SBE activities and programs, and it includes a milestone-service recognition of SBE chapter certification chairs, and updates on the society’s plans, programs and government relations efforts. With 2024 being the 60th anniversary of the founding of the Society, special recognitions will be made at both events.

Everyone attending the Membership Meeting will be eligible to win prizes, including gift cards and SBE-logo wear. The grand prizes, graciously donated by Blackmagic Design, will be two Micro Studio Camera 4K G2s, which will be given to two lucky winners. You’ll want to get to the meeting early as well, because the first 100 people in line will receive a special gift. The Member Reception will also have prize drawings. It’s a great opportunity to unwind and catch up with

Recruit a New Member During the Membership Drive

You’re reading The Signal because you are an SBE member. It’s one of many benefits of SBE membership. You know the value that SBE membership offers you, so why not share this with a colleague who is not an SBE member? Now is the perfect time to introduce your colleagues who are not familiar with the SBE, but could benefit from membership. When you recruit a new member, you might receive some personal benefit in addition to helping the society grow.

While anyone can join the SBE at any time during the year, there’s an added benefit to joining during the SBE Membership Drive, held from March 1 to May 31. If you recruit a new member during the Drive and your name is on the sponsor’s line of the membership application, your name will be entered into the member drive drawing for prizes donated from our sustaining members. If you recruit a new sustaining member, you’ll earn five entries into the prize drawing. Prizes include logo items, books and more from the SBE and many sustaining members. The grand prize is airfare and two nights’ hotel stay to attend the SBE National Meeting, planned to be held this fall.

As a recruiter, for every new member you sponsor you will receive $5 off your 2025 dues (up to $25). Need more incentive? If you recruit three or more new members, your 2025 membership will be upgraded to SBE MemberPlus.

In 2023, 65 individual members and three sustaining members were recruited. With your help, we can exceed that mark in 2024. Start recruiting now, and make sure your recruits list your name on their SBE membership application so you get the credit.

SBE Sustaining Members: To donate a prize for the Drive, contact SBE Member Communications Director Chriss Scherer.

see NAB SHOW, p. 6
Dream of remote broadcasting possibilities with the award-winning flexibility and redundancy delivered by ViA and Gateway 4 codecs. With unrivalled network connectivity options, flexible multi-stream connections, and full remote control – the world is at your fingertips.

- ViA delivers 7 IP interface options and supports mono, stereo, double mono, triple mono, or stereo plus mono.
- The Gateway 4 provides two stereo connections, or one stereo and two mono connections, or up to 4 mono connections.

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Americas - Phone: +1-317-845-8000 | Email: sales@tieline.com
CANDIDATES Sought for SBE ELECTION

The annual election of officers and directors to the national SBE Board of Directors will take place this summer. The SBE Nominations Committee seeks qualified candidates who are voting members (Member, Senior, Fellow or the designated representative of an SBE Sustaining Member) in good standing (dues paid). Candidates must hold an engineering level of SBE certification (CBT or higher, or CBNE) and maintain it the entire duration of service on the Board, if elected. Candidates should have a desire to serve and lead as a member of the board and through service as a national committee chair or member. Members of the Board represent all members, not a specific region or chapter. It is suggested that candidates have previous experience as a leader in his or her local chapter, or other volunteer leadership experience, prior to running for the national SBE Board, but this is not required. Members of the Board are expected to attend two regularly called meetings each year: in the spring, held during the annual NAB Show, and in the fall, at the annual SBE National Meeting. Other meetings may be called via conference call during the year.

The national SBE board includes 12 directors, four officers and the immediate past president. Directors serve two-year terms and officers serve one-year terms. Six director seats will be contested in 2024 as will all four officer positions. The SBE By-laws limit the number of terms for elected members of the Board.

If interested, contact SBE Nominations Committee Chair Jeff Welton at jwelton@sbe.org or via the SBE National Office at 317-846-9000. A nomination slate will be assembled by the committee by April 9. Other qualified members may be nominated by members no later than June 23.

The election runs from July 8 to Aug. 7. Those elected will be installed at the SBE National Meeting, held this fall.

Nominate a Member for SBE Fellow

There is still time to recognize a broadcasting peer who has contributed to the success of the SBE, an SBE chapter or broadcast engineering. The membership grade of SBE Fellow is the highest in the society, and it honors those who have exhibited a dedication to the advancement of the broadcast engineer, the field of broadcast engineering and the Society of Broadcast Engineers itself. To date, 89 members have been recognized with the honor in the society’s 60 years of existence.

To nominate a member, candidates must be proposed in writing by a voting SBE member to the Fellowship Committee. The nomination must include a comprehensive professional history of the nominee and an explanation of why the candidate is deserving of this honor. The nomination must also include the written endorsements of at least five other voting SBE members. Nominations are confidential. No others besides the nominators and the members of the Fellowship Committee should be aware of the nomination. The nominee should not know that he or she has been nominated.

Nominations for 2024 must be received no later than March 14, 2024, for consideration. The Fellowship Committee will bring the names of nominees to the Board of Directors for consideration and election at the April 2024 meeting. The SBE secretary will notify those elected. Recipients will be recognized at the SBE Awards Dinner in the fall during the 2024 SBE National Meeting.

Submit your nominations in a single package to: Fellowship Committee Chair Troy Pennington, CSRE, CBNT; 6156 Hampton Hall Way; Hermitage, TN 37076; or to tpennington@sbe.org.

Which one of the following statements about series resistive circuits is false?

A. The same current flows through all parts of the circuits.
B. The sum of the voltage drops across the resistances in the circuit equals the applied voltage.
C. The total resistance of the circuit is less than the resistance of any single resistor in the circuit.
D. The total power expended in the circuit equals the product of the applied voltage and total circuit current.

Answer on page 6
Pecan Pie With Your Streaming?

hope everybody had a wonderful and peaceful holiday season. My family had a death just before Thanksgiving, but I have always been proud that I come from a very strong family unit (brothers, sisters, in-laws) and we grieved together and supported each other as a family together.

I had an interesting conversation during Thanksgiving at my sister’s. While the nieces and nephews were discussing the new digital devices available today, the discussion moved to streaming and the different kind of services. Here is where it got interesting; I’m age 64, a Baby Boomer, versus a 26-year-old Gen Z’er. I mention that a lot of programming can be seen free over the air (OTA). Just put up an antenna and you can receive many free dot 2 channels, as I call them. “Oh, Uncle Ted that’s stealing. I would rather pay Hulu or YouTube than pay the station.” Wait? What? Some Gen Z’ers think that putting up an antenna and receiving OTA signal is stealing the signal from the broadcaster.

After sitting down with some pecan pie after the meal, I asked more questions to the Gen Z’er, which at this time wishes she had never brought any of this up in the first place. I assume that Gen Z’ers think that everything has a price in this nothing-is-free world. For the record, I do not place all Gen Z’ers in the SBE website, sbe.org/hamnet. Hamnet in operation. Both groups and activities on a monthly basis.

LETTER FROM THE PRESIDENT

By Ted Hand, CPBE, 8-VSB, AMD, ATSC3, DRB
SBE President
president@sbe.org

SBE Hamnet Connects Members Around the World

The SBE Hamnet, SBE Chapter of the Air 73, was developed more than 45 years ago for ham operator-members who are not near a local SBE chapter. The Hamnet has provided an ideal way for broadcast engineers and other amateur radio operators (all are welcome) to contact one another, share technical information, discuss broadcasting techniques and get the latest information on SBE programs and activities on a monthly basis.

The SBE currently has two Hamnets in operation. Both groups have email reminder lists. You can subscribe to them and get more information about SBE Hamnet at the SBE website, sbe.org/hamnet.

SBE HF Hamnet

The SBE HF Hamnet is held on the second Sunday of every month at 2400 GMT on 14.205MHz. Occasionally, that frequency is busy and you may need to move up or down (no more than 10kHz) to find the SBE meeting. Hal Hostetler, CPBE, WA7BGX, an SBE member since the 1980s, serves as net control. He lives in Tucson, AZ.

SBE UHF/VHF Hamnet

The SBE UHF/VHF Hamnet is held the fourth Thursday evening of the month at 9 p.m. ET/6 p.m. PT. The Net is worldwide on AllStar Node 46079, DMR Talkgroup. see HAMNET, p. 15
Here’s to Your Recertification Success

Just before the end of last year, I had the opportunity to participate in the December SBE WEBxtra. Ostensibly, SBE VP and Social Networking Committee Chair Kevin Trueblood and I were slated to talk about the upcoming SBE Ennes Workshop at the NAB Show this April, but our conversation expanded into another of my favorite subjects: SBE Certification. In my mind, Education and SBE Certification fit like hand in glove.

Inevitably, we touched on the recertification process. The intention is to encourage the certified engineer on a course of continuing involvement and education. We recognize that our industry is driven by change, at a rate that is ever increasing. Unless you’re intentionally staying abreast of the latest developments, things can become overwhelming in short order. SBE Certifications are granted for a five-year period, and are renewable.

The recertification process for entrance-level certifications consists of either meeting a service requirement, or upgrading to a higher level. If you’re at a higher level of SBE certification, there are different paths to consider. You can either accumulate recertification credits, upgrade to a higher certification by exam or simply retake the exam for your current level. The process for CPBE is a bit different, as there is no exam, so should you inadvertently let that grace period expire, you will have to recertify at a Senior level by taking the exam and then going through the CPBE process from scratch. (A great reason to not let that expire, eh?)

I’ve spoken with quite a few folks who didn’t realize how easy it is to accumulate and document the necessary credits for recertification. Depending on level, you’ll require between 20 and 30 credits to accumulate and document the necessary credits for recertification. Table 1 includes some partial excerpts for the more common categories.

<table>
<thead>
<tr>
<th>Category A</th>
<th>You can accumulate up to 2 credits per year thru full-time employment in broadcast engineering.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Category E</td>
<td>You can accumulate up to 1 credit per year through active participation in the SBE or other national technical societies (max 2/year).</td>
</tr>
<tr>
<td>Category F</td>
<td>Active participation as an elected or appointed officer or committee member in the SBE or other technical society at local or national level accrues 1 credit/year (max 2/year).</td>
</tr>
<tr>
<td>Category G</td>
<td>Attendance at local SBE meetings and other local technical meetings/conferences accrue ½ credit per meeting. Daylong regional or national conference attendance accrues at 1 credit/day. (WEBxtra can count as a local meeting, which is very helpful if there is no local chapter nearby.)</td>
</tr>
<tr>
<td>Category I</td>
<td>SBE University courses and Webinars by SBE accrue 1 credit per course/webinar. (With Member Plus, these are &quot;all you can eat.&quot;) Participation in the Mentee program (including TPT): 1 credit per 10 contact hours.</td>
</tr>
<tr>
<td>Category J</td>
<td>Participation as an SBE Mentor (including TPT) 1 credit per 10 contact hours.</td>
</tr>
</tbody>
</table>

Table 1. Highlights of selected SBE recertification categories.

As a student (1 per CEU), presentations of significant papers or talks at a national, regional or local level, or publication of a technical article in a national or local chapter publication, attendance at factory or in-station schools (1 credit/10 contact hours).

Recertification credits are reviewed by the local Chapter Certification Committee and approved by the National Certification Committee.

Here’s something you may (or may not) be aware of - If you’re at least 59½ years old and retired from regular full time employment, and a member with current certification, or 59½ years of age, currently certified at the senior level or above, have maintained continuous certification for 20 years and are a current member, you may be granted certification for life by application with payment of a one-time $58 fee per certification.

A link to the application is on the “Certification Levels” page.

As always, thoughts and suggestions are both welcome and sought. If you’d like to share yours, please drop me a line: gmorrill@sbe.org.

Education Almanac

Webinars by SBE
Feb. 8: Why Worry About Your Air Chain?  Feb. 15: Applied RF Basics Module 4
sbe.org/webinars

Leadership Development Course
Aug. 7-9: Atlanta
sbe.org/ldc

SBE Ennes Workshops
June 8: Syracuse, NY  June 19: Quincy, IL
Contact the SBE to arrange an SBE Ennes Workshop in your area.
sbe.org/ennes_workshop

SBE Compensation Survey Launches in April

On April 1, the SBE will post its eighth survey, and we need your help in gathering and supplying the most accurate information.

As an SBE member, you will have free access to the survey results as a member benefit. The survey will tell you if your earnings are in line with other professionals, based on information gathered from many sources.

The Compensation Survey provides practical information to SBE members about individual compensation (salary and benefits) based on multiple demographics. SBE members will have access to the full report. We need every SBE member to participate to provide a large sample base of responses. All responses are anonymous. The surveys continue to provide good information, and strong participation ensures that we can provide the most accurate and useful data. In April, look for a link to the survey in our regular email communications and on the SBE website. The results will be published in July.

GM Morrill, CPBE, AMD, CBNE
Chair, SBE Education Committee
gmorrill@sbe.org

February 2024
The SBE Diamond Anniversary: A Chance to Catch a Break

It is human nature that we often do not appreciate what we have until it is gone. SBE Certification you earned in past years has a value that may not always seem as important as it should. One day you wake up and realize, “What was I thinking? Why did I let that get away from me?”

Perhaps your reason was financial, or you simply forgot and let it expire. You may have left the industry for a short time and now realize it is tough out there in this economy and “I am better off financially if I return to what I know best.” SBE Certification could make the decisive difference in a management lay-off decision, or in a new hire decision. Even if you plan to retire, it could make the difference in picking up some part-time broadcast engineering employment in the market where you plan to retire, where no one knows you or the station you previously worked.

SBE Certification is the only “currency” in the field of broadcast engineering that demonstrates that you know what you are doing and that you have taken the time to certify your skills and competence with the only organization that certifies those skills.

This year the SBE celebrates its 60th anniversary; the diamond anniversary. In honor of this milestone, the SBE is offering you an opportunity to regain your SBE Certification if you allowed it to lapse in the past. You have the opportunity to obtain that certification again.

All SBE Certification levels are included in the Diamond Project. If you are an SBE member, then the re-certification fee is $125. However, if you hold the highest level of certification, CPBE, then the re-certification fee is $200.00. As a CPBE you have the option of paying the $125 fee and re-instating your previous senior-level CSTE or CSRE rather than your CPBE. If you are not a member of the SBE, then there is an additional $85 (traditional membership) or $175 (MemberPlus) fee for all levels of certification.

All the program details and a special Diamond Project application are on the SBE website at sbe.org/diamondproject. Applicants should fill out the Diamond Application and provide a letter to the Certification Committee detailing the work you have been doing over the time that your certification was expired. A resume would also be helpful.

It is arguable that this program is somewhat unfair to a person who has faithfully re-certified every five years. That may be true, but this is a program to allow individuals who are sincerely committed to broadcast engineering to “catch a break” and gain forgiveness. We understand in a time that job positions can be precarious, having an edge with SBE Certification could be the key to standing out to your employer.

If you value certification, then we hope you will avail yourself of this offer before the December 31, 2024 deadline.
**SBE Certification Achievements**

**CONGRATULATIONS**

**LIFE CERTIFICATION**
- Certified Professional Broadcast Engineer (CPBE) Walcott Denison, III, Lynchburg, VA - Chapter 9
- Kishore Persaud, Cantonsville, MD - Chapter 46
- Certified Senior Radio Engineer (CSRE)
  - David Caires, Glen Carbon, IL - Chapter 55
- Certified Broadcast Television Engineer (CSTE)
  - James Lien, Pottstown, PA - Chapter 18

**CERTIFIED PROFESSIONAL BROADCAST ENGINEER (CPBE)**

**NOVEMBER EXAMS**
- Certified Senior Television Engineer (CSTE)
  - Stephen Darsey, Fort Worth, TX - Chapter 67
- Certified Broadcast Radio Engineer (CBRE)
  - Matthew Converse, Green Bay, WI - Chapter 80
- Certified Broadcast Television Engineer (CSTE)
  - Philip Hartman, Dunedin, FL - Chapter 39
- Certified Broadcast Television Engineer (CSTE)
  - Jackson Buraczewski, Cincinnati, OH - Chapter 33

**CERTIFIED RADIO OPERATOR (CRO)**
- John Cento, Bowling Green, KY
- Tessema Tessema, Centennial, CO
- East Valley Institute of Technology
- Dillon Adams, Mesa, AZ
- Adrian Avala, Mesa, AZ
- Michael Bates, Mesa, AZ
- Adam Beadle, Mesa, AZ
- Aaron Buster, Mesa, AZ
- Hayden Barto, Mesa, AZ
- Kylon Conroy, Mesa, AZ
- Joceline Cortez, Mesa, AZ
- Dominic Costana, Mesa, AZ

**CERTIFIED TELEVISION OPERATOR (CTO)**
- Bates Technical College
  - Praxedes Andreve, Tacoma, WA
  - Marquise Burton-Rood, Tacoma, WA

**SPECIAL PROCTORED EXAMS**
- Certified Broadcast Television Engineer (CSTE)
  - Umesh Manedi, Duncansville, PA - Chapter 20
- Certified Broadcast Television Engineer (CSTE)
  - Cody Hume, Laramie, WY

**RECERTIFICATION**
- Applicants completed the recertification process either by re-examination, point verification through the local chapters, and national certification Committee approval and/or met the service requirement.

**Certified Broadcast Networking Technologist (CBNT)**
- Jennifer Abney, Tucson, AZ - Chapter 32
- Brian DePalo, Colorado Springs, CO - Chapter 48
- Nelson Durley, Coweta, OK - Chapter 56
- Joe Neubaur, Tucson, AZ - Chapter 32
- Certified Broadcast Technologist (CBT)
  - Seamus Butcher, Somerville, MA - Chapter 11
  - Andrew Hansen, Oshkosh, WI - Chapter 80

**Certified Professional Broadcast Engineer (CPBE)**
- Donald Smith, Raleigh, NC - Chapter 93
  - Applicants must have 20 years of professional broadcast engineering or related technologies experience in radio and/or television. The candidate must be currently certified on the Certified Senior Broadcast Engineer level.

**Win a Blackmagic Design Micro Studio Camera 4K G2**

Attend the SBE Membership Meeting at the 2024 NAB Show, and you could win a Blackmagic Design Micro Studio Camera 4K G2 in the door prize drawing. Two cameras will be awarded to two winners. Must be present to win. Thanks to SBE Sustaining Member Blackmagic Design for the prize donation.

**Nominations Open for SBE Awards**

Each year, the SBE Awards Program recognizes the SBE Engineer of the Year, the SBE Educator of the Year and others. It could be someone you nominate. The national award nominations need to be submitted to the National Office by June 15. There are other honors as well. The SBE Technology Award; Facility Innovation of the Year; Best Technical Article; Book or Program by an SBE Member; Best Article, Paper or Program by a Student Member; and the Freedom Award are among the accolades. There are also a series of statistical awards.

For information about these and any of the SBE National Awards, please visit sbe.org/awards or contact Megan Clappe at mclappe@sbe.org. Recognition by your peers is the highest honor. Honor your colleagues today.

**Certified Broadcast Networking Technologist (CBNT)**
- Tom Daley, Morrison, CO - Chapter 49
- Horace Murray, Glen Burnie, MD - Chapter 37
- Patricia Nelson, Fort Oglethorpe, GA - Chapter 45
- Patrick Perez, Mesa, AZ - Chapter 5
- Kenneth Scott, Seattle, WA - Chapter 16
- Certified Radio Operator (CRO)
  - Kim Brickman, Alameda, CA
  - Evan Matsler, Rancho Cordova, CA - Chapter 43
  - Jake Skiba, Chicago, IL
  - Certified Television Operator (CTO)
  - Orvin Debban, Holdrege, NE - Chapter 87
  - David Caires, Glen Carbon, IL - Chapter 55
  - Jake Wargo, Lyndhurst, OH - Chapter 70
  - Terrance West, Bozeman, MT

**Certified Broadcast Networking Technologist (CBNT)**
- Duane Evarts, Parker, CO - Chapter 49
- Kishore Persaud, Cantonsville, MD - Chapter 46
- Certified Televison Operator (CTO)
  - Terry Manus, Concord, NC

**Certified Professional Broadcast Engineer and Certified Senior Broadcast Engineers who have maintained SBE certification continuously for 20 years, are at least 59½ years old and are current members of the SBE may be granted Life Certification if so requested. All certified who have retired from regular full-time employment and are at least 59½ years old may be granted Life Certification if they so request. If the request is approved, the person will continue in his/her current level of certification for life.

**Get your SBE Certification pin?**
- sbe.org/pins

**February 2024**
SBE Ennes Workshop @ the NAB Show

The NAB Show is all about technology, so the SBE Ennes Workshop is the ideal start to the convention. Spanning two days on April 12 and 13 and part of the Broadcast Engineering and IT Conference sessions, the Workshop has two educational tracks: RF101 and Media Over IP Essentials. Registration through the NAB Show website is required for the Workshop.

RF 101 returns from 2023, starting with Ohm’s Law and ending with RF broadcast systems and the associated components. While targeted for newer engineers and those with IT backgrounds, it will also be a good refresher for experienced engineers, involving fast-paced sessions presented by industry experts. A group headed by Jeff Welton, CBRE, will present this workshop.

New for 2024 is a track to introduce the essentials of IP-delivered media, covering both video and audio implementations. The vast majority of audio studio builds today utilize IP infrastructure from the microphone forward, and the ATSC 3.0 universe is totally IP-based. Individuals involved with non-broadcast media delivery, whether a house of worship, post-production facility or as an audio-visual professional will also benefit from grounding in the installation and maintenance of modern non-analog facilities. The Media Over IP (MoIP) Essentials workshop is being crafted by David Blaikik, CBT, and Fred Willard, CPBE, 8-VSB, ATSC3, CBNT.

At the end of the second day, a joint, 90-minute session on management skills will be presented. Management for Engineering Staff will teach how to speak in terms of ROI, cost of acquisition and cost of ownership/operation: The language owners, managers and financial leaders understand, with a goal toward helping bring engineering back into the management team. The presenters have worked in engineering and upper management, helping attendees develop the skills needed to properly manage a department.

The two-day workshop includes breaks and lunches. The workshop registration costs $259, which includes admission to the Exhibit Halls at the NAB Show. The NAB will also provide a registration code for SBE members that offers a free Exhibits pass and/or $150 off the NAB Show Conference pass. Register at the NAB Show website.

A rundown of the planned presentations follows. The schedule is subject to change. The SBE Ennes Workshop will be held in the LVCC West Hall.

<table>
<thead>
<tr>
<th>Friday, April 12</th>
<th>Media Over IP Essentials</th>
</tr>
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<tbody>
<tr>
<td>Welcome; Jeff Welton, Nautel</td>
<td>Welcome; Jim Ragsdale, Fred Willard, Geary Morrill</td>
</tr>
<tr>
<td>Basic Electronics Fundamentals; Greg Buchwald, Motorola</td>
<td>Welcome to Media Over IP; Martin Oyster, Telos Alliance</td>
</tr>
<tr>
<td>Propagation; Karl Lahn, Broadcast Transmission Services</td>
<td>TCP/IP Basics; Andy Butler, PBS</td>
</tr>
<tr>
<td>Modulation; John Kean, Capitol Airspace Group</td>
<td>IP Troubleshooting Basics; Mike Liebman, Sirius/XM</td>
</tr>
<tr>
<td>Audio Over IP; Kirk Harnack, Telos Alliance</td>
<td>SNMP and Monitoring Protocols, 2110 Integration; Nigel Brownett, Suitelife systems/NFB Consultants</td>
</tr>
<tr>
<td>Regulation; Kevin Trueblood</td>
<td>Audio over IP Compatability; John Davis, Wheatstone; Greg Shay, Telos Alliance</td>
</tr>
<tr>
<td>Proof of Performance; Greg Buchwald, Motorola</td>
<td>Managing SDI, NDI, and 2110 Environments; Mike Bergeron, Panasonic</td>
</tr>
<tr>
<td>Test/Measurement; TBD</td>
<td>A Taxonomy of Audio Codecs; JJ Johnston, Immersion Networks</td>
</tr>
<tr>
<td>Passive Components; Steve Wilde, American Amplifier Technologies</td>
<td>Understanding SMPTE 2110; John Malhot, Imagine Communications</td>
</tr>
<tr>
<td>Troubleshooting; Greg Buchwald, Motorola</td>
<td>Greenfield 2110 Facility Buildout; Jim Beahn, Fox; Nik Kumar</td>
</tr>
<tr>
<td>Studio Tips; Josh Bohn, MaxxKonnect Group</td>
<td>The Hybrid World of SDI and 2110; Steve Holmes, Leader</td>
</tr>
<tr>
<td>RF101</td>
<td>RF Deeper Analysis and Troubleshooting: Wireshark and Beyond; Ed Martinez, Stream Guys</td>
</tr>
<tr>
<td></td>
<td>Audio Loudness, Introducing AES77; John Kean, Capitol Airspace Group</td>
</tr>
<tr>
<td>Saturday, April 13</td>
<td>Media Over IP Essentials</td>
</tr>
<tr>
<td>Welcome; Jeff Welton, Nautel</td>
<td>Welcome; Ted Hand, David Blaikik, Fred Willard</td>
</tr>
<tr>
<td>Transmitter Site Safety; Karl Lahn, Broadcast Transmission Services</td>
<td>Working with Fiber; Javid Butler, HDR Consulting</td>
</tr>
<tr>
<td>Broadcast Transmitters; Greg Martin, Rhode &amp; Schwarz</td>
<td>Media Streaming Basics; Greg Oginowski, Modulation Index/StreamS</td>
</tr>
<tr>
<td>Site Optimization; Jeff Welton, Nautel</td>
<td>Production Quality Streaming, Web RTC; Andrew Osmond, Evertz</td>
</tr>
<tr>
<td>Remote Control, Site Monitoring and SNMP; Tony Peterle, Worldcast Systems</td>
<td>IP for Internal Communications; Kirk Harnack, Telos Alliance; Martyn Oyster, Telos Alliance</td>
</tr>
<tr>
<td>Translators; John Kean, Capitol Airspace Group</td>
<td>Working with Documentation; Christian Holbrook, WireCAD</td>
</tr>
<tr>
<td>STL/Microwave ; John Kean, Capitol Airspace Group</td>
<td>Report from the Field: Lessons Learned Building IP Islands; Dave Donaldson, Gray Media</td>
</tr>
<tr>
<td>AM and AM Directionals; Steven Lockwood, PE</td>
<td>IP STL and MPX Formats; Merrill Weiss, MWG LLC</td>
</tr>
<tr>
<td>FM/TV Antennas; Steve Wilde, American Amplifier Technologies</td>
<td>Media-Over-IP in the Cloud: Noor Hassan, AWS; Jonathan Solomon, AWS</td>
</tr>
<tr>
<td>Single-Frequency Networks; Tony Peterle, Worldcast Systems</td>
<td>The Future of Media Over IP Capstone; Chris Lennon, Ross Video</td>
</tr>
</tbody>
</table>

How to Talk Like a Manager
Kevin Trueblood, SBE: Cindy Cavell, Cavell, Mertz & Associates; Gary Cavell, Cavell, Mertz & Associates
These SBE Sustaining Members are Sponsoring Events at the NAB Show

**MEMBER RECEPTION**

**GOLD SPONSOR**

**SBE BOOTH SPONSOR**

**NEMAL**

**MEMBERSHIP MEETING**

**SILVER SPONSOR**

**BRONZE SPONSOR**

**SBE ENNIES WORKSHOP**

**GOLD SPONSOR**

**SBE ENNIES WORKSHOP**

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**SBE ENNIES WORKSHOP**

**BRONZE SPONSOR**

**MEMBER RECEPTION**

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**Nautel**

**Wire CAM**

**Additional sponsorships are available. Contact Debbie Hennessey for information: dhennessey@sbe.org**

February 2024
Opportunity for Qualifying Low Power Television Stations to Apply for Class A Status

After nearly a year of wait and preparation, the Commission has adopted a Report and Order – FCC 23-112 – implementing the Low Power Protection Act (LPPA). As a result, once the Report and Order goes through necessary additional regulatory approvals and the Media Bureau successfully updates its license application form, qualifying low power television (LPTV) stations will have one year in which to apply to the FCC to convert to Class A status.

If you operate an LPTV station, you are no doubt aware that under FCC rules LPTV stations are classified as a secondary service, and therefore may not cause interference to, and must accept interference from, full-power television stations as well as certain land mobile radio operations and other primary services. As a result, LPTV stations can be displaced by full power stations, which makes LPTV stations’ existing service profiles inherently subject to some uncertainty.

In early January 2023, Congress sought to change that, at least as applied to certain LPTV stations operating in smaller markets. In particular, Congress enacted the LPPA, which directed the FCC to offer a level of heightened protection to qualifying LPTV stations similar to that previously provided to certain LPTV stations in 2000 under the Community Broadcasters Protection Act of 1999 (CBPA). Similar to the CBPA, the LPPA directs the FCC to provide eligible LPTV stations with a limited window to apply for a Class A license. Designation as a Class A television station provides primary status, and thus a measure of interference protection not currently afforded to LPTV stations.

To implement the new law, including by proposing rules regarding the various eligibility criteria articulated therein, the FCC solicited comment on various aspects of the LPPA via a March 2023 Notice of Proposed Rulemaking. After considering all comments submitted in response to the NPRM, the recent order adopts nearly all FCC implementation proposals.

The Order and Adopted Eligibility Criteria

Although the order’s discussion of the adopted eligibility criteria is too exhaustive to fully discuss here, some of the most important eligibility criteria follow:

- For the 90-day period prior to the LPPA’s enactment (i.e., between October 7, 2022, and January 5, 2023), the station must have satisfied the same requirements applicable to a station that qualified for Class A status under the CBPA, which includes: (1) broadcasting a minimum of 18 hours per day; (2) broadcasting an average of at least 3 hours per week of “locally produced programming”; and (3) complying with the Commission’s requirements applicable to LPTV stations.
- The station must demonstrate that the Class A station for which the license is sought will not cause any harmful interference as specified by certain provisions of the Communications Act and FCC rules.
- The station must show that the LPTV station “operates” in a Designated Market Area (DMA), as defined by the Nielsen Local TV Report, with not more than 95,000 television households as of January 5, 2023.
- An eligible LPTV station – from the date of its application for a Class A license and continuing thereafter – must comply with the Commission’s operating rules for existing Class A television stations, including various programming and recordkeeping requirements to which LPTV stations are not subject.

The order also provides important gloss on several of the foregoing eligibility criteria.

First, the Order defines the LPPA’s use of “operates” to mean that an LPTV applicant’s “transmission facilities” – including the structure on which its antenna is mounted – must be located within a qualifying DMA. This is a somewhat stricter standard than another the FCC had articulated as a possibility, which was merely that an LPTV station’s protected contour “extends into the geographic area of a qualifying DMA.”

Second, in response to commenter advocacy, the order mostly declines to adopt the NPRM’s proposal that a station would lose its Class A status if its DMA were ever to exceed 95,000 television households for any reason. Specifically, the Order determines that an LPTV station converting to Class A status pursuant to the LPPA will not lose its Class A status if the station is no longer able to comply with the 95,000 TV household threshold for reasons that “are beyond the station’s control,” defined as a change in market size due to: “(1) population growth, (2) a change in the boundaries of a qualifying DMA such that the population of the DMA exceeds 95,000 television households, or (3) the merger of a qualifying DMA into another DMA such that the combined DMA exceeds the threshold amount.” On the other hand, the Order states that a station converting to Class A status pursuant to the LPPA will lose its Class A status if the size of the market changes “due to a change within the control of the station,” such as a site move to a DMA with more than 95,000 television households.

Remember, this summary does not address every aspect of the Order. But if you operate an LPTV station that meets the criteria listed here, you may want to review the Order more closely, or contact your regulatory counsel to discuss whether your station could qualify to apply for Class A status.

Host an SBE Ennes Workshop

The 2024 SBE Ennes Workshop schedule is filling up. Make plans to host a workshop in your area today.

The SBE and the Ennes Educational Foundation Trust present one-day educational programs for broadcast engineers, called SBE Ennes Workshops. These programs feature multiple topics and speakers that provide television and radio engineers with the “nut and bolts” information they need to do their jobs. An SBE Ennes Workshop can serve as a highlight of your television and radio engineers with the “nut and bolts” information they need to do their jobs. An SBE Ennes Workshop can serve as a highlight of your chapter’s program year.

The cost to bring an SBE Ennes Workshop to your area is typically shared between your chapter and the SBE. For the 90-day period prior to the LPPA’s enactment (i.e., between October 7, 2022, and January 5, 2023), the station must have satisfied the same requirements applicable to a station that qualified for Class A status under the CBPA, which includes: (1) broadcasting a minimum of 18 hours per day; (2) broadcasting an average of at least 3 hours per week of “locally produced programming”; and (3) complying with the Commission’s requirements applicable to LPTV stations.

To find out how your chapter can host an Ennes Workshop for the broadcast engineers in your community, contact Education Director Cathy Orosz, at 317-846-9000 or corosz@sbe.org.

Legal Perspective

By Coe Ramsey, Patrick Cross and Noah Hock
SBE Regulatory Counsels
cramsey@sbe.org, prcross@sbe.org, nhock@sbe.org
Spring Excitement

There is a lot going on in 2024 for broadcast engineering education for young broadcasters. I want to highlight a few events that I am involved in, here in Indiana and in Maryland.

In Indiana, where the SBE national office is located, there is an exceptional high school and college educators’ organization called the Indiana Association of School Broadcasters. Each year, it holds an annual conference for members. The High School Conference will be held at the Butler University campus on March 11. More than 50 high schools, represented by 700 high school broadcasting students, are expected to attend the conference from around the state of Indiana. A small group of students will be selected to compete live at the conference in the categories of TV news anchor, radio personality, and radio newscast. Students attend educational sessions ranging from sports to marketing in the morning followed by an awards ceremony in the afternoon. The competition encourages students to develop their skills in front of and behind the camera/microphone. The SBE has an opportunity to lead a session on broadcast engineering at this conference.

The IASB is also planning a spring event for educators and their best students at a broadcast station. This event will be broadcast engineering focused. The SBE will be involved in this event and will have the opportunity to give educators and students an introduction to a professional facility.

Broadcast Training in Maryland

The event in Maryland will be held in Kent County, on the eastern shore of the Chesapeake Bay on March 19. The radio station WKHS is owned by the Board of Education of Kent County. WKHS will commemorate 50 years’ operating this unique broadcast training program. All facets of the station’s operation are covered by students and community volunteers. WKHS has a track record of success in employing hundreds still working in the industry. I will be attending, as well as folks from SBE Chapters 37 and 48, and the local SMPTE section. There will be congratulatory speeches and tours of the station. In addition to 50 years of operation, WKHS is also celebrating official integration of the Society of Broadcast Engineers Certified Radio Operators exam into the Maryland State Education curriculum.

These events have some things in common that I want to highlight because I think that they should be cloned all over the country. First, they involve young people. We as an organization must engage with young people every chance we get. The SBE, in partnership with the Indiana Broadcasters Association and the IASB, is actively pursuing activities that involve young people. In the past, we have struggled to find broadcast-related groups of young people, but we are lucky enough to have these groups already active nearby. The IBA also funds internships for its member stations. Other state broadcast associations do as well.

WKHS is a station that has a long history of educating young people in broadcasting and has committed alumni who noted this anniversary. They took the initiative to plan activities to celebrate the achievement and I was invited to participate. I agreed because I believe that we need to shower attention on programs like this. I hope that many members in the area will join them on March 19, especially our SBE chapters in the vicinity.

The second commonality that these events have is access to technology. We know that many Gen-Z and Generation Alpha students have an interest in technology. Although they don’t often have formal training in its use, they are comfortable with it being a part of their lives. In these events, we have an opportunity to show students the technology commonly used in broadcasting, in both production and transmission. There are many career opportunities using this technology and our members are being asked to develop increasing proficiency in it.

The third commonality in these events is the collaboration with other organizations. Working with state broadcast associations, the IASB, the Kent County School System, local SBE Chapters, and local SMPTE sections shows a willingness to put the needs of broadcast engineers higher than protecting organizational territory. The broadcast industry needs to show this kind of collaboration, to dispel the pop culture myth that broadcasting is no longer relevant.

Finally, these events demonstrate the value that educators bring to the broadcast table. Educators are working daily with the young people that we need to connect with. Educators at the high school and college level are important to instruct and advise broadcasting students, helping them to identify their strengths and weaknesses so that they can focus their attention on the areas that provide them the greatest opportunity.

I’m looking forward to being involved in both events and I hope that I can help some students to identify their interest and opportunities in broadcast engineering. This is going to be an exciting spring!

SBE Celebrates 60 Years

With the start of the new year 2024, the Society of Broadcast Engineers celebrates its 60th anniversary. Officially founded on April 4, 1964, the SBE has grown from its humble beginnings when about 100 broadcast engineers gathered for a meeting at the NAB Convention in Chicago to provide a leading role in broadcast and multimedia education, certification, professional networking, frequency coordination and advocacy for technical professionals working at radio and TV station, production facilities and more.

The Society’s roots stretch back to 1961, when the Institute of Radio Engineers (IRE) and American Institute of Electrical Engineers (AIEE) passed a joint resolution calling for a “merger or consolidation into one organization.” The two groups did finally join forces in 1983 forming what is known today as the Institute of Electrical and Electronic Engineers (IEEE).

The new organization was perceived by some as not addressing the needs of broadcast engineers. Because of the interest shown in response to an editorial in Broadcast Engineering magazine, written by eventual first SBE President John Battison, the organizational meeting held in 1964 formed an organization devoted to the needs and interests of broadcast engineers.

Throughout 2024, the SBE will mark the event in its bi-monthly newsletter, The Signal, on the SBE website, in social media posts, and with in-person events at the 2024 NAB Show. 
How to Properly Tune an FM Tube-Type Transmitter

As a member of the SBE Mentoring Committee and mentor of five younger broadcast engineers here in Montana, I’ve often encountered situations where the local engineer needed help dealing with a legacy FM tube-type transmitter. Most mentors find the younger engineers tasked with maintaining the technical operations of their stations have very good IT and studio operations skills but need assistance when tackling transmitter and RF problems, especially tube-type rigs.

While many stations have upgraded FM transmission facilities to all solid-state, there are still many tube rigs in operation as main or backup units all over, especially in the smaller markets. Finding easy to understand documentation on this topic is not always available in the transmitter manual. Hands-on demonstration of all the ins and outs of dealing with tube rigs by a mentoring engineer with years of experience seems to work better when training another engineer less familiar with the best procedures.

This article cannot cover all the intricacies of tube transmitter operations or all of the common failure modes an engineer may encounter. But we will discuss the key points that need to be considered and followed when properly tuning an FM tube transmitter.

An engineer not well versed in this topic might approach the task by adjusting all available controls to achieve maximum power output without paying close attention to the factory test sheet of measured parameter data. That may work okay at the power amplifier (PA) output stage, but not with the other controls on the transmitter.

### Tuning Triodes

Tube transmitters using grounded grid designs with a triode PA tube (3CX) are simpler to deal with than those using tetrodes (4CX). Grounded grid transmitters like the CCA, CSI, Sparta/Bauer, Bext, Energy Onyx and Armstrong models generally use only a PA tube, PA load and PA input tuning control on the front panel. The PA stage is cathode/filament driven by a lower-power transmitter, or an IPA stage, usually a solid-state, wide-band module or combined modules driven by an FM exciter.

Proper tuning and setup of this type transmitter should start with using a reduced amount of exciter and IPA drive to then see how the IPA stage is matched into the PA. Adjusting the PA input control for minimum reflected power is essential to protect the IPA output devices and allow maximum power transfer to the PA stage.

If the PA input tuning control cannot achieve a sharp minimum level of reflected power, the tuning shaft coupler set screws may be slipping or there may be problems with other components in the RF input section of the PA cavity. Those include coupling capacitors, the tube socket ring hardware or the tube itself.

### Tuning Tetrodes

Let’s take a look at a commonly encountered tetrode tube setup such as a Harris HT model transmitter. Harris produced and sold perhaps thousands of this model in power output levels ranging from 3.5 kW up to 35 kW. Tetrode PA tubes need significantly less drive power than grounded-grid tubes with control grid excitation and the addition of a screen grid. So there are more variables to be aware of for proper tuning.

As with a grounded-grid transmitter, the first step towards achieving proper tuning and best efficiency is to obtain correct matching between the IPA output and the PA input stage. Reduce both exciter drive power and the screen grid drive voltage, which is usually the transmitter’s output power raise/lower control, to about half normal levels. This protects components if the PA stage is significantly detuned.

The HT model transmitters offer both grid tuning and input matching variable controls to tune the PA input to resonance. These controls move sharply so care is needed to find and achieve minimum reflected power to the IPA. After that, exciter and IPA power can be increased to generate more PA output power.

Adjust the PA plate and PA loading controls alternately to achieve a peak in forward power. At this point, about half the desired power output should be obtainable. Now you can start increasing the screen voltage or raise/lower power control while alternately adjusting PA plate tune and loading to increase output power towards full power. Re-check the PA grid/input controls to make sure IPA reflected power stays at a dip.

### Factory Test Data

Identify and be mindful of what the typical operating levels for each stage’s metered parameter are for your TPO by referring to the factory test data sheet found in the manual. Any parameter that deviates significantly from its test data value should be suspect and may be the result of improper tuning or setup.

The screen current value is a good indicator of proper PA tuning and loading. If the screen current is too low, the PA loading is too heavy and needs to be readjusted. Conversely, if screen current is too high, the PA loading is too light. The PA grid bias negative voltage adjustment will also impact output power. Lower voltage will allow more output power.

### Extending Tube Life

If your find the IPA drive and screen voltage/current values need to run much higher than the test data specifies to make full power, the PA tube may be soft. You can verify that by adjusting the PA filament voltage see TUBES, p. 14
Cumulus Media, Inc. • 2021
American Amplifier Technology/ Shively Labs • 1996
Steve Wilde 916-978-1899
Quality Broadcast Products

American Tower Corporation • 2000
Tiffany Yu 603-930-9091
Development/Construction/Management

Barnfind-USA, Inc. • 2021
George Goids 919-748-7373
Fiber Transport Solutions

BB&S Lighting • 2023
Tom Yuhas 800-820-6610
Manufacturer and Developer of High-end LED Lighting

Blackmagic Design • 2012
Terry Frelsche 408-954-0500
Production Switchers, Digital Cameras, Routers, Video Editing and Monitoring, Color Correction, Video Converters

Braeke Manufacturing LLC • 2012
Patra Largent 949-756-1600
RF & Microwave Components

Broadcast Depot - 2018
Jim Jobe 305-281-7540
TV, Satellite, Radio, IP

Broadcast Devices, Inc. - 2015
Robert Tarsio 914-737-5032
Audio/RF Support Products

Broadcast Electronic Incs. • 1978
Perry Priestley 217-224-9600
Radio Equipment Manufacturer

Broadcast Software International - 2016
Marie Summers 541-338-8588
Radio Automation, Audio Logging

Broadcast Supply Worldwide • 1886
Brian Walker 800-426-8434
Audio Broadcast Equipment Supplier

Broadcasters General Store • 2004
Katy Kerstin McKenzie 352-622-7700
Broadcast Audio Video Distributor

Burk Technology • 2019
Matt Leland 978-486-0086 x703
Facility Transmitter Control Systems

Cavell, Mertz & Associates Inc., a Division of Capitol Arapage Group, LLC • 2011
Gary Cavell 703-392-9090
Consulting Services

Correx Corporation - 1997
Chris Crump 978-784-1776
Audio & Video Cables & Telephone Interfaces

Continental Electronics • 1976
Dave Dalesio 412-997-3253
IEEE, TV and Radio Transmitters

Cragford Broadcasting Company • 2021
Chris Alexander 503-481-1800
Media Company

CueScript • 2014
Michael Accardi 203-763-4030
Telopenspoothing Software & Hardware

Cumulus Media, Inc. • 2021
Conrad Trautmann 212-419-2940
Audio Media Company

Davicom, Division of Comlab, Inc. • 2014
Louis-Charles Guerrier 418-682-3380 x512
Remote Site Monitoring and Control Systems

Dielectric - 1995
Cory Edwards 207-655-8131
Radio & TV Antenna Systems and Monitoring

Digital Alert Systems, LLC - 2005
Bill Robertson 585-765-1155
Emergency Alert Systems

DoubleRadius, Inc. - 2012
Jeffrey Holdemin 704-927-6085
IP Microwave STL

Draeke Lighting • 2015
Dave Shepard 270-804-7383
PA/Obstruction Lighting - Medium and High Intensity

DTG Inc./HD Radio Technology • 2014
George Cernat 443-539-4334
HD Radio Technology

du Trel, Lunits & Rackley, Inc. • 1985
Jeffrey Reynolds 941-329-6000
Consulting Engineers

Ecco • 1980
Dorey Storozh 800-532-6626 x530-662-7553
New & Rebuilt Transmitting Tubes

ENCO Systems Inc. • 2003
Samanthara Borth 248-827-4440
Playout and Automation Solutions

ERI - Electronics Research - 1990
Zachary Bailey 812-925-6000
Broadcast Antennas, Transmission Line, Filters/Combiners, Towers and Services

Fluorocraft • 2008
Shawn Maynard 877-774-1058
Television Broadcast Automation

GatesAir • 1977
Mark Goins 513-459-3710
Digital TV Transmitters, STL Codes

Heartland Video Systems, Inc. • 2011
Dennis Klas 920-893-4204
Systems Integrator

Hitachi Kokusai Electric Comark • 2013
Jack McAnulty 413-998-1523
Manufacturer Broadcasting Transmission Equipment

Indiana Broadcasters Association • 2019
Dave Arland 317-701-0084
Indiana Association for Radio & TV Broadcasters

Inovonics Inc. • 2012
Gary Luhman 831-458-0552
Radio Broadcast Equipment

Jampro Antennas Inc. • 2011
Alex Perchevitch 916-383-1177
DTV, FM-HD Radio, DVB-T/T2, ISDB-T, DAB

Kathrein USA Inc. • 1985
Brad Holly 423-878-3141
Radio Broadcast Antenna Systems - Brad Holly

Kimtronics Lab, Inc. • 2015
Brad Holly 423-878-3141
Radio Broadcast Antenna Systems - ISO9001 Registered Company

Iatako • 2021
Paul Adrain 214-683-0791
Media Workflow Automation

LBA Technology Inc. • 2002
Jerry Brown 252-757-0279 x228
AM/MW Antenna Equipment & Systems

Linkup Communications Corporation • 2017
Mark Johnson 703-217-8290
Satellite Technology Solutions

LumenServe • 2023
Bear Poulin 512-423-8323
Tower Lighting

LYNK Technol • 2007
Steve Russell 661-251-8600
Broadcast Terminal Equipment Manufacturer

Markertek • 2002
Adam June 845-246-2357
Specialized Broadcast & Pro-Audio Supplier

Micronet Communications Inc. • 2005
Jeremy Lewis 972-422-7200
Coordination Services/Frequency Planning

Moseley Associates Inc. • 1977
Bill Gould 805-986-9621 x785
Digital STLs for Radio and Television

MusicMaster • 2014
Jerry Butler 352-231-8922
Advanced Music Scheduling Solutions

NASCAR Productions • 2014
Abbey Kieckhefer 704-348-7131
Live/Post Production Services

National Association of Broadcasters • 1981
Industry Trade Association 202-429-5340

National Football League • 1999
Rharp Beaver 813-282-8612
Game Day Coordination Operations

Nautil Inc. • 2002
Jeff Welton 877-662-8835
Radio Broadcast Transmitter Manufacturer

Nemal Electronics Int'l Inc. • 2011
Benjamin L. Nemser 305-899-0900
Cables, Connectors, Assemblies and Fiber Optic

Orban Labs, Inc. • 2011
Carl Pappas 480-403-8300
Praudio Broadcast Equipment Distributor

Poloron Instruments • 1978
Zachary Babenderer 301-696-5550
RF Measurement Equipment Manufacturer

ProAudio.com- A Crouse-Kimzey Co. • 2008
Zachary Babenderer 301-696-5550
Audio Processing AMFMTV

Propagation Systems Inc. • 2010
Dodie Rose 814-472-5540
Quality Broadcast Antenna Systems

Quintech Electronics and Communications Inc. • 2002
James Herbstriet 724-349-1412
State-of-the-art RF Hardware Solutions

QVC • 2011
Kevin Wainwright 317-696-5550
RF Measurement Equipment Manufacturer

Radio Automation and Playout

Radio Broadcast Transmitter Manufacturer

Radio Broadcast Equipment Manufacturer

Radio Broadcast Transmitter Manufacturer

Radio Automation and Playout

Radio Automation, Audio Logging

Radio/TV Transmitters, STL Codes

Radio/TV Transmitters, STL Codes

Radio Broadcast Antenna Systems

Radio Broadcast Transmitter Manufacturer

Radio Broadcast Transmitter Manufacturer

Radio Broadcast Transmitter Manufacturer

Radio Automation and Playout

Radio Automation and Playout

Radio Automation and Playout

Radio Automation and Playout

Radio Automation and Playout

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Radio Automation and Playout

Radio Automation and Playout
Member Spotlight: Michael Ridinger

**Member Stats**

**SBE Member Since:** 2007  
**Employer:** Unique Media Systems  
**Position:** President and VP of Engineering  
**Location:** Enfield, NH  
**Chapter:** 11 Boston

**I’m Best Known For:** Degreed Electrical Engineer, became involved in 1991 with the Public Access television sector by starting the station in the town I lived in at the time.

**What do you enjoy or value most about your SBE involvement?**

**A.** I like being connected with people in our industry and value the service SBE provides.

**What got you started in broadcast engineering?**

**A.** I started a public access station, and then about 15 years later realized there was an opportunity designing and building access centers in New England.

**Who was your mentor or who do you admire?**

**A.** Nikola Tesla. He could picture something in his mind and run experiments on it. Basically build it in his head. I also picture things in my head (in no way do I compare myself with Tesla’s brilliance). He invented the induction motor, AC power transmission. He had the idea of radio before Marconi (they fought over this at great length), and he envisioned broadcasting images. I also admire Edison, Ben Franklin, Einstein, Newton, DaVinci.

**What do you like most about your job?**

**A.** Being connected with people who provide local access as in this day and age they are the only ones providing news related to local issues and politics.

**When I’m not working I...**

**A.** ...invent. I hold several patents. One is for a direct write-to-wafer method of doping a silicon wafer using a laser without multiple oxide steps to form the pattern. I also designed an insert for shoes that provides shock absorption and cooling by pumping air through the shoe.

**What’s your favorite gadget?**

**A.** I like the full, rich sound of a 12-string guitar. I like to play rock and blues.

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Secure Your Spot at the 2024 SBE Leadership Development Course

Don’t miss the SBE 2024 Leadership Development Course, August 7-9, 2024, in Atlanta. Secure your place today as space is limited.

Dr. Abram Walton, the founder of Ivory Bridge Group, a management consulting and training firm will teach the course. Walton is also a tenured professor of management at Florida Tech, specializing in management and innovation. He actively researched in the fields of innovation management, business analytics and product lifecycle management and has authored over 100 publications.

“Whether you’re a high-level manager, or an aspiring leader, this course is packed with insightful team building fundamentals to bring your communication, people and management skills to the next level and beyond. Three days well spent,” said Mike Friedman, chief engineer, VPM Radio.

Specifically designed for broadcast engineers who have or aspire to have management responsibilities, the SBE Leadership Development Course is for technically adept people to acquire and develop skills for sound leadership, supervisory and management skills. The SBE Leadership Development Course is equally beneficial for those who are already in management and for those without prior management or supervisory experience.

The three-day event challenges attendees to refine leadership skills and better understand and improve interactions with others. Broadcast organizations may want to consider sending a group of employees to the course to share the experience of this highly interactive event. Registration includes all course materials, three days of instruction, the Leadership Development Webinar Series of three webinars, a certificate of completion, light breakfast and afternoon snacks. SBE Members receive a discount on registration.

Interested in hosting an LDC workshop? Future locations are being considered. Contact Education Director Cathy Orosz at 317-846-9000 or corosz@sbe.org.

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TUBES, continued from p. 12

control. If PA output power changes directly as filament voltage changes, the tube is near or at end-of-life and should be replaced.

After installing a new or rebuilt tube, always remember to set the filament voltage to its specified voltage for 2 or 3 weeks. Then reduce this voltage to a point just above where forward PA power starts to decrease. This procedure will significantly extend useful tube life.

The last but very important parameter to watch while tuning a tube transmitter is the PA stack temperature. The newer versions of the Harris HT models show that on the multimeter. You can also stick an oven meat thermometer in the PA exhaust stack as a good indicator. A stack temp running a lot higher than 140-160 degrees F is a sign of decreased PA efficiency that will shorten tube life.

This discussion will hopefully help those engineers less familiar with tube transmitter tuning procedures and is just a quick summary of the recommended steps. You can find others through an online search of the topic.
Keep Your SBE Member Benefits and Renew Your Membership Now

Communication and developing professional relationships are important to your career. By maintaining your SBE membership you can do both. Annual membership renewal for Member, Associate, Senior, and most Fellow members of the SBE is underway. Renewal letters and membership cards are in the mail. The due date for membership renewal is April 1.

Membership dues for the SBE MemberPlus option remains at $175 and includes all of the benefits of traditional membership, plus access to all archived SBE webinars and any new webinars the SBE presents during the membership year (through March 31, 2025), at no extra charge. That's more than 100 technical broadcast and media webinars available to you 24/7/365.

Traditional membership dues for Member, Senior, Associate and Fellow members remain at $85. Student membership stays at $25. SBE Student Members may choose to take the SBE Student MemberPlus option for $90 when they join or renew. Traditional SBE membership provides discounted education, certification programs and member services as well as opportunities for member interaction in local chapters and with members across the United States and in 19 other countries. The SBE network of 116 SBE chapters provides opportunities for education, local SBE certification exams and professional and social interaction with local technical media professionals. Traditional membership also affords members the opportunity to take part in the SBE Mentor Program, and access to the annual SBE Compensation Survey results, SBE social media and the SBE WEBxtra monthly online meeting.

The fastest way to renew your membership is online at sbe.org. Click on “Renew Membership” at the top of the home page. The online system is secure and accepts Visa, MasterCard and American Express. Your membership can also be renewed through the mail, using the renewal form and return envelope mailed to you. While the SBE By-laws allow for a grace period if dues are not paid by April 1, SBE MemberPlus benefits expire April 1 if not renewed. Membership will revert to traditional membership during the grace period.

SBE Life Members (who traditionally pay no dues) have the opportunity to take the SBE Life MemberPlus option and receive access to all Webinars by SBE for $90. To sign-up for SBE Life MemberPlus, contact Scott Jones at the National Office at 317-846-9000 or kjones@sbe.org.

SBE members who are at least 65 years of age, are fully retired from broadcast engineering work and have been an SBE member for at least 15 consecutive years at the time of applying for Life membership status may be eligible for Life membership. There is a one-time $85 application fee ($175 if opting for Life MemberPlus). Life MemberPlus is renewed annually.

If you have questions about your membership renewal, please contact Scott Jones at the SBE National Office at 317-846-9000 or kjones@sbe.org.

WELCOME TO THE SBE

NEW MEMBERS

Rob Able - Johnstown, PA
Sergor S. Chang-Gilhooley - Los Angeles, CA
Thomas Crowe - Alexandria, VA
Tyler Daniels - Smithfield, NC
Brady Davis - Pendleton, IN
Jason E. Dean - Jacksonville, FL
John Dowdel - Westminster, CO
Brady W. Dreasier - Quincy, IL
Sharon K. Gould - Vestal, NY
Bret Greenburg - Provo, UT
Zachary D. Harris - San Marcos, TX
Ezequiel Hernandez - Saratoga Springs, UT
Cooper S. Hodges - Maryville, TN
Raymond Holton - Philadelphia, PA
Rob Johnstone - Bangor, PA
Nickolas J. Kruger - Ames, IA

SBE WEBxtra month-

Sam Lunz - Glenshaw, PA
Elizabeth F. McCoy - Centralia, WA
Tristan C. McKenna - Quaker Hill, CT
Ryan Meyer - Clara City, MN
Sam A. Mulvey - Tacoma, WA
Jason J. Newman - Los Angeles, CA
Jose G. Ramirez - Doral, FL
Christopher Rash - Johnston, IA
Adam Robinson - Toronto, ON
Dylan J. Sheldon - Owings Mills, MD
Gregory J. Sponskowski - Fargo, ND
Ira C. Stloter - Bonne Terre, MO
Bruno G. Tariant - Tampa, FL
Douglas J. Weiss - Council Bluffs, IA
Mike Zimmerman - Omaha, NE

RE TURNING MEMBERS

Charles M. Abell - Dumfries, VA
Patrick J. Berger - North Aurora, IL
Francisco J. Bermues - Torrance, CA
Donald Bohrer - Helotes, TX
Michael R. Margrave - Sumter, SC
Arthur C. Morris - Aurora, MO
Donny Newenhouse - San Francisco, CA
Esteban L. Ortega - Lomita, CA

Sam Lunz - Glenshaw, PA
Elizabeth F. McCoy - Centralia, WA
Tristan C. McKenna - Quaker Hill, CT
Ryan Meyer - Clara City, MN
Sam A. Mulvey - Tacoma, WA
Jason J. Newman - Los Angeles, CA
Jose G. Ramirez - Doral, FL
Christopher Rash - Johnston, IA
Adam Robinson - Toronto, ON
Dylan J. Sheldon - Owings Mills, MD
Gregory J. Sponskowski - Fargo, ND
Ira C. Stloter - Bonne Terre, MO
Bruno G. Tariant - Tampa, FL
Douglas J. Weiss - Council Bluffs, IA
Mike Zimmerman - Omaha, NE

NEW STUDENT MEMBERS

Kira J. Hoiden - Lawrence, KS
Nicholas Reed - Nolensville, TN
Evan W. Roach - Toledo, OH
Jason Spiller - Bellmore, NY

NEW YOUTH MEMBERS

Jack Magoun - Arlington, MA

In Memoriam

Robert J. Haduch - Pittston, PA
Nicholas R. Marasco - Chittenango, NY
Jack S. Sellmeyer - Lucas, TX

February 2024

Randall Jones, CBT, CBNT, AE7RJ, is net control of the UHF/VHF Hamnet.

The Net is based in Denver both on analog and digital repeaters locally and throughout Colorado, and is easily linked into from anywhere in the world using the above facilities. You can also join via a hotspot or use a internet-linked repeater. Randall Jones, CBT, CBNT, AE7RJ, is Net Control. Contact him at ae7rj@jonesnw.net. Jack Roland, CBRE, AMD, CBNT, KE0VH, (ke0vh@outlook.com) is also involved.

Hamnet History

The SBE Hamnet began on HF in 1977. SBE Past President Chuck Kelly was living and working in Durango, CO. His closest regular chapter at that time was in Denver, a more than six hour drive. The chapter number 73 was assigned a few years later. Steve Brown, Rick Farquhar, Troy Pennington have also previously served as Net Control.

HAMNET, from p. 4


February 2024
MEMBERS ON THE MOVE

Doug Lung of Honomu, HI, was awarded the 2023 IEEE/BTS Jules Cohen Award for Outstanding Broadcast Engineering.

Steve Tuzeneu, CBT, is chief engineer of WPCV, WLKF, WWRZ, and WONN, Lakeland, FL.

Al Kornak is regional sales manager at Cartoni. He is based in Dallas, PA.

Zhulieta Ibisheva, CBTE, CBT, is director of technology at NBCUniversal, Washington, DC.

Alan Jurison, CPBE, AMD, DRB, CBNE, has received the 2024 Radio World Excellence in Engineering Award.

Have a new job? Received a promotion? Send your news to Chriss Scherer at cscherer@sbe.org.

MARK YOUR CALENDAR

SBE Certification Exams
Feb. 2-12, 2024
sbe.org/certification
Application deadline closed

SBE WEBxtra
Feb. 19, 2024
sbe.org/webxtra
online

SBE Membership Drive Begins
March 1, 2024
sbe.org

SBE Compensation Survey Opens
April 1, 2024
sbe.org

SBE Dues Renewal Deadline
April 1, 2024
sbe.org/renew

SBE Ennes Workshop @ the 2024 NAB Show
Las Vegas
April 12-13, 2024
sbe.org/ennes_workshop

2023 NAB Show
Las Vegas
April 13-17, 2024
nabshow.com

SBE Membership Meeting
April 15, 2024

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