THE Signal
Bimonthly Publication of the Society of Broadcast Engineers

SBE
The Association for Broadcast and Multimedia Professionals

www.sbe.org
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Recruit a New Member During the Membership Drive

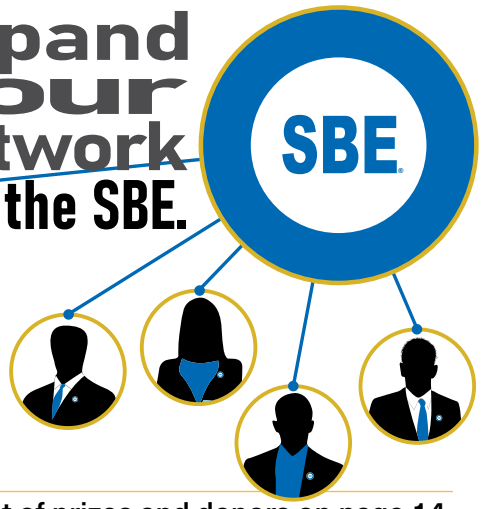
The annual Society of Broadcast Engineers membership drive is underway. The drive is an effort to recruit new members to the society, and you can benefit from your recruiting efforts as you help the Society grow.

When you recruit a new member during the Member Drive, you will be entered into the drawing for prizes donated from our Sustaining Members and the SBE. If you recruit a new Sustaining Member, you'll earn five entries into the prize drawing. And if you recruit three or more Regular or Associate Members or one Sustaining Member you will also receive an upgrade to SBE MemberPlus.

You already know the benefits of being part of the society, so share it with your colleagues. Need a list? Go to tinyurl.com/SBEreasons. The annual SBE Membership Drive began March 1, so recruit someone now through May 31 to be eligible to win a prize. The grand prize is airfare and hotel to attend the SBE National Meeting, planned to be held during the 2022 SBE22 Broadcast and Technology Expo in Syracuse in September.

As a further bonus, for every new member you sponsor you will receive $5 off your 2023 dues (up to $25).

SBE Sustaining Members who have contributed prizes are noted on page 14. We thank these SBE Sustaining Members for their support. Start recruiting now, and make sure your recruits list your name on their SBE membership applications so you get the credit. Full details about the Membership Drive are at sbe.org/drive.



See the list of prizes and donors on page 14.

SBE Events, Sessions Highlight NAB Show

The NAB Show returns, packed with exhibits, sessions and plenty of opportunities to meet with manufacturers, vendors and colleagues. As you plan to make the best use of your time at the convention, include the many SBE events on your convention calendar. While the Ennes Workshop highlights the SBE's educational offering on Saturday (see page 8 for more information), the main event for SBE members is the annual Membership Meeting, which will be followed by a reception.

Note that all the SBE events will be held in the Las Vegas Convention Center this year. The new West Hall is now open.

The Membership Meeting will be held on Monday, April 25, at 5:00 p.m. in LVCC room W307/W309. The Membership Meeting brings you up to date 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. Everyone attending will be eligible to win prizes, including a Studio Camera 4K Pro (courtesy of the Membership Meeting sponsor Blackmagic Design), three restaurant gift cards, and two SBE-logoed hats. You'll want to get to the meeting early as well, because the first 125 people in attendance will receive an SBE-logoed tote bag.

The Membership Reception starts immediately after the meeting at 6:00 p.m. in room W211/W212. Light snacks and drinks are made possible from the generous support of several Sustaining Member sponsors. Lots of prizes will also be awarded, including gift cards, broadcast equipment and Maine lobsters. Check the list of event sponsors on page 9 of this issue.

The SBE booth is LN4, which will be located in the North Lobby of the LVCC. Be sure to check the complete event schedule on the SBE NAB Show events page on our website (sbe.org/nab), which is also linked from the home page.

Another helpful resource to plan your convention time is our SBE Sustaining Member Online Resource Guide (sbe.org/guide). All these sources provide details for SBE committee meetings, the board of directors meeting, SBE certification exams, and the daily booth prize drawing.

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OVERVIEW

Experts since 1997, QCommunications was officially founded in 2006 and has since worked on a range of diverse projects, providing clients with extensive support and quality services in the REPACK FCC program. After recognizing the need, QCommunications recently expanded, adding the Veteran owned and operated QForce Airborne Division. With QForce, we now also offer a wide range of services in the Broadcast and Cellular infrastrcture, employing a variety of terrestrial and aerial platforms to fulfill all the data collection and deliverable needs of the client. Utilizing decades of industry experience and invaluable knowledge, QForce is your go-to resource for **all** of your needs.

- QForce leverages proven Unmmaned Aerial Systems (UAS's) technology tested globally state-of-the-art RF analyzer and antenna equipment to produce a full Comprehensive Coverage Verification via Field Study.
- QForce's multiple point and at height inspection process allows for real time/accurate, non-interpolated data.
- QForce pilots are meticulously trained for months and FAA certified via the Part 107 Commercial Unmanned Aerial Pilot License.
- QForce uses customer fabricated and RF shielded American manufactured Unmanned Aerial Systems.
- QForce is fully licensed and insured in multiple industries.

UAV SERVICES

QForce leverages proven technology of the course of years of development inclusive in all services we provide. QForce is operated in a para-military structure and follows explicit guidelines and procedures, thus producing explementary deliverables with the least amount of risk to our customers, surroundings, and QForce Teams.

RF Engineering - Broadcast

Pattern Verifications

Coverage Verifications

Broadcast Tower Mapping

RF Mapping

Construction Drawings

RF Engineering - Cellular

Performance Mapping
- Non-modulated Signal Pattern
- Interference Hunting
- Physical Layer RF Power
- Spectrum ID

PSAP Verification (Q3/2021)
- Rehome E911
- Accuracy Testing
- KPI Accuracy
- TXT2911 Rehome

COW (Q4/2021)

Drive Testing
- Pre-Post Swap Cluster Testing
- Single Site Verification
- Troubleshooting
- Pre-launch Cluster Operations

Site Survey/Tower Studies

3D Digital Twins/Photogrammetry Models

3D/2D Geo-mapping/Site Survey

Infrared/Thermal Inspection

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SBE National Office
317-846-9000 www.sbe.org

SBE Awards: Nominate Today!

Who will be the next Robert W. Flanders SBE Engineer of the Year award recipient? Perhaps you know someone worthy of the honor. Nominate that person today. Individuals can also be nominated directly for the national award. National award nominations need to be submitted to the National Office by June 15.

Also, Chapter Engineer of the Year award recipients, nominated by SBE Chapters, are automatically entered into consideration for the Robert W. Flanders SBE Engineer of the Year award. Each chapter can establish its own criteria for the chapter award.

There are other honors as well. The James C. Wulliman SBE Educator of the Year; 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.

Of the 13 awards recognizing chapters that are presented each year, a local chapter or SBE member submits nominations for 10 of them. Many SBE members are highly qualified and deserving of recognition. Likewise, many chapters do an excellent job promoting the ideals and goals of the SBE. Please nominate these members and chapters so they can receive the recognition they deserve.

For more information about all the SBE National Awards, visit sbe.org/awards or contact Megan Clappe at the national office or by email at mclappe@sbe.org. Recognition by your peers is the highest honor. Honor your colleagues today.

CQ Certification Question

SBE CERTIFIED

Answer on page 6

A paper copy of the FCC Rules:

A. must be available at the station's Control Point.
B. must be placed in the station's Public Inspection file.
C. must be physically available during regular business hours to the station's designated chief operator.
D. must be in a three-ring binder format and kept available by the station's designated chief operator at all times.
E. None of the above

LETTER FROM THE PRESIDENT

By Andrea Cummis, CBT, CTO
SBE President
acummis@sbe.org

Finding the Next Generation of Broadcast Engineers

As long as I've been going to SBE meetings (far too many years to mention), one of the regular topics of discussion has been, "Where are the new broadcast engineers going to come from? How do we find young engineers and get them interested in what we do?"

As many of us head towards retirement, there are very few people interested in filling our positions. Many engineers retire only to come back as consultants since there is still a need for engineers, but new talent is hard to find. For people studying engineering, it may be more attractive to become a software engineer and work regular hours behind a desk, instead of having to be on call 24/7 and work really hard for comparatively little pay.

An old friend of mine, Andy Gladding, has taken a big step towards solving this problem. I met Andy many years ago when he was a radio engineer at Fox Network in New York City. I had been hired to design the new XM radio rooms, and I was lucky enough to work with Andy on installing the Enco radio servers. We've been friends ever since.

Andy Gladding and the staff at WRHU.

After working at many places in the New York City area, Andy is now the chief engineer of Salem Media of New York where he works on shows such as *The Mike Gallagher Show*, *AM 970s*, *The Joe Piscopo Show*, and the *Kevin McCullough Radio Program*, as well as handling all engineering planning and maintenance responsibilities for the New York cluster.

Andy went to college at Hofstra, and he has also worked as the chief engineer for Hofstra University radio station WRHU since 2015. The station is part of the Lawrence Herbert School of Communication (LHSC), which is a full-service institution, providing students training in journalism, media studies, public relations, audio/radio, television and film.

Over the last few years, Andy and his colleagues at the radio station and university have expanded an old program from when Andy was a Hofstra student: WRHU Engineering's Tech Thursdays. Their sessions have ranged from training workshops that teach basic skills such as soldering and cable termination to broadcast hardware troubleshooting, systems design and transmission systems construction. I was the guest speaker at one session to introduce the students to the SBE. This program is helping students find internships in broadcasting including working with WABC-TV's engineering department.

The Society of Broadcast Engineers is working with Andy to create a student chapter at Hofstra. This will give the students an opportunity to be introduced to the many engineers in the New York City chapter, as well as the ability to participate in all the meetings to prepare for SBE certification exams, and of course membership gives the students access to SBE JobsOnline. SBE15 in New York City is actively working with Andy to set up SBE certification exams at Hofstra this spring to make it easy for all the students in the broadcast engineering program to obtain their first SBE certifications. They already have almost 40 students interested in testing!

Other projects Andy and the Hofstra group are discussing with SBE15 include:

- To have a space that serves as an official SBE NY chapter satellite office with the intent of welcoming all SBE engineers to campus at any time to use the facility and interface with students.
- To hold regular workshops, trainings and other presentations that could involve some hands-on activities for the students.
- Host a full-blown broadcasting day. This would be a day of networking with hiring managers, vendors and other areas of interest. This could potentially be the same day as certification testing at Hofstra every semester when possible.

I look forward to the SBE working with other colleges with communications departments to create similar programs all over the country so we can find and train people interested in broadcast engineering and help them find jobs when they graduate, and ultimately a great career they will love.

2022 SBE Leadership Development Course Set for August

The SBE has set the date for the 2022 SBE Leadership Development Course in Atlanta: Aug. 3-5. Make plans now to take part in this SBE tradition that started in 1965.

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 course is equally beneficial for those who are already in management and for those without prior management or supervisory experience.

The cost is $670 for SBE Members and $725 for Non-Members. Look for details and register at sbe.org/ldc. Questions? Contact Education Director Cathy Orosz at 317-846-9000 or corosz@sbe.org.

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EDUCATION UPDATE

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

Webinars by SBE Launches CBNT/CBNE Series

Things certainly changed as a result of the pandemic. It accelerated many changes already underway, none more than IT-centric solutions replacing wide swaths of broadcast infrastructure. The Certification Committee developed the CBNT and CBNE certifications to indicate proficiency with this technology, and SBE Past President Wayne Pecena, CPBE, 8-VSB, AMD, ATSC3, DRB, CBNE, developed day-long study sessions to advance the knowledge of our members. The pandemic canceled such in-person educational events, even though the need for this knowledge has become more acute.

As a result of conversations within and outside the SBE Education Committee, Wayne has developed an alternative that puts this knowledge in the hands of anyone having access to an internet connection. And it's been enhanced to address recent trends in implementation. I spoke with Wayne about a new Webinars by SBE series available starting this month.

Wayne: [Study topics sessions] were originally presented across the country, all in-person as opposed to being online, and a full day in length.

Geary: So now you're presenting these study topics in an eight-part webinar series.

Wayne: Each lecture will be an hour, with questions at the end [of the session]. The very first webinar will cover a bit of an introduction, with background of the two certifications and their requirements. The last session will include a review of the material presented throughout.

Geary: And the way these sessions are scheduled, someone who is going for a certification will be able to take that exam relatively soon after the last session.

Wayne: Yes, technically within three days. There's an application deadline in June for the August exam window [at local chapters]. There's a reminder in each session for folks wanting to get certified (upon conclusion) to submit their application in time. This will be similar to those in-person sessions.

Geary: The August exam deadline is June 10 for applications. Of course, some folks may not want to commit to the August exam until they've gone through all eight sessions, and there is another exam window in November.

Wayne: There's nothing that keeps them tied to the August timeframe. And if you're just interested in the knowledge without taking an exam, these [sessions] are pretty comprehensive. There will be recommended reading assignments. Expect to spend two to three hours of self-study. Obviously if you don't do them, you don't do them. But there'll be some resources there.

Geary: Unlike study session of the past, folks can go back and review each sessions as many times as they like, because they're all "in the can."

Wayne: Absolutely. If someone says he can't be there for eight [live sessions], they're all available on-demand. You can simply go back, and there's a handout package with all the slides, a summary of reference information and 10 takeaway bullet points for each session. I'll also include summary questions of the material at the end of each session.

I originally thought there wouldn't be any new material, but there is new material. If you look at my other webinars, everything is focused on IP networking or cybersecurity. There's a lot of stuff beyond that in a broadcast environment, like digital media workflows, metadata and digital storage. And interfaces like RS-232 and RS-485, and mod bus, which a lot of remote control manufacturers like to use. Plus AES67. So if we're going to do all that, I might as well include some Dante, Livewire and Wheatnet info. In preparing for SBE Certification, there's also cabling and Wi-Fi. It's a real balance between prep study for an exam and expanding one's overall knowledge of IT in a broadcast environment.

Pecena

I really want to emphasize that I do not have any insight into the question pool on the actual certification exams. Yes, I have seen the CertPreview. Yes, I have taken both exams.

Geary: I can confirm that I felt well prepared for taking both the CBNT and CBNE exams based on the material covered in the in-person study sessions I attended, as well as reference material that were recommended. Is there anything else we should make sure people understand that are using this series towards their certification?

Wayne: I think we want to emphasize we're trying balance between serving two [certification] audiences. One focused on either or both certifications. Obviously, you could get a CBNT first and get the CBNE after. You might even skip the CBNT altogether potentially. Because the CBNE is a "professional level certification" it has an experience requirement of five years, like CBRE- or CBTE-level exams.

Geary: When the shift to IT-based technology started, there were some who jumped on board immediately, and others who didn't. For the latter, this is going to be a great opportunity to get up to speed in a user-friendly manner, as they can take in this info as they wish.

I look forward to the new series reaching an even larger percentage of SBE membership.

For more information on any SBE education program click the Education tab at sbe.org, or contact Education Director Cathy Orosz at the SBE National Office at 317-846-9000 or corosz@sbe.org.

Education Almanac

Webinars by SBE

April 5: CBNT & CBNE Study Topics 1: Introduction
April 19: CBNT & CBNE Study Topics 2: Internetworking
May 3: CBNT & CBNE Study Topics 3: Physical and Virtual Addressing
May 12: SBE RF Safety Course
May 17: CBNT & CBNE Study Topics 4: Media Systems Architecture
June 7: CBNT & CBNE Study Topics 5: IT Systems for Broadcast Media
June 28: CBNT & CBNE Study Topics 6: IT Cybersecurity
July 19: CBNT & CBNE Study Topics 7: Building the IT Infrastructure
Aug. 2: CBNT & CBNE Study Topics 8: Webinar Series Review

sbe.org/webinars

Leadership Development Course

August 3-5: Atlanta

sbe.org/ldc

SBE Ennes Workshops

April 23: 2022 NAB Show

Contact the SBE to arrange an SBE Ennes Workshop in your area.

sbe.org/ennes_workshop

CERTIFICATION UPDATE

By Megan E. Clappe
SBE Certification Director
mclappe@sbe.org

Volunteer Service Recognized

The SBE is made up of a multitude of volunteers. There are six employees who work at the National Office, but the real momentum of the SBE is because of those who dedicate their personal time to further the goals and objectives of broadcast engineering through the SBE. This includes, but is not limited to the Board of Directors, all the various SBE committees in addition to the Certification Committee, and the local chapters including the chapter certification chairmen.

Every year at the annual membership meeting during the NAB Show, the SBE recognizes the local certification chairs who devote volunteer time to the Program of Certification. These local certification chairs receive a plaque on their recurring five-year anniversaries. What follows is a list of those who will be recognized in April.

Thank you very much to all the volunteers who devote so many hours to the SBE and the certification program!

National Certification Committee

Hal Kneller, Jr., CPBE, AMD, DRB, CBNE: 10 years
Cris Alexander, CPBE, AMD, DRB: 15 years
David Priester, CPBE: 15 years

Chapter Certification Chairs

1 YEAR
Paul Holzwarth, CBTE: Chapter 6
Doug Garlinger, CPBE, 8-VSB, ATSC3, CBNE: Chapter 25
James Arcaro, CPBE: Chapter 70
Michael Echenique, CSTE: Chapter 131

5 YEARS
James C. Campbell, CPBE: Chapter 103
Rusty Armitage, CPBE: Chapter 113

15 YEARS
Dennis Vigil, CSTE, 8-VSB, CBNT: Chapter 34
Elvir Hadziselimovic, CSTE, 8-VSB: Chapter 62
Philip Mowbray, CPBE: Chapter 81
Britt Lockhart, CPBE: Chapter 85

20 YEARS
Mark Simpson, CPBE, AMD, DRB, CBNE: Chapter 32

25 YEARS
Robert Locke, CPBE, CBNT: Chapter 3
Donald Strauss, CPBE: Chapter 55
James Leedham, CPBE, CBNT: Chapter 74

30 YEARS
Mark Quella, CPBE: Chapter 11
James Hermanson, CPBE, CBNT: Chapter 24

35 YEARS
Thomas Alderson, CSTE: Chapter 21
Rick Ryan, CPBE: Chapter 28
Robert Bell, CPBE: Chapter 30
Brian Morgan, CPBE: Chapter 49
Carl Davis, CPBE: Chapter 93

40 YEARS
Robert Good, Jr., CPBE: Chapter 41
Robert Venditti, CSRTE: Chapter 43

CQ

Answer from page 3

The answer is E

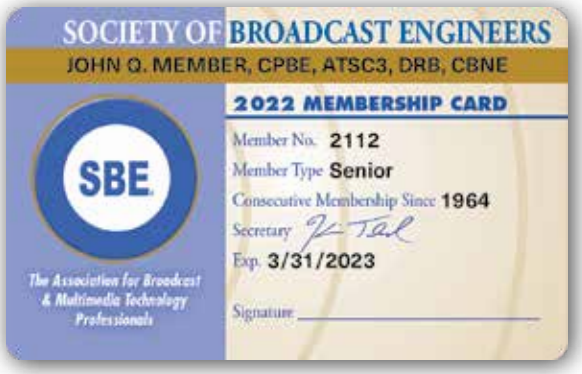
The FCC deleted the requirement for a paper copy of the FCC Rules in the Feb. 20, 2018, R&O to MB Docket 17-231, effective March 30, 2018.

Still Time to Renew Your SBE Membership

It is still not too late to renew your membership in the Society of Broadcast Engineers and retain your membership benefits. If you are a Member, Senior, Student, Associate or Fellow member, you may renew online at sbe.org. Click on "Renew Membership" in the upper right-hand corner of the website home page (or the hamburger drop-down menu on a mobile device). The online system is available 24/7, is secure, and accepts Visa, MasterCard and American Express. The system automatically generates a receipt, sent to your email address. You will need your member number and website password to access the renewal system, but if you don't have them handy, there is an automated retrieval system available to you on the renewal page.

When renewing, consider joining more than 1,000 fellow SBE members who have chosen the SBE MemberPlus option over the past year. For $175, the SBE MemberPlus option provides all of the benefits of traditional membership, plus access to all archived SBE webinars and all new SBE webinars produced through March 31, 2023. That's more than 100 webinars covering a broad range of broadcast/media technology, regulatory and safety topics.

You may also renew your membership by mail, completing and returning the renewal form and your payment to the SBE national office: Society of Broadcast Engineers, 9102 N. Meridian Street, Suite 150, Indianapolis, IN 46260; or by fax at 317-846-9120.



Traditional and MemberPlus Members

Membership renewal was due April 1. SBE By-laws provides for a three-month grace period (extends through June 30). If you chose the SBE MemberPlus option in 2021 and you did not renew by April 1, be aware that your SBE MemberPlus option benefits ended on April 1, 2022, and your membership was automatically converted to traditional membership for the duration of the grace period. If you renew during the grace period (or after), you can restore your free access to all SBE webinars by taking the SBE MemberPlus option.

SBE Certification Achievements

CONGRATULATIONS

LIFE CERTIFICATION

Certified Professional Broadcast Engineer (CPBE)
James Bernier, Fernandina Beach, FL - Chapter 7
Mario Hieb, Glendale, CO - Chapter 62

Certified Senior Radio Engineer (CSRE) AM Directional Specialist (AMD) Digital Radio Broadcast Specialist (DRB)
Alan Lane, Tallahassee, FL - Chapter 106

Certified Broadcast Networking Engineer (CBNE)
James Bernier, Fernandina Beach, FL - Chapter 7

Certified Broadcast Television Engineer (CBTE)
Eddie Simone, Phoenix, AZ - Chapter 9

Certified Broadcast Networking Technologist (CBNT)
Mark Watson, Albany, OR

Certified Broadcast Technologist (CBT)
Steven Beitzel, Trenton, OH - Chapter 33
Gregory Beveridge, Thornton, CO - Chapter 48
Peter Fountain, Littleton, CO - Chapter 48
Michele Muller, San Mateo, CA - Chapter 40
Mark Watson, Albany, OR

Certified Television Operator (CTO)
Mark Watson, Albany, OR

Certified Radio Operator (CRO)
Mark Watson, Albany, OR

Certified Professional Broadcast Engineers 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.

CERTIFIED PROFESSIONAL BROADCAST ENGINEER (CBPE)

Certified Professional Broadcast Engineer (CPBE)
Ben Endow, Phoenix, AZ - Chapter 9
Robert Weller, Washington, DC - Chapter 37

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.

FEBRUARY EXAMS

Certified Broadcast Radio Engineer (CBRE)
Ron Davis, Nephi, UT - Chapter 62

Certified Broadcast Television Engineer (CBTE)
Scott Spongberg, Provo, UT - Chapter 62

Certified Video Engineer (CEV)
Alex Voss, Farmers Branch, TX - Chapter 67

Certified Broadcast Technologist (CBT)
Derick Abbey, Rochester, NY

Certified Radio Operator (CRO)
Lance Coon, Lohrville, IA - Chapter 109
Allie Knitter, Vacaville, CA - Chapter 43
Michael Storvick, Centennial, CO - Chapter 48

SPECIAL PROCTORED EXAMS

Certified Broadcast Networking Technologist (CBNT)
Ryan Cox, Bonney Lake, WA - Chapter 16

Certified Television Operator (CTO)
Walter Lanier, Killeen, TX

Certified Radio Operator (CRO)
Chase Spross, Portland, OR

CERTIFIED RADIO OPERATOR (CRO)

Cave City High School
Kaytlin Arnold, Cave City, AR
Nathaniel Ayers, Cave City, AR
Christopher Bunch, Cave City, AR
Austin Burba, Cave City, AR
Cayden Burrow, Cave City, AR
Caleb Cates, Cave City, AR
Andrew Doyle, Cave City, AR
Adrian Finney, Cave City, AR
Briawna Finney, Cave City, AR
Ivette Galan, Cave City, AR
Mason Green, Cave City, AR
Matthew Holliday, Cave City, AR
Christian Jacobs, Cave City, AR
Thomas King, Cave City, AR
John Mahan, Cave City, AR
Hunter McCain, Cave City, AR
Joey Miller, Cave City, AR
Michael Otwell, Cave City, AR
Wyatt Prince, Cave City, AR
Samuel Sanchez, Cave City, AR
Ian Sanders, Cave City, AR
Stevie Scheffler, Cave City, AR
Talon Smith, Cave City, AR
Jadyn Stauffer, Cave City, AR
Malachi Treadway, Cave City, AR
Constance VanHoesen, Cave City, AR
Eliza Westmoreland, Cave City, AR
Lily Williams, Cave City, AR
Lily Wood, Cave City, AR

CERTIFIED TELEVISION OPERATOR (CTO)

Andrew Smith, Vermillion, SD

Got your SBE Certification pin?
sbe.org/pins

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 Professional Broadcast Engineer (CPBE)
James Kauffman, Ocoee, FL - Chapter 42
John McKinley, Gahanna, OH - Chapter 52

Certified Professional Broadcast Engineer (CPBE) AM Directional Specialist (AMD) Digital Radio Broadcast Specialist (DRB)
Arthur Reis, New Lenox, IL - Chapter 26

Certified Senior Radio Engineer (CSRE)
Alex McKenzie, Ellis, KS - Chapter 3
Jerry Olson, Spokane, WA - Chapter 21

Certified Senior Television Engineer (CSTE)
Michael Hoffman, Hermosa Beach, CA - Chapter 47
Matt Rogers, Mason, OH

Certified Senior Radio Engineer (CSRE) AM Directional Specialist (AMD)
Walter Sewell, Highland, IN - Chapter 26

Certified Senior Television Engineer (CSTE) 8-VSB Specialist (8-VSB)
Elvir Hadziselimovic, Cottonwood Heights, UT - Chapter 62
Jerry Martin, Loma Linda, MO - Chapter 56
Dennis Vigil, Albuquerque, NM - Chapter 34

Certified Broadcast Networking Engineer (CBNE)
Corey Gregory, Warrenton, VA - Chapter 132
Jerry Martin, Loma Linda, MO - Chapter 56
Kira Parker, South Burlington, UT - Chapter 115
John Saunders, Boonsboro, MD - Chapter 46

Certified Broadcast Radio Engineer (CBRE)
Darrell McCalla, Vestavia, AL - Chapter 68
Stuart Muck, Fond du Lac, WI - Chapter 80
Friend Weller, Logan, UT - Chapter 62

Certified Broadcast Television Engineer (CBTE)
Joseph Addalia, Jr., New Smyrna Beach, FL - Chapter 42
William McKinney, Middlefield, OH - Chapter 70
Rick Morris, Wilmette, IL - Chapter 26
Scott Nielson, Layton, UT - Chapter 62
Anthony Peiffer, Pleasant Gap, PA - Chapter 15

Certified Audio Engineer (CEA)
Mark Dubosky, Jacksonville, FL - Chapter 53
Darrell McCalla, Vestavia, AL - Chapter 68
Errol McKinson, Laurel, MD - Chapter 132
Seth Morth, Lebanon, PA - Chapter 41

Certified Video Engineer (CEV)
Jonathan Bernstein, Washington, DC - Chapter 37
Darrell McCalla, Vestavia, AL - Chapter 68

Certified Broadcast Networking Technologist (CBNT)
Darrell McCalla, Vestavia, AL - Chapter 68
William McKinney, Middlefield, OH - Chapter 70
Arthur Reis, New Lenox, IL - Chapter 26
Matt Rogers, Mason, OH
Dennis Vigil, Albuquerque, NM - Chapter 34

Certified Broadcast Technologist (CBT)
Matt Antalek, Lancaster, MA - Chapter 11
Ronald Castro, Petaluma, CA - Chapter 43
Marc Fenton, Moreno Valley, CA - Chapter 131
R. Allen Fowler, Murray, KY - Chapter 103
Daniel Gonzalez, Simi Valley, CA - Chapter 47
John Kemps, Napa, CA - Chapter 40
Darrell McCalla, Vestavia, AL - Chapter 68
John O'Brien, La Canada, CA - Chapter 47
Ryan Phillips, Seattle, WA - Chapter 16
Joshua Rule, Myrtle Beach, SC - Chapter 107
Stephen Tuzeneu, Middletown, CT - Chapter 45
Billy Volek, Sioux Falls, SD

Certified Television Operator (CTO)
Stanley Armstong, Rocky Mount, NC
David Corpuz, Denver, CO
Rudolph Gonzalez, Wiemar, TX
Patrickia Nelson, Rossville, GA
Josian Rodriguez, Phoenix, AZ
Glen Samletzka, Arlington, MN

Certified Radio Operator (CRO)
Ronald Teuffel, Charleston, WV
Latasha White, Panama City, FL

2021 SBE Compensation Survey Open

The SBE is conducting its seventh (and ongoing) compensation survey. Launched to provide practical information to SBE members about individual compensation (salary and benefits) based on facilities, market size and years of experience, SBE members will have access to the full report.

While each annual survey has seen a successful response rate, your participation is important to provide the large sample pool for the most reliable results.

All survey responses are anonymous. Find the survey link in email communications and on the SBE website. With your help we can provide a useful and practical resource to SBE members.

Highlights of the survey will be reported in *The Signal*. The full report will be available for download to members from the SBE website. Take the survey today.

The SBE Ennes Workshop

Saturday, April 23, 2022 | LVCC W311/W313

ENNES WORKSHOP

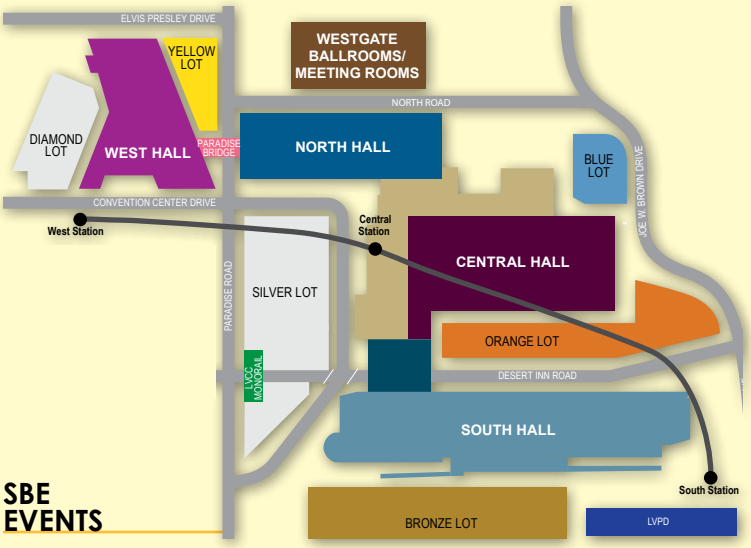
10:35-10:40 a.m
Welcome
Tom Mikkelsen
Opening comments
SBE Executive Director Jim Ragsdale

10:40-10:55 a.m.
Technology Road Map Update. A review of the variety of advanced technology solutions and their progress for implementation into the broadcast and network architectures.
Stan Moote, CTO, IABM

10:55-11:15 a.m.
What's New and What's Old with ATSC panel discussion. Planning ATSC 1.0 Sunset, continuing update on the progress of ATSC 3.0 and Nextgen TV.
Joe Addalia, Director of Technology Projects, Hearst
Del Parks, President of Technology, Sinclair
Tom Mikkelsen
Stan Moote, CTO, IABM

11:15-11:35 a.m.
Virtual LED Walls Sets panel discussion
Stan Moote, CTO, IABM
Rob Fowler, Director of Business Development, Brompton Technology
Tom Shelburne, Executive VP - Sales & Operationas, Mo-Sys Engineering

Tom Mikkelsen and Stan Moote are the co-chairs/moderators of the SBE Ennes Workshop.



SBE EVENTS

SBE Certification Committee Meeting
Saturday, April 23, 2022
6:30 p.m. - 10 p.m.
LVCC W210

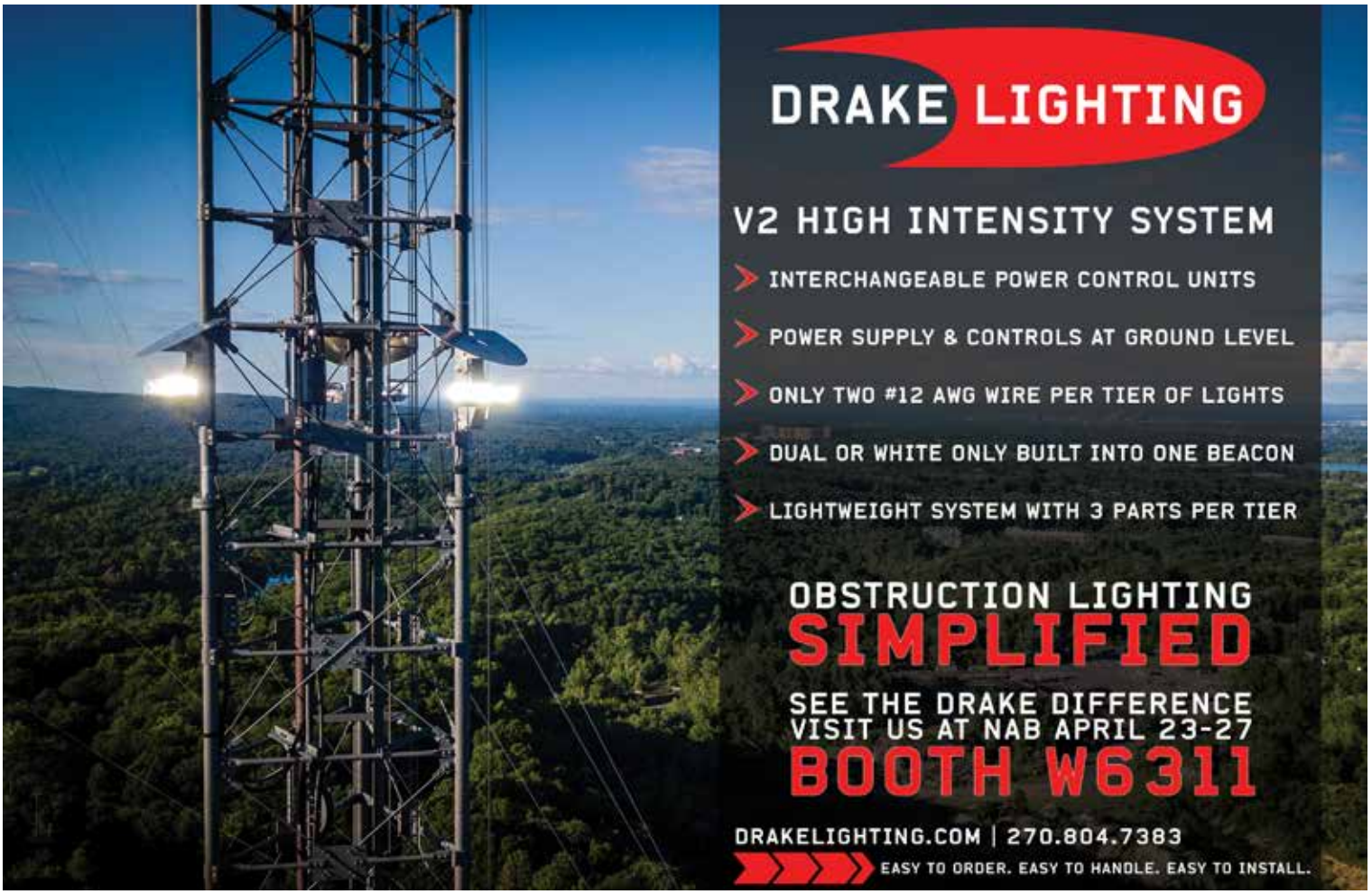
SBE Board of Directors Meeting
Sunday, April 24, 2022
8 a.m. - 12 p.m.
LVCC W210

SBE Education Committee Meeting
Sunday, April 24, 2022
2 p.m. - 3 p.m.
LVCC W210

SBE Membership Meeting
Monday, April 25, 2022
5 p.m. - 6 p.m.
LVCC W307/W309

SBE Member Reception
Monday, April 25, 2022
6:15 p.m. - 7:15 p.m.
LVCC W211/W212

SBE Daily Booth Drawing
Sunday and Tuesday in booth LN4 at 5:00. Monday during the SBE Membership Meeting.



The SBE Thanks These Sustaining Members for Sponsoring Events at the NAB Show

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Tieline Booth: #C1707

LEGAL PERSPECTIVE

By Stephen Hartzell and Coe Ramsey
SBE General Counsels
shartzell@sbe.org, cramsey@sbe.org

Spring Brings Changes: A Play in Three Acts

Act 1: The Bar

It's the same old story: A DJ, a baker, and a bagpiper walk into a bar... You know how this one ends. The bagpiper calls it a day, and the DJ and baker attempt to fill the piper's ghillie brogues as they slog through the regulatory bog. (Or something like that.) We are grateful to Chris Imlay (obviously the bagpiper) for his multiple decades of service to the SBE, and we, the DJ (Coe) and the baker (Stephen), are honored to have the opportunity to bring our multiple decades of broadcasting legal experience to the table to serve the regulatory legal needs of the SBE. Chris may have taken his final curtain call for the SBE, but we're pretty sure that we'll continue to bump into him backstage with his VIP pass. Thank you Chris!

Act 2: The Bank

Not for nothing, as of this writing a hot-off-the-presses FCC Public Notice announced that repacked/displaced television stations would be allocated their full 100 percent verified expenses for their channel change projects. While this is one of few pieces of good news to come out of the Broadcast Incentive Auction (and post-Auction transition), it deserves mention that, for most broadcasters, the Auction wasn't so much about money as it was about the loss of irreplaceable spectrum and further crowding of the UHF band that stations had come to rely on in many markets for wireless mics operations.

Act 3: The Blank

Speaking of wireless mics operations, we want to catch you up briefly on TV white spaces developments (TVWS). While the continued increase in the quantity of local broadcast news and live sports and entertainment events has escalated demand for wireless microphones equipment and resulted in more wireless mics usage (both scheduled and unscheduled), it is curious (not to mention frustrating) that the FCC continues to mollycoddle the TVWS industry, which has a quantity of end-users that can be counted merely in the hundreds nationwide despite nearly 15 years of efforts by the government to foster their implementation, while hindering broadcaster use of wireless mics during newsgathering and other activities.

On January 25, 2022, the FCC adopted its latest TVWS order. In the FCC's opinion – and it's not at all clear that SBE would completely agree – the January 2022 order "will provide additional certainty to white space device users, manufacturers and database administrators to enable unlicensed white space devices to operate efficiently and protect other spectrum users, in particular wireless microphone users."

Among the multiple issues addressed by the January 2022 order, probably the most important is the elimination of the previously-adopted-but-never-implemented requirement for databases to push channel availability notifications to fixed and personal/portable (Mode II) TVWS devices to help guard against interference with licensed wireless microphones. The FCC replaced the push notification requirement with a rule that requires TVWS devices to re-check the database more frequently, with the exception of narrowband and mobile white space devices. The FCC also rejected an NAB challenge to a particular database administrator.

Background. For almost 15 years now, the FCC has been progressively making TVWS available for unlicensed operations. Such unlicensed operations are conducted via white space devices, which provide or facilitate the deployment of wireless services such as broadband. Because unlicensed white space operations have the potential to cause harmful interference to existing, licensed broadcast and wireless microphone operations, the FCC has adopted rules both limiting the scope of permissible unlicensed operations and requiring white space devices to regularly check certain databases to ensure that their operations are taking (or will take) place on a viable, available channel and at a permissible power level.

The FCC's rules provide for three classes of white space devices: fixed, mobile (within a defined geo-fenced area), and personal/portable (unspecified locations that may change). Personal/portable TVWS devices operate in either Mode I or Mode II. A Mode I device does not have internal geo-location and databases access capability, and must access the database from either a fixed TVWS device or a Mode II personal/portable device. A Mode II device uses internal geo-location and database access functionality.

Prior to the January 2022 order, the FCC required all TVWS devices to contact a white space database at least once per day, and if a device could not contact a database on a given day, it was required to cease operation after 11:59 p.m. the next day if it was still unable to contact a database. Because wireless microphone usage generally changes more frequently than once daily, the FCC adopted (but did not implement) rules that also would have required TVWS databases to push changes in channel availability to fixed and personal/portable (Mode II) TVWS devices when a licensed wireless microphone is registered on such TV channel(s).

Database Recheck Frequency for Fixed and Personal/Portable Devices. In the January 2022 order, the FCC acknowledged that the push notification requirement was problematic, including because there were insufficient technical assurances that TVWS devices would actually receive push notifications. Accordingly, the FCC eliminated the push requirement for certain TVWS devices and replaced it with a more-frequent database recheck requirement. Specifically, the January 2022 order requires that fixed and personal/portable (Mode II) white space devices (except for narrowband devices) (i) re-check the white space database at least once every hour when not in sleep mode, and (ii) cease operations after two failed scheduled checks. In adopting the new hourly re-check requirement the FCC rejected the NAB's and Shure Incorporated's request to require re-checks every 20 minutes.

As for narrowband (bandwidth of no greater than 100 kHz) and mobile devices, the daily re-check interval continues to apply for now (such devices were not subject to the now-eliminated push requirement). However, in the January 2022 order, the FCC is seeking comment on whether these devices should also be required to re-check the white space database more frequently

see CHANGES, p. 11

LINKS

Incentive Auction Public Notice
docs.fcc.gov/public/attachments/DA-22-191A1.pdf

FCC TVWS Order
docs.fcc.gov/public/attachments/FCC-22-6A1.pdf

Temporary BAS Receive Sites
usa.wavedb.com/temporarybas

White Spaces Devices Database
usa.wavedb.com/lowpowerauxiliarystations

FOCUS ON THE SBE

By James Ragsdale
SBE Executive Director
jragsdale@sbe.org

Getting To Know You (Continued)

In the last issue of *The Signal*, I talked about how I wanted to learn from our members what your needs are. As we approach refreshing our strategic plan, we can't do that without knowing what our members' needs are. In addition, we need to find those who might benefit from being members of the SBE and find out what their needs are. Over time, we have the capability of delivering new certifications that prove the expertise of our members and the knowledge to offer educational classes that strengthen our members.

As I mentioned in the last article, I believe that the strength of the SBE is in its chapters. You know the industry, the people working in the industry, and the changing technology that you develop and implement. Each month, I get excited when I receive chapter reports and see the technologies that you are learning about in your meetings. I would encourage you to meet as often as possible this summer. This is a time when you can have picnics and outdoor barbecues. I even saw a report of a fishing contest. The meeting options are so much greater in the warmer months. If your chapter is having difficulty getting together, consider having a joint meeting with another chapter. Also, if you need an educational program, check out the list of SBE Sustaining Member speakers at sbe.org/speakers.

I committed in that article to hosting an open Zoom monthly meeting reserved for the purpose of member communication with the National Office. I want that time to be without an established agenda, leaving time for chapter leaders and members to ask questions. If I don't know the answer, I will commit to finding the answer and sharing it in the next Zoom monthly meeting. I want this meeting to be a time for respectful dialogue. I hope to learn more about what we as an organization can do to further the profession of broadcast engineering. I look forward to hearing from many of you during these meetings. If you are a chapter chair and haven't received that Zoom link email, please send me a message at jragsdale@sbe.org.

We are in our final preparations for the NAB Show, and I am hopeful that I will see many of you there. This will be my first NAB Show and I know that it will be unlike any previous event. The SBE will have its usual booth, Certification and Education Committee meetings, our spring Board meeting, the spring Membership Meeting, and the SBE Member Reception. Any member is welcome to sit in on the board meeting, attend the membership meeting, and mingle at the reception. I've watched a few of the past membership meetings on YouTube. It's great to see outstanding chapters and broadcast engineers celebrated for their accomplishments.

Future Events

This summer, I am looking forward to hosting almost 30 registrants for our Leadership Development Course in Atlanta, GA. This event happened annually until the pandemic interrupted our schedule in 2020. It is on again this year and it will be held Aug. 3-5, 2022. This three-day course is an intensive study of successful leadership and management, designed specifically for broadcast engineers. This course will give me the chance to hear from a mix of members and non-members about the demands of your career and how the SBE can equip you for growth. Get more info at sbe.org/ldc.

In the late summer, we will hold the SBE National Meeting (which includes the fall Board meeting and Membership Meeting) in conjunction with the SBE Chapter 22 Expo. The Board Meeting will be on Sept. 28 and the Membership Meeting will be on Sept. 29 at the Ramada by Wyndham in Liverpool, NY. If you are located nearby, and especially if you aren't able to attend the NAB Show in the spring, it would be great to meet you at the SBE National Meeting. I think it's great that we have two opportunities each year to get face-to-face and share what is going on in the broadcast engineering industry. I want to meet as many of you as possible at these events and hear your dreams for the future of the SBE.

As we return to familiar activities that we haven't been able to enjoy for a couple of years, I hope that brings some anticipation and excitement for reconnecting with old and new friends. I'm certainly looking forward to getting acquainted with many of you and hearing from you. I need your input, the SBE needs your input, and your peers need your input. Thank you for being involved with us.

CHANGES, from p. 10

than once per day, and the FCC has proposed that mobile white space devices should be subject to the same hourly recheck requirement as fixed and personal/portable (Mode II) white space devices. As framed in the January 2022 Order, the crux of the issue surrounding how frequently database rechecks should be required is balancing the need for licensed wireless microphone operators to be able to quickly deploy in breaking news and other exigent circumstances, while at the same time ensuring that white space devices don't needlessly clog bandwidth and/or suffer battery drain due to required rechecks that occur more often than actually is necessary (in the FCC's opinion) to prevent harmful interference. Comment dates have not yet been set, but opening comments will be due 30 days after publication in the Federal Register, with reply comments due 60 days after such publication.

White Space Database Administrator. The January 2022 order also denied the NAB's request to reconsider the designation of Nominet UK as a white space database administrator. The NAB had expressed concern that Nominet's database contained incorrect channel information for hundreds of TV stations. In denying the NAB's request, the FCC noted that Nominet had corrected the errors and indicated that the errors were the result of issues related to the FCC's transition to its new LMS database and Nominet's inadvertent failure to include updates to its final version of the database. The FCC did emphasize that it takes seriously the integrity of the white space database and that it will continue to work with white space database administrators and interested parties to ensure that the database provides accurate lists of available channels for TVWS devices.

Given the history of the TVWS industry's lobbying efforts, we expect further Commission action in the not-too-distant future, so be sure to recheck – though perhaps not hourly – the pages of *The Signal* and SBE-news. And, in the meantime, be sure to license (via the FCC's ULS database) – and update existing licenses for – your Part 74 licensed wireless mics as well as register them (and temporary BAS receive sites) with the white spaces database.

ENGINEERING PERSPECTIVE

By Mark Persons, CPBE, AMD, CBNT
Webmaster, SBE Chapter 17 Twin Cities
Recipient, SBE John H. Battison Award for Lifetime Achievement 2020
teki@markpersons.com

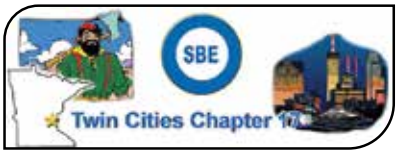
Create a Winning SBE Chapter Website

Telling the story of an organization on the internet.

You may have noticed that Twin Cities Chapter 17 website took top honors

from the SBE in 2021 for Best Chapter Communication, which includes the chapter website. The truth is that web writing is not difficult. Anyone with a willingness and desire to learn can do it. It can even be fun.

I took on the volunteer job of writing sbe17.org after the chapter's 2019 summer picnic. It started out with basic HTML code, which was difficult to write. The site looked fine on desktops but did not display well on smartphones and tablets.



This got me to looking at Wix, Webflow, Godaddy and even Wordpress. I settled on weebly.com. There are better tools, but I thought they were more difficult to learn and use.

With Weebly, there is no software on the webmaster's computer. The writing is all cloud-based. Almost any non-technical person can make it work. Text boxes, photos, and other elements are drag-and-drop from a menu onto a page. That includes a search box, which is very convenient for web visitors. The Weebly theme I picked keeps menu choices at the top of the screen, regardless of how far a web visitor has scrolled down a page.

The Chapter 17 website has stories from past meetings for those who could not attend. Everyone loves a story. Think of the website as storytelling about the organization and what it does. Websites are information resources for members and the world.

One catch is that websites need to be updated frequently by a chapter member. It is a job just like chapter chairman and other chapter roles. A site with outdated information can be a black eye for an organization.

As an SBE mentor, I'll be glad to help others wanting to do this for their chapter.

If your chapter needs assistance with SBE logos or other media for the chapter website, contact SBE Member Communications Director Chriss Scherer, CPBE, CBNT.

Seven Easy Steps to Maintain Your Website

1. Choose the right website builder
Success starts with the right foundation.

2. Update Regularly
Maintain the website so visitors know your chapter is up and running.

3. Give it a Makeover
Visitors will quickly exit if the site is outdated or poorly formatted.

4. Review your content
Don't publish without editing and reviewing a couple of times.

5. Optimize the Website for SEO
Search engine optimization will help deliver a consistent flow of traffic to your site.

6. Create a Sense of Community
Commenting systems increase traffic. Chapter leaders should participate in the commenting.

7. Use Social Media
Social media is a top traffic source for many websites.

Source and more detail: Lifehack.com
tinyurl.com/website7steps

Nominations Committee Seeks Board Candidates

By Roz Clark, CPBE, CBNT

The SBE Nominations Committee is beginning its work to assemble a slate of candidates for the upcoming SBE election. I have again been appointed to chair the Nominations Committee.

The SBE Nominations Committee seeks qualified candidates who are voting members (Member, Senior, Fellow or the designated representative of a 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, not only as a member of the board, but through service as a national committee chair or member. Members of the Board are "at large," meaning they represent all members, not any one specific region, state, city or chapter.

Members of the Board are expected to attend two 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 2022 as will all four officer positions. The SBE By-laws limits the number of terms of elected members of the Board. Directors may serve three consecutive terms, the secretary and treasurer may serve up to four consecutive terms, and the president and vice president may serve up to two consecutive terms. The maximum time anyone may serve on the board is ten consecutive years.

Members interested in offering their candidacy and serving on the national Board if elected are encouraged to contact the SBE Nominations Committee Chair Roz Clark, at roz.clark@cmg.com or via the SBE National Office at 317-846-9000. A slate of nominees will be assembled by the committee by April 19. Other qualified members may be nominated by members in good standing no later than July 8.

The election takes place from July 15 through Aug. 17. Those elected will be installed into office during the SBE National Meeting, planned to be held in Syracuse in September.

SUSTAINING MEMBERS

Support the companies who support the SBE and the industry

AC Video Solutions • 2014
Andrea Cummis 201-303-1303
Consulting, Systems Design/Integration

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

Audemat-Worldcast Systems Inc. • 2000
Christophe Poulain 305-249-3110
Control Manufacturer

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

Belden Electronic Division • 1991
Rose Lockwood 203-500-4743
Fiber and Copper Cabling Infrastructure

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

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

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

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

Broadcast Electronics Inc. • 1978
Perry Priestley 217-224-9600
Radio Equipment Manufacturer

Broadcast Supply Worldwide • 1986
Shannon Nichols 800-426-8434
Audio Broadcast Equipment Supplier

Broadcasters General Store • 2004
Buck Waters 352-622-7700
Broadcast Audio Video Distributor

Burk Technology • 2019
Jim Alinwick 978-486-0086 x7404
Transmitter Facility Control Systems

Calrec Audio • 2016
Helen Carr 703-307-1654
Audio Mixing Equipment

Cavell, Mertz & Associates Inc. • 2011
Gary Cavell 703-392-9090
Consulting Services

Comrex Corporation • 1997
Chris Crump 978-784-1776
Audio & Video Codecs & Telephone Interfaces

Continental Electronics • 1976
Dale Dalesio 412-979-3253
TV and Radio Transmitters

Crawford Broadcasting Company • 2021
Cris Alexander 303-481-1800
Media Company

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

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

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

Dialight Corporation • 2006
David Jennings 732-919-3119
FAA Certified Obstruction Lights

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 Holdenrid 704-927-6085
IP Microwave STL

Drake Lighting • 2015
Dave Shepeard 270-804-7383
FAA Obstruction Lighting - Medium and High Intensity

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

du Treil, Lundin & Rackley, Inc. • 1985
Jeff Reynolds 941-329-6000
Consulting Engineers

The Durst Org. – 4 Times Square • 2004
Tom Bow 212-997-5508
TV/FM/Microwave Tower Site

DVEO - Division of Computer Modules Inc. • 2011
Laszlo Zoltan 858-613-1818
Everything About Transport Streams

Econco • 1980
Debbie Storz 800-532-6626, 530-662-7553
New & Rebuilt Transmitting Tubes

ENCO Systems Inc. • 2003
Samantha Bortz 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

Florical Systems • 2008
Shawn Maynard 877-774-1058
Television Broadcast Automation

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

Hilights, Inc. • 2016
Timothy Nash 352-564-8830
Obstruction Lighting Maintenance

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

iHeartMedia, Inc. • 2019
Troy Langham 918-664-4581
Radio Group Owner

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

Inovonics Inc. • 2012
Gary Luhrman 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

JVC Professional Video • 2014
Edgar Shane 973-317-5000
Professional Video Products, Camcorders, Display Monitors, Recording Decks

Kathrein USA Inc. • 1985
Les Kutasi 541-879-2312
Antennas for Broadcasting & Communications

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

latakoo • 2021
Paul Adrian 214-683-0791
Media Workflow Automation

LBA Technology Inc. • 2002
Jerry Brown 252-757-0279 ×228
AM/MW Antenna Equipment & Systems

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

LYNX Technik • 2007
Steve Russell 661-251-8600
Broadcast Terminal Equipment Manufacturer

MaestroVision • 2021
Claude Turcotte 888-424-5505
Broadcast Automation Software

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

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

Microwave Video Systems • 2011
Warren J. Parece 781-665-6600
Microwave Equipment Rental, Sales & Service

Moseley Associates Inc. • 1977
Bill Gould 805-968-9621 x785
Digital STLs for Radio and Television

MultiCAM Systems • 2020
Mary Ann Seidler 207-776-5338
Fully automated live video production

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

Nascar Productions • 2014
Abbey Kielcheski 704-348-7131
Live/Post Production Services

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

National Football League • 1999
Michael Katzenoff 212-450-2368
Game Day Coordination Operations

Nautel 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

Neutrik USA, Inc. • 2012
Kathy Hall 704-972-3050
Ruggedized Optical Fiber Systems

NPR Distribution Services • 2019
Joe Schifano 202-513-2624
Your Content Delivery Partners

Orban Labs, Inc. • 2011
Mike Pappas 480-403-8300
Audio Processing AMFMTV

Potomac Instruments • 1978
Zachary Babendreier 301-696-5550
RF Measurement Equipment Manufacturer

ProAudio.com- A Crouse-Kimzey Co. • 2008
Mark Bradford 800-433-2105 x560
Proaudio Broadcast Equipment Distributor

Propagation Systems Inc. - PSI • 2010
Doug Ross 814-472-5540
Quality Broadcast Antenna Systems

QCommunications • 2019
Tony zumMallen 816-729-1177
Services Behind the Scenes

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

QVC • 2011
Kevin Wainwright 484-701-3431
Multimedia Retailer

Rohde & Schwarz • 2003
Walt Gumbert 724-693-8171
Transmitters, Test & Measurement, Video

Ross Video Ltd. • 2000
Jared Schatz 613-228-0688
Manufacturer, Television Broadcast Equipment

Sage Alerting Systems Inc. • 2010
Harold Price 914-872-4069 x113
Emergency Alert Systems Products

SCMS Inc. • 2000
Bob Cauthen 800-438-6040
Audio and RF Broadcast Equipment Supplier

Shively Labs • 1996
Dale Ladner 888-SHIVELY
FM Antennas & Combiners

Shure Incorporated • 2012
Bill Ostry 847-600-6282
Microphones, Wireless Systems, Headsets

Sierra Automated Systems and Eng. Inc. • 2011
Al Salci 818-840-6749
Routers, Mixers, Consoles, Intercoms

Staco Energy Products Co. • 2010
Paul Heiligenberg 937-253-1191 x128
Manufacturer of Voltage Regulators, UPS

SuiteLife Systems • 2019
Nigel Brownett 310-405-0839
Manage. Monitor. Control

Sutro Tower Inc. • 1989
Raul Velez 415-681-8850
Broadcast Tower Leasing

Synthax Inc. • 2020
Brittany Hilton 754-206-4220
Audio Codecs and Converter Solutions

Technical Broadcast Solutions, Inc. • 2018
Robert Russell 302-414-0055
Engineering and Consulting Services

Televes USA, LLC • 2021
Andy Ruffin 937- 475-7255
Antennas Transmitters Measurement Distribution

Telos Systems/Omnia/Axia • 2003
John Bisset 216-241-7225
Talk-Show Systems

Teradek • 2011
Jon Landman 949-743-5783
Camera-top ENG Solutions

Tieline The Codec Company • 2003
Dawn Shewmaker or Jacob Daniluck 317-845-8000
Audio Codec Manufacturer

Unimar Inc. • 2001
Thad Fink 315-699-4400, 813-943-4322
Tower Obstruction Lighting Designer, Manufacturer, Distributor

Wheatstone • 2010
Jay Tyler 252-638-7000
IP Consoles, Routers & Processors

WideOrbit • 2012
Brad Young 415-675-6700
Radio Automation and Playout

Wireless Infrastructure Services • 2006
Travis Donahue 951-371-4900
Repacking Services - West Coast Turnkey Services

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Member Spotlight: Chris Daniel

Member Stats

SBE Member Since: November 2012
Certifications: CBT, CRO
Employer: Daniel Communications, LLC and Community Radio, Inc.
Position: President of both companies
Location: Mena, AR
Chapter: Restarting Chapter 75 Arkansas
I'm Best Known For: Technical project organizing and coordinating. "Can do attitude." Ability to see the big picture and not get caught up in the "what ifs" and "we never did it that way before" attitudes in order to accomplish a task.

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

A. The educational opportunities, networking, and resources.

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

A. I started work at a radio station when I was 14, and the engineer was kind enough to answer all my questions. Being a ham operator, I knew a little about RF, so it just seemed to naturally happen.

Q. *Who do you admire in the industry?*

A. I admire Larry Wilkins a great deal. Not only has he contributed greatly as an engineer, but he has also unselfishly shared his many years of experience and knowledge with others, myself included, through the Alabama Broadcasters Association's Engineering Academy. He is a man of character and integrity. An asset to and great ambassador for our industry!

Started in 2015, Chris at the controls of KAWX Community Radio, an LPFM station with a full-power translator.

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

A. Helping small mama/papa stations and Christian stations with technical and regulatory issues.

Q. *What's something people don't know about you?*

A. My wife and I have enjoyed lots of RV trips and travel over the years, and in September will travel to England to hike about 100 miles through the Cotswold Region.

Q. *When I'm not working I...*

A. ..am on the ham bands as W5AWX, or I'm out walking or hiking, or I'm doing Bible study.

Q. *What's your favorite Gadget?*

A. My Yaesu 817 QRP radio and my Icom 718 HF rig.

ENNES EDUCATIONAL FOUNDATION TRUST

The trust offers scholarship and educational programming and grants that benefit broadcast engineering and the broadcast engineer. Submit tax-deductible donations, payable to the Ennes Educational Foundation Trust, to the Society of Broadcast Engineers; 9102 N. Meridian St., Suite 150; Indianapolis, IN 46260.

THANKS TO THE FOLLOWING SUPPORTERS FOR THEIR CONTRIBUTIONS

Harold E. Ennes Scholarship
Ronald Capan, Pittsburgh, PA
Jorge Conde, Guayama, PR
David Gleason, La Quinta, CA
James Grimes, Evanston, IL
Russell Harbaugh, Southfield, MI
William Harris, Albuquerque, NM
Philip Hartman, San Francisco, CA
Stephen Hawes, Berkeley, CA
Kevin Hornberger, Plainfield, IL
Maria Laing-Smith, Camarillo, CA
Kate Landow, Denver, CO
Peter Magee, Morris, AL
David Peabody, Gardner, MA
Mark Richer, Arlington, VA
Richard Thomas II, Okemos, MI
Thomas Weber, Greenwood, IN
John Wenzelberger, Henderson, NV

Robert D. Greenberg Scholarship
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Thomas Weber, Greenwood, IN

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Thomas Weber, Greenwood, IN

sbe.org/ennes

SBE Membership Drive Recruiter Prizes

Grand Prize
- A trip to the SBE National Meeting

Donated by Sustaining Members
- Blackmagic Design: ATEM Mini Extreme ISO
- Broadcasters General Store: Six BGS tumblers and $20 Starbucks gift cards
- Davicom: $50 Amazon gift card
- Heartland Video Systems: $100 Amazon gift card; Heartland Video Systems backpack; Rocketbook smart notebook; lots of HVS-logoed items
- LBA: $250 in LBA online safety courses
- Orban: 1101e card and breakout cable
- Shively Labs: $100 L.L. Bean gift card
- Telos Alliance: Tribit Portable Bluetooth Speaker; Telos swag pack
- Tieline: Two $25 Amazon gift cards

From the SBE
- A copy of SBE CertPreview
- One free SBE Webinars by SBE registration
- One $25 gift certificate for the SBE Store/SBE Bookstore
- An SBE-logoed hat
- Two SBE coffee mugs and magnets

sbe.org/drive

WELCOME TO THE SBE

NEW MEMBERS

Mark C. Anderson - Bemidji, MN
Grant M. Atherton - De Pere, WI
Daniel Bazarian - Lowell, MA
Kyle J. Bloodworth - Millington, TN
Tony L. Campbell - Grass Valley, CA
Christopher Comley - Austintown, OH
Jonathan R. Danner - Cullowhee, NC
Kyle T. Davis - Fort Worth, TX
Michael M. Drummer - Meriden, CT
Michael J. Engel - Verona, WI
Conlan J. Fay - Chicago, IL
Randy Fisher - Amherst, NE
Ruben O. Garcia - San Antonio, TX
Brian C. Hawkins - Omaha, NE
Michael P. Henlin - Kingston, Jamaica
Eric D. Johnson - Portland, OR
Joseph L. Johnson - Denver, CO
James Karcher - Lansdale, PA
Joel S. Kepple - Savannah, GA
Adam J. Lechowicz - Sitka, AK
Evan R. Matsler - Rancho Cordova, CA
Matt Moore - Lexington, KY
Hector Perez - Fresno, CA
Jorge L. Quinones - Kissimmee, FL
Martin Ramos - Fresno, CA
Eliu Ramos Ortega - Glenview, IL
Diego A. Ruiz - Burbank, CA
Alec Schaffer - Laramie, WY
Ryan J. Smith - Hiram, ME
Rob H. Smoot - Corona, CA
Peter R. Spence - Kingston, St. Andrew, Jamaica
Vincent J. Steier - Baltimore, MD
Mark T. Tetlak - Cleveland, OH
Christian A. Tinney - Carrollton, GA
Nicholas Tobiason - Kalispell, MT
Adam VanConant - Saint Paul, MN
Nick B. West - Millen, GA
Juan P. Zayas - Bethlehem, GA

NEW STUDENT MEMBERS

Kyannea Gonzales - Pasco, WA
Kayla Gonzales - Pasco, WA
Andrew L. Hansen - Oshkosh, WI
Michael Oher - Oswego, NY

NEW ASSOCIATE MEMBERS

Cristi Gonzales - Pasco, WA

RETURNING MEMBERS

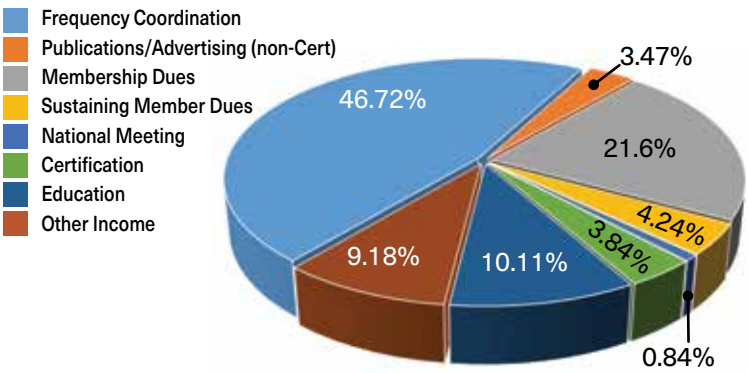
Brady C. Aldrich - Wenatchee, WA
Ryan N. Beal - Hammond, IN
Terence M. Bolden - Jacksonville, NC
Brad K. Butzbach - Emmett, ID
Fredrick L. Carmichael - Guild, TN
Francisco Gutierrez - Corpus Christi, TX
Troy L. Harper - Groves, TX
Matthew D. Howell - Silver Spring, MD
Mike W. Irby - Denver, CO
Aaron A. Ishmael - Knoxville, TN
Ibidapo Macaulay - Ikoyi, Lagos, Nigeria
Mario A. Magana - Bonney Lake, WA
Tom Matthews - Savannah, GA
Wade Matthews - New Orleans, LA
Andrew McFarland - Lincolnshire, IL
Frank J. Mestre - New York, NY
Damian Molina - North Hollywood, CA
Joseph C. Offerdahl - Fosston, MN
Maria Oliver - San Jose, CA
Donald L. Perkins - Johnson City, NY
Richard E. Ranson - Northport, AL
Mark D. Rushton - Boulder, CO
Ben Slater - Laramie, WY
Ivory Sostand - China, TX
Raj Tandon - Doral, FL
William R. Vickery - Pittsburg, KS

2021 Financial Year in Review

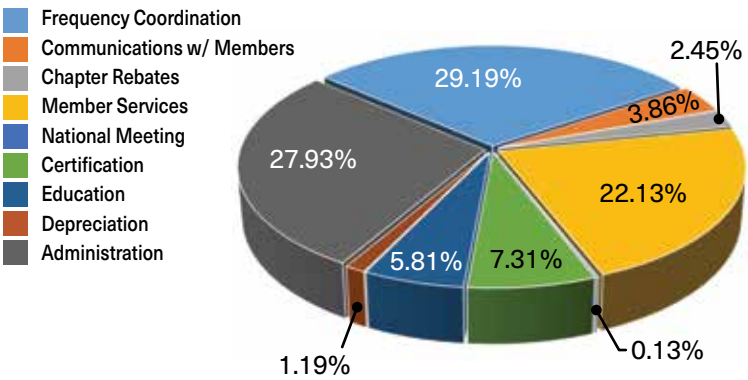
The Society of Broadcast Engineers, Inc. completed 2021 with net revenue from all operations of $317,144. Gross income from all sources was $1,344,854, while expenses were $1,027,710. The value of SBE savings and investments as of Dec. 31, 2021 were $1,402,452. Total SBE assets as of Dec. 31, 2021 were $1,733,329, an increase of $322,742. Long-term investment gain totaled $96,859.

A percentage breakdown of SBE income from program operations and expenses is depicted in the accompanying charts. A financial statement will be published in the June issue of *The Signal*, following the completion of the Society's annual financial audit.

Income



Expenses



State Broadcast Associations Sponsor SBE TPT Progam Enrollees

At the beginning of 2021, the SBE launched the Technical Professional Training Program (TPT), a response to the ongoing concern about new technical talent choosing broadcasting as a career. Drawing on existing SBE programs, the society assembled a valuable service to the broadcast industry.

Since its launch, 33 people have participated in the SBE TPT. Several state broadcast associations have expressed interest in enrolling new technical talent. The Missouri Broadcasters Association (MBA) and Nebraska Broadcasters Association (NBA) have launched efforts to cover the cost of TPT enrollment by reimbursing the cost for individuals to join the SBE Technical Professional Training Program. Missouri launched its program in 2021, and Nebraska launched its program in January 2022.

The MBA provides the subsidy as a member service. While the association has budgeted for a fixed number of applicants per year, that line has not been met.

The NBA has limited enrollment to one enrollee per dues-paying station employment unit (SEU). Up to 12 enrollees will be accepted on a first-come, first-serve basis for calendar year 2022.

Terry Beth Harper, director of member services for the MBA, says, "The MBA recognizes that many of our member station engineers have retired, or are threatening retirement, and managers are finding it difficult to replace them. The SBE Technical Professional Training Program is a great solution to prepare someone already at the station who might be able to slip into that role."

"Our industry has been fortunate to have such tremendous service from countless broadcast engineers. These talented men and women are retiring faster than we can replace them," notes Jim Timm, president and executive director of the NBA. "Recognizing that many stations have a person or two on staff with some technical aptitude, we feel the SBE's TPT is an ideal way to help them expand their capabilities and potentially, groom some future engineers for NBA member stations. Kudos to Mark Gordon and the Missouri Broadcasters Association for sharing this scholarship concept."

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Members On The Move

Robert Cram is chief engineer of KAYU-TV, Spokane, WA.

Tony Peterle, CPBE, has transitioned to a consulting role with Worldcast Systems and is relocating to Ohio.

Robin Cole, CSTE is the assistant engineer of KAYU-TV, Spokane, WA.

Brian Zittlau is director of engineering at Nebraska Public Media, Lincoln, NE.

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

MARK YOUR CALENDAR

S M T W T F S

SBE Dues Renewal Deadline
April 1, 2022 — sbe.org/renew

2022 NAB Show — *Las Vegas*
April 23-27, 2022 — nabshow.com

SBE Membership Meeting — *NAB Show*
April 25, 2022

SBE WEBxtra — *online*
April 25, 2022 — sbe.org/webxtra

SBE WEBxtra — *online*
May 16, 2022 — sbe.org/webxtra

SBE Membership Drive Ends
May 31, 2022 — sbe.org

SBE Certification Exams — *Local Chapters*
June 3-13, 2022 — sbe.org/certification
Application deadline April 15, 2022

SBE Awards Nominations Deadline
June 15, 2022 — sbe.org/awards

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