



The Return of the NAB Show

After a long hiatus, the NAB Show returned to an in-person event, and the SBE was there. There were a few changes, most notably the new West Hall, non-use of the South Hall, and the LVCC Loop (a.k.a. the Tesla Tunnel), which saved a lot of walking from the North and Central Halls to and from the West Hall.

The SBE presented a shortened SBE Ennes Workshop on Saturday morning. This is just another part of the SBE's ongoing educational efforts. The SBE thanks Tom Mikkelsen and Stan Moote for again organizing the presentations.

The Board of Directors met on Sunday Morning. It provided your elected leadership the chance to be updated on the activities of the various SBE committees and programs. It was the first face-to-face meeting of the board since 2019.

The SBE booth was a hub of activity. Located in the North Hall lobby and positioned across the way from previous years, it allowed greater visibility for passersby moving between the exhibit halls. The SBE displayed books from the SBE Bookstore and SBE-logged merchandise from the SBE Store. On Sunday, Monday and Tuesday, the SBE held a daily booth drawing for a \$200 Amazon gift card.



The Membership Meeting was streamed live.

see [NAB](#), p. 7

Martin Faubell Receives SBE John H. Battison Award for Lifetime Achievement

At the 2022 NAB Show, the Society of Broadcast Engineers presented the SBE John H. Battison Award for Lifetime Achievement, which recognizes and pays tribute to individuals

for their dedication, lifelong achievement and outstanding contribution to broadcast engineering. Nominees are SBE members in good standing and have been active for 40 years or more in the broadcast engineering industry or a closely allied field that benefits broadcast engineering. Nominations can be made by any member of the SBE and will include the endorsement of three other SBE members. There is no more than one recipient per calendar year. The recipient for 2022 is E. Martin (Marty) Faubell.

Marty retired in December 2020 from the position of vice president, engineering, for

Hearst Television, in charge of the engineering operations and staffs for 33 TV stations. In this role, he provided the technical leadership from analog television through the introduction of ATSC 3.0. This encompassed the transition to digital television (DTV), high definition television (HDTV), as well as the spectrum repack. He also innovated the use of dedicated satellite access for enhanced newsgathering and content-sharing between the company's stations. He moved the company from tape-based newsgathering to digital acquisition and non-linear editing. He moved master control operations to a non-linear, server-based environment, and he helped create a central distribution center for content with other station groups.

In addition, he has been an advocate for the needs of the television industry. This includes taking a stand for the broadcasters as various spectrum encroachments affected the industry, working to help develop common standards, and mentoring and growing

engineering talent throughout the industry.

Faubell moved to the corporate headquarters of Hearst Television as vice president in 1997. Previously, he became the director of engineering for WTAE-TV in 1987, the company's Pittsburgh, PA, station, where he supervised the introduction of numerous

see [FAUBELL](#), p. 4

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Faubell

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QCommunications is a group of experts working in the broadcasting and telecommunications industry since 1997. Since its founding in 2006, QCommunications has participated in a broad variety of programs, providing clients with extensive support and quality services. Our work in the REPACK program established a productive working relationship with the FCC, broadcast providers and numerous vendors as we helped to transition the frequencies of over 300 TV stations. QCommunications recently expanded after recognizing the need for more accurate and safer signal verification, adding our Veteran-operated QForce Airborne Division. This expansion enables us to now offer comprehensive field studies and measurement solutions with the use of American-made unmanned aerial systems (UASs). QCommunications and QForce are the go-to resources for all of your needs.



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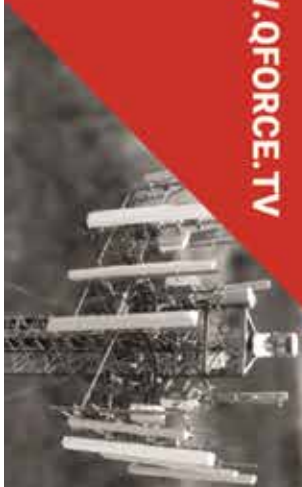


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Andrea Cummis, CBT, CTO
WLVTV-TV | Bethlehem, PA
acummis@sbe.org

VICE PRESIDENT

Ted Hand, CPBE, 8-VSB, AMD, ATSC3, DRB
Cox Media Group | Charlotte, NC
thand@sbe.org

SECRETARY

Kevin Trueblood, CBRE, CBNT
WGCU Public Media | Estero, FL
ktrueblood@sbe.org

TREASURER

Jason Ornellas, CBRE, CRO
Bonneville International | Sacramento, CA
jornellas@sbe.org

DIRECTORS

Steve Brown, CPBE, CBNT
Woodward Radio Group | Appleton, WI
sbrown@sbe.org

Roswell Clark, CPBE, CBNT

Cox Media Group | Clearwater, FL
rclark@sbe.org

Kirk Harnack, CBRE, CBNE

Telos Alliance | Nashville, TN
kharnack@sbe.org

Zhulieta Ibisheva, CBTE, CBT

E.W. Scripps Co. | Honolulu, HI
zibisheva@sbe.org

Jeff Juniet, CBTE

Cox Media Group | Orlando, FL
jjuniet@sbe.org

Charles "Ched" Keiler, CPBE, 8-VSB, CBNE
HC2 Broadcasting/E Three Services | Ft. Lauderdale, FL
ckeiler@sbe.org

Thomas McGinley, CPBE, AMD, CBNT

McGinley Enterprises | Missoula, MT
tmcginley@sbe.org

Geary Morrill, CPBE, AMD, CBNE

Alpha Media | Saginaw, MI
gmorrill@sbe.org

David Ratener, CPBE, CBNT

Salem Media | Seattle, WA
dratener@sbe.org

Shane Toven, CPBE, DRB, CBNE

Educational Media Foundation | Antelope, CA
stoven@sbe.org

Dan Whealy, CBTE

Quincy Media | Waterloo, IA
dwhealy@sbe.org

Fred Willard, CPBE, 8-VSB, CBNT

Univision | Washington, DC
fwillard@sbe.org

IMMEDIATE PAST PRESIDENT

Wayne M. Pecena, CPBE, 8-VSB, AMD, ATSC3, DRB, CBNE

Texas A&M University/KAMU | College Station, TX
wpecena@sbe.org

SBE NATIONAL STAFF

James Ragsdale | Executive Director
jragsdale@sbe.org

Megan E. Clappe | Certification Director
mclappe@sbe.org

Cathy Orosz | Education Director
corosz@sbe.org

**Chriss Scherer, CPBE, CBNT
Member Communications Director**
cscherer@sbe.org

**Debbie Hennessey
Sustaining Membership Manager**
dhennessey@sbe.org

Scott Jones | Database Manager
kjones@sbe.org

**RJ Russell, CPBE, ATSC3
Frequency Coordination Manager**
rjrussell@sbe.org

The Signal is published bimonthly by the Society of Broadcast Engineers, Inc., 9102 North Meridian Street, Suite 150, Indianapolis, IN 46260.
©2021 Society of Broadcast Engineers, Inc.
Editorial content and design: Chriss Scherer, 317-762-9723, cscherer@sbe.org.
Advertising: Debbie Hennessey, dhennessey@sbe.org, 317-846-9000
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SBE National Office
317-846-9000 www.sbe.org

SBE National Meeting Returns to Syracuse and Chapter 22 Broadcast & Technology Expo

The Society of Broadcast Engineers National Meeting will be held in Syracuse, NY, on Sept. 28-29, 2022. The event will be held in conjunction with the annual SBE Chapter 22 Broadcast & Technology Expo, presented by Chapter 22 of Central New York.

The SBE National Meeting includes the SBE National Awards Reception and Dinner, recognizing outstanding achievement by SBE members and chapters. The SBE will also conduct the SBE Annual Membership Meeting on the 29th.

The Expo takes place on Sept. 29 and includes broadcast technology sessions and broadcast/media equipment and services tradeshow. The Expo was held for 45 consecutive years before taking a four-year break beginning in 2015. Chapter 22 brought it back in 2019, only to have it delayed because of COVID. The event draws broadcast engineers from all over New York State, surrounding states and Canada.

The National Meeting begins on Wednesday afternoon, Sept. 28 with the fall meeting of the national SBE Certification Committee from 2 to 4 p.m. The fall meeting of the SBE Board of Directors follows from 6 to 10 p.m. Attendance at the Board meeting is open to any SBE member. On Thursday, activities begin with the annual SBE Fellows Breakfast, a reunion of SBE Fellow members. In the afternoon, the one-hour SBE Annual Membership Meeting will be held at 4 p.m.

The SBE Annual Awards Reception and Dinner takes place after the Membership Meeting with the reception beginning at 5 p.m., followed by the dinner at 6 p.m. The dinner will feature a guest speaker and the presentation of the society's major awards, including the Robert W. Flanders SBE Engineer of the Year and James C. Wulliman SBE Educator of the Year awards.

The SBE will also present awards to chapters and individual members during the dinner program. Chapter awards include: Best Chapter or Regional Educational Event, Best Chapter Communications, Most Certified Chapter, Highest Member Attendance and Greatest Growth in New Members. Winners of local Chapter Engineer of the Year awards will also be recognized.

see **NATIONAL MEETING**, p. 15

Broadcast
& Technology



Certification Question



SBE CERTIFIED

Answer on page 6

The term "headroom" when applied to an audio amplifier refers to:

- A. the difference between the average level and clip point.
- B. the maximum output level.
- C. the signal-to-noise ratio in decibels.
- D. the frequency response of the system.

ENNES

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sbe.org/ennes



LETTER FROM THE PRESIDENT

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

Welcome back to the NAB Show!

For most of us, the annual trip to Las Vegas has been a regular event in many of our lives. I personally have been going to the NAB Show since 1981, only missing just a couple of the shows over the past 40 years.

For those of us visiting from the east coast, it's always been a much needed burst of sunshine that marks the end of winter. It's always been a great industry show, where you can see the newest technologies, collect cool swag, and most importantly, connect with colleagues and friends from all over the world. I've always looked forward to the show, and this year the NAB Show felt particularly special due to the lapse of attending for the past few years because of COVID. There weren't as many people as usual, but it still felt great to be there. Plus, the weather was perfect, and the new West Hall was a nice improvement over the South Hall.

I think many of us were simply grateful to be back in the hallowed Las Vegas Convention Center Halls, dashing from one stand to the next to check out the launch of new 4K, UHD, ATSC 3.0, cloud services, Web3 and immersive media platforms, products and services. After an absence of the past two years, I'd say the energy was very positive and people were grateful to resume life in the real world, unmasked and ready to do business. It was so great to see so many old friends after three years. Everyone I spoke with said the same thing; they had no expectation of how the show would go this year, but were very pleased to see so many seasoned executives and serious buyers keen to learn about new gear and to purchase equipment. Vendors said that there were no tire kickers this year, so the show was unusually productive.

In addition, I'm delighted to say that we held the first in-person SBE board meeting in two and a half years. We also held the spring

Membership Meeting and the SBE Member Reception, which were both very well attended. This was particularly special to me as it was the first live meeting with our members since becoming president last October. This was my first opportunity to address the members in person and get to mingle with everyone at the party. It was also our first chance to meet Jim Ragsdale, our new executive director in person. Plus, we gave out lots of great gifts from our very generous Sustaining Members at both the membership meeting and the reception.

The SBE booth turned out to be in a great location in the North Hall hallway and it was nice that so many of our members were able to stop by and chat with our staff. As always, the staff did a great job managing the booth and all our events.

While we have all grown used to see the value of videoconferencing and live-streaming to remain connected, the show was an excellent reminder of the value of our global community of colleagues that work together to innovate, launch, operate and scale the spectrum of media and entertainment services.

As nice as it was to get to see all the new technology and listen to the seminars, the best part was running into so many old friends.

Now I'm looking forward to the next show! The next SBE board meeting, national membership meeting and the national awards dinner will take place at the SBE National Meeting in Liverpool, NY, on Sept. 28 and 29. Our events will be held in conjunction with the SBE Chapter 22 Broadcast and Technology Expo. I hope to see you all there!

President Cummis at 2022 NAB Show SBE events. Clockwise from upper right: Emceeing the spring Membership Meeting, leading the SBE Board of Directors meeting, presenting the SBE John H. Battison Award for Lifetime Achievement to Marty Faubell.



FAUBELL, from p. 1

technological advancements including robotic cameras, satellite newsgathering resources and master control automation.

From 1981 to 1987, he was assistant chief engineer at WPIX-TV, New York City, and before that he was engineering maintenance supervisor at WRAL-TV, in Raleigh, NC.

A native of Cherry Hill, NJ, Faubell holds a Bachelor of Science degree in broadcast engineering and a master's degree in broadcast management, both from Bob Jones University in Greenville, SC. He is a Life Member of the Society of Broadcast Engineers, first joining in 1995, and was a long-time member of the Society of Motion Picture and TV Engineers.

In the nominations, one endorsement noted that when he first met Marty, he, "Was impressed with [Marty's] knowledge of digital television and broadcasting in

general. He knew all facets of television and radio broadcasting from the top of the antenna to information technology, business applications, accounting, building construction and management."

Another nomination noted, "I am in awe of the amount of knowledge Marty has that he shared with me and my peers at Hearst Television. If Marty did not have an answer right at hand, he made sure he followed up with you. He taught us lessons in the most caring and constructive manner. He showed you that he wanted you to succeed. He was an advocate for broadcast television and the needs of his stations."

On the announcement, SBE President Andrea Cummis, CBT, CTO, said, "Marty exemplifies the ideal candidate to receive the SBE's John H. Battison Award. His dedication to, knowledge of and skills in broadcast engineering extend beyond the benchmarks of bestowing this honor."

sbe.org/lifetime





EDUCATION UPDATE

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

Smart Study Suggestions for the Busy Engineer

The SBE Education Committee recently received a request after one module of the CBNT & CBNE Study Topics Webinars by SBE asking about effective test references and study habits. Given that four of the eight modules in the series have already been streamed live (and you can catch up with because they're available on demand), there couldn't be a better time to share this info.

One of the best overall reference texts I've come across in recent memory is our very own *SBE Broadcast Engineering Handbook*. That is the primary reason we included it in the Technical Professional Training program for new entrants to our field. It covers a broad range of disciplines that a broadcast engineer will likely encounter. It's worth obtaining a copy.

Besides the *SBE Broadcast Engineering Handbook*, there is a list of reference texts recommended for each Certification level (you will find the lists in the Certification section on the SBE website, under Exam Preparation). Besides outside purchase, many of these may be found at your local library, perhaps through the modern miracle of internet connectivity or even borrowing a copy from another member.

Also, investing in the appropriate CertPreview level has become a must for me. And here's why.

You'll figure out what you don't know. Once you take a CertPreview practice test, you can go back and see if you have the right answers. To make study time efficient, you can focus on what you got wrong. According to a university Biologist in NYC, mistakes are a primary key to learning. Put the lion's share of your study effort where you need the most help.

It also helps if you mix it up. CertPreview does exactly this. Each time you take it, questions on different facets of the material will be changed and moved around. You won't know what's coming next. This interleaving will lead to better retention whether you have a strong or weak working memory.

As for study habits themselves...

Don't just cram. It's a good idea to review right before you take any exam, but research shows it works better to space out your studying. A psychologist at Williams College points to a study where students studied vocabulary words. Some spaced their sessions out over several days, others in a marathon one-day session. The former did better. He said it's because our memory works like a bucket, and if we try to refill it while it's already full, it won't hold much. Letting some of the material "drip out" allows one to relearn and retain it better.

Don't just read ... and re-read. Re-reading material has been likened to looking at the answer to a puzzle instead of doing it yourself. In a 2013 study, students that took practice tests over several weeks did better than those who just read the material. A full letter grade better (approximately 10 points). Fortunately, SBE CertPreview provides a ready-made source of sample questions covering the subject matter you'll encounter. And you can re-take it as many times as you wish.

Use pictures. In study materials you'll often find diagrams and graphs that elaborate on concepts. If there isn't a diagram of something you're trying to learn - make one yourself. It will make a more complete mental model. Visual models help across the board re-

gardless of your ability to build a mental model.

What do you already know? New information can often be mastered when you combine it with other things you already understand. It creates a bigger mental network. You'll remember facts when you know how they fit with other things you already know.

Make your plan - and work it. No one knows your schedule limitations better than you. Try to develop and stick to a regular routine. And get enough sleep - not just the night before writing a Certification exam. Exercise will also help. If you are serious about learning new technologies (or anything else for that matter) studying has to become a priority.

If these ideas seem overwhelming, try to incorporate them one at a time. Finally, if you're struggling to just focus on your studies, you might have an undiagnosed condition. Consider speaking with your doctor. Your condition may be treatable, and doing so will benefit more than just your learning.

Here's to your Certification success. If you have any thoughts or questions, feel free to drop me a line gmorrill@sbe.org.

Education Almanac



Webinars by SBE

- June 9: CBNT & CBNE Study Topics 5: IT Systems for Broadcast Media
 - June 23: Introduction to Successful Troubleshooting Module 1
 - June 28: CBNT & CBNE Study Topics 6: IT Cybersecurity
 - July 19: CBNT & CBNE Study Topics 7: Building the IT Infrastructure
 - Aug. 9: CBNT & CBNE Study Topics 8: Webinar Series Review
- sbe.org/webinars

Leadership Development Course

Aug. 3-5: Atlanta

sbe.org/ldc

SBE Ennes Workshops

October: Minneapolis

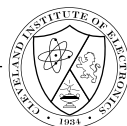
Nov. 9: Michigan Assoc. of Broadcasters

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

sbe.org/ennes_workshop



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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.



CERTIFICATION UPDATE

By Cris Alexander, CPBE, AMD, DRB
Director of Engineering, Crawford Broadcasting Company
Member, SBE Certification Committee
calexander@sbe.org

The Value of SBE Certification

Thankfully it's not all that often that I find myself looking for engineering talent. Most of the engineers in our company have been with us for many years, some more than 20, and we have almost no turnover. But from time to time I need to hire someone, and when I do, SBE certification is my primary initial screening tool.

Why is that? What does SBE certification tell me about a candidate that his or her resume does not?

At face value, SBE certification tells me something about the knowledge level of the applicant. He or she has demonstrated, by successfully testing for the applicable certification level, that the person is knowledge-proficient in certain areas. Engineering-level certifications tell me that the applicant has a broad knowledge base of engineering topics, the things that would be used in the workplace on a regular basis. Specialist certifications tell me that he or she has special skills that may be of value.

Beyond all that, however, SBE certification tells me something about the person. It tells me that he or she is committed to person-

al growth, to maintaining a certain proficiency and to expanding a knowledge base and skill set through continuing education. Recertification is not a proforma process. It requires commitment and action. That's the kind of person I am looking for when hiring: Someone who not only possesses all the required knowledge and skills but that continues to build on that year in and year out, not allowing knowledge and skills to stagnate as technology moves forward.

Outside of the hiring process, an employee's furtherance of his or her SBE certification shows me a commitment to growth and increasing of the employee's value to the company. That definitely comes into play at annual review time, and it is a primary consideration when evaluating an individual for promotion or added responsibility.

The bottom line here is that SBE certification has tremendous value, both at the screening/hiring level and as an ongoing performance indicator. It is my go-to tool for both hiring and performance review.



Answer from page 3

The answer is A

Headroom (usually described in decibels) is the maximum level above the average audio level before distortion may occur.



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The SBE and Me

A recently certified SBE member shares his thoughts on SBE Certification.

By Mike Kernen, CSRE

Chief Engineer, Crawford Media Group Detroit

Having never lived in the proximity of an active SBE chapter, I had never sought membership therein. For years I had eyed certification and even investigated it a few times, but never took the steps to really do it.

Cris Alexander and Crawford are very active in the organization, and with support and encouragement from Cris, I'm now a member. Not only am I an SBE member, but I've also just passed a certification exam and became an SBE Certified Senior Radio Engineer.

I'm writing about this experience because it's incredible. It's valuable in that it lets others know you're qualified in a field where scant or no academic organizations exist for one to obtain related knowledge and credentials. Whereas a doctor must achieve qualification by way of a stringent collegiate education and the AMA to become licensed to practice medicine, broadcast engineers are left solely to gain knowledge through the rigors of experience and their own resourcefulness, often by trial and error and mentorship.

The SBE certification program is possibly the best way to outwardly demonstrate an individual's achievement in broadcast engineering. Potential employers, current employers and colleagues know it carries weight and is a bona fide testament to an individual's experience and proficiency. Also, it feels great to have.


I was anxious for weeks after the exam while I awaited the results just because I wanted it so badly. I am proud to have this certification and I wholly recommend it to everyone in our profession. It's an achievement that you earn and having something you've truly earned feels like absolutely nothing else.

This originally appeared in the April issue of The Local Oscillator, a publication for the Crawford Media Group engineers.

SBE Certification Achievements

CONGRATULATIONS



LIFE CERTIFICATION	<p>Certified Professional Broadcast Engineer (CPBE) Joseph Tymecki, Fairfax, VT - Chapter 110</p> <p>Certified Senior Radio Television Engineer (CSTE) Roger Newton, Tulsa, OK - Chapter 56</p> <p>Certified Broadcast Networking Technologist (CBNT) Roger Newton, Tulsa, OK - Chapter 56 Dave Ratener, Kent, WA - Chapter 16</p>	<p>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.</p>
CERTIFIED PROFESSIONAL BROADCAST ENGINEER (CBPE)	<p>Certified Professional Broadcast Engineer (CPBE) Victoria Kipp, Oregon, WI - Chapter 24 Samuel Wallington, Columbia, TN - Chapter 43</p>	<p>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.</p>
FEBRUARY EXAMS	<p>Certified Senior Radio Engineer (CSRE) Michael Kernen, Macomp Twp, MI - Chapter 82</p> <p>Certified Broadcast Radio Engineer (CBRE) Alexander Mackensen, Hurricane, WV - Chapter 116</p> <p>Certified Audio Engineer (CEA) Jonathan Danner, Cullowhee, NC - Chapter 84 Alexander Mackensen, Hurricane, WV - Chapter 116</p>	<p>Certified Broadcast Networking Engineer (CBNE) Tyler Lange, Menifee, CA - Chapter 131 Mathew Petronelli, New York, NY - Chapter 15 Jon Zucco, Centennial, CO - Chapter 48</p> <p>ATSC 3 Specialist (ATSC3) Frederick Engel, Apex, NC - Chapter 93</p> <p>Certified Broadcast Networking Technologist (CBNT) Karim Springer, Rahway, NJ - Chapter 15</p>
SPECIAL PROCTORED EXAMS	<p>Certified Broadcast Networking Technologist (CBNT) Anthony Solano, Brighton, CO</p>	<p>Alabama Broadcasters Association Certified Broadcast Technologist (CBT) Daniel Luke, Stanfield, NC Joseph Myers, Lexington, SC</p> <p>A.B.A. (cont.) Christina Tinney, Carrollton, GA Phillip Tracy, Buchanon, GA Larry Wilson, Waxhaw, NC</p>
SBE CERTIFIED SCHOOL COURSE COMPLETION	<p>DINFOS Eli Pena Lacruz, Kissimmee, FL</p>	 <p>Got your SBE Certification pin? sbe.org/pins</p>
CERTIFIED BY LINCENSE	<p>Certified Broadcast Technologist (CBT) Matthew Chambers, Tulsa, OK - Chapter 56</p>	<p>Fredrick Carmichael, Guild, TN - Chapter 103 Michelle Davies, Pineville, NC - Chapter 93</p> <p>Dale Pendleton, Raleigh, NC - Chapter 93</p>
CERTIFIED RADIO OPERATOR (CRO)	<p>Joey Ewing, Tucson, AZ Michael Goldsmith, Los Angeles, CA Chevail Gregory, Omaha, NE Dane Howard, Columbia, SC Ezra Parish, Twin Falls, ID Kenneth Roberts, Granada Hills, CA George Rodriguez, Pasadena, CA <i>Killeen Independent School District</i> Dylan Allen-Caple, Killeen, TX Passion Anderson, Killeen, TX VJae Brown, Killeen, TX Hunter Cox, Killeen, TX Marcus Cox, Harker Heights, TX Chloe Gilland, Ft. Hood, TX Inez Figueroa, Killeen, TX</p>	<p>Shanaya Fullard, Killeen, TX Michael Gunther, Killeen, TX Joksan Garcia Perez, Killeen, TX Omari Purcell, Nolanville, TX Brian Vaughan, Temple, TX James Vaughn, Killeen, TX Josiah Villarreal Flores, Florence, TX Jorien Young, Killeen, TX <i>Southern Indiana Career and Technical College</i> Presley Dicks, Evansville, IN Ron Fisher, Evansville, IN Jackson Gray, Evansville, IN Macey Hahn, Evansville, IN Ashton Hudson, Evansville, IN</p> <p>Preston King, Evansville, IN Braidan Lambert, Evansville, IN Ryan Mattix, Evansville, IN Isaac Merrell, Evansville, IN Kennedy Perry, Evansville, IN Andrew Seyferth, Evansville, IN Elijah Simms, Evansville, IN Marissa Solis, Evansville, IN Zane Spivey, Evansville, IN Seran Strom, Evansville, IN <i>Streetsboro High School</i> Richard Livellara, Streetsboro, OH Grant Miller, Streetsboro, OH Jennifer Rebecchi, Streetsboro, OH Corey Teuton, Streetsboro, OH</p>
CERTIFIED TELEVISION OPERATOR (CTO)	<p>Adam Edwards, Las Vegas, NV Dane Howard, Columbia, SC <i>Cave City</i> Nathaniel Ayers, Cave City, AR Tyler Cooper, Cave City, AR Ben Johnson, Cave City, AR</p>	<p><i>Cave City (cont.)</i> Charles Roberts, Cave City, AR Ian Sanders, Cave City, AR <i>Pasadena City College</i> Chloe Chow, South Pasadena, CA Clark Crane, Alhambra, CA</p> <p><i>Pasadena City College (cont.)</i> Kaylin Johnson, Altadena, CA Kevin Luu, San Gabriel, CA Daniel Sterling, Glendale, CA Daniel Valencia, Temple City, CA Adelio Morales Villeda, Pasadena, CA</p>
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.	<p>Certified Senior Radio Engineer (CSRE) James Gay, Macon, GA - Chapter 5</p> <p>Certified Broadcast Networking Engineer (CBNE) Jeffery Hartman, Bon Aqua, TN - Chapter 103 Edick Safarians, Burbank, CA - Chapter 47 Ma Louella Wong, Millersville, MD - Chapter 132</p> <p>Certified Broadcast Radio Engineer (CBRE) Joshua Smith, East Longmeadow, MA - Chapter 11</p>	<p>Certified Video Engineer (CEV) Jeffery Hartman, Bon Aqua, TN - Chapter 103</p> <p>Certified Television Operator (CTO) Gary Kelley, Wichita, KS</p> <p>Certified Radio Operator (CRO) Dave Juday, Phoenix, AZ</p> <p>Certified Broadcast Technologist (CBT) Mark Allen, Rosston, AR Tyler Angle, Meade, KS - Chapter 3 Chris Daniel, Mena, AR Eric Heidendahl, Brighton, Ontario Canada Klonaris Ingram, New Bern, NC - Chapter 93 Gregory Lesko, Monroe, NC - Chapter 45 Derek Murphey, Fitchburg, WI - Chapter 24 Aaron Savage, Sacramento, CA - Chapter 43</p>

NAB, from p. 1

In the booth on Monday morning, the SBE awarded the SBE John H. Battison Award for Lifetime Achievement to Marty Faubell. The presentation would have been made at the Membership Meeting, but the SBE was told that Marty had a conflict and would not be there. The surprise presentation was made earlier in the day, with many of Marty's now former coworkers attending. For more on this see the article in this issue of *The Signal*.

With the exhibit floor hours shifted to Sunday through Wednesday, the SBE Membership Meeting and Member Reception were also shifted to be held on Monday evening. The Membership Meeting was streamed live as the April SBE WEBxtra. Attendees

and viewers were given updates on SBE business and activities, and recognitions were made of Mentor Program participants and milestone service marks for SBE chapter certification chairs. There were door prizes drawn, with the main prize being a BlackMagic Design Studio Camera 4K Pro. The first 125 people in the door received an SBE-logged tote bag.

The Membership Reception brought in lots of members for a social period with light food, drinks and plenty of door prizes made possible from the generous support of several Sustaining Member sponsors.

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

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Candidates Announced for SBE Election

Each year, the SBE membership elects members to serve on the national Board of Directors, the governing body of the society. This includes all four officers for one-year terms and half the 12 directors for two-year terms. Additional candidates may be nominated by the membership. Any eligible member proposed by at least ten SBE members to the national Secretary by July 1 will be added to the ballot.

The election will take place July 15 through August 17. Balloting will be via the election website, except for those members who have opted out of electronic voting this year or who have not provided the SBE Na-

tional Office with their email address. They will receive their ballots through the mail.

The Nominations Committee is chaired by Roswell Clark, CPBE, CBNT. Committee members are John Collinson, CPBE, 8-VSB, AMD, CBNE, New Port Richey, FL; Chris Crump, CBNE, Buford, GA; Mark Johnson, CSRE, Panama City Beach, FL; Jason Ornellas, CBRE, CRO, Sacramento, CA; and Jeff Schick, CBT, Forest Hills, NY.

For more information about candidacy, contact SBE Secretary Kevin Trueblood at ktrueblood@sbe.org or SBE Executive Director Jim Ragsdale at jagsdale@sbe.org or 317-846-9000.

Nominations Committee Candidate Slate

** indicates incumbent*

Officers

President: Andrea Cummis, CBT, CTO *

Chapter 15 New York; Bethlehem, PA

Vice President: Ted Hand, CPBE, 8-VSB, AMD, ATSC3, DRB *

Chapter 45 Charlotte; Charlotte, NC

Secretary: Jason Ornellas, CBRE, CRO

Chapter 43 Sacramento; Sacramento, CA

Treasurer: Kevin Trueblood, CBRE, CBNT

Chapter 90 Southwest Florida; Estero, FL

Directors

David Antoine, CBRE, CBNT

Chapter 15 New York City; Bronx, NY

Greg Dahl, CPBE

Chapter 96 Rockford; Rockford, IL

Mark Heller, CPBE

Chapter 80 Fox Valley; Two Rivers, WI

Mark Johnson

Chapter 106 Florida Panhandle; Panama City Beach, FL

Tom McGinley, CPBE, AMD, CBNT *

Chapter 16 Seattle; Missoula, MT

Dennis Sloatman

Chapter 60 Richmond; Midlothian, VA

Shane Toven, CPBE, DRB, CBNE *

Chapter 43 Sacramento; Antelope, CA

Fred Willard, CPBE, 8-VSB, CBNT *

Chapter 37 District of Columbia; Washington, DC



Cummis



Hand



Ornellas



Trueblood

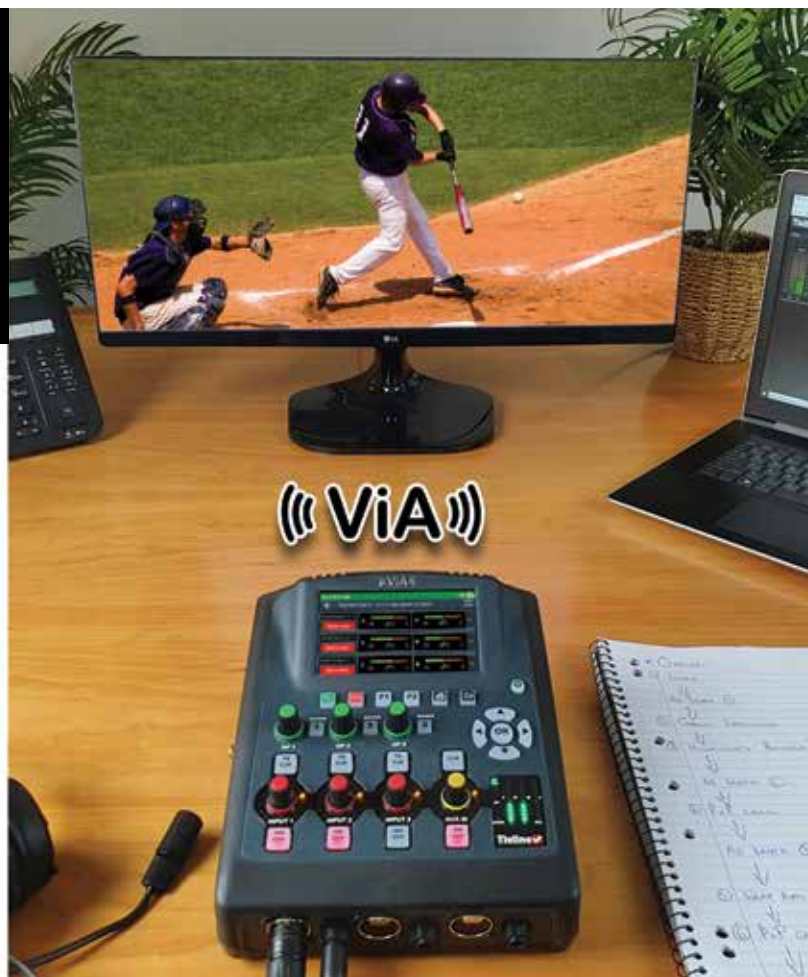
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LEGAL PERSPECTIVE

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

Have You Updated Your ULS Information?

As you know, many broadcasters use the 6 GHz band to operate fixed links such as STLs, TSLs, and other relays. You are also likely aware that two years ago the FCC authorized standard-power unlicensed operations in parts of the 6 GHz band. The SBE filed reply comments in late May in the FCC's 6 GHz proceeding to address one last open item that the Court of Appeals told the FCC to address, namely incumbent user interference concerns as expressed by the NAB during an earlier stage of the proceeding.

By recent Public Notice, the FCC has urged all 6 GHz licensees, including broadcasters, to both promptly review and maintain accurate and complete information in the Commission's Universal Licensing System (ULS) pertaining to fixed 6 GHz links. According to the Notice, a recent third-party audit of the ULS revealed that "a number of license records contain missing, clearly erroneous, or conflicting information." We encourage SBE members who are responsible for any fixed 6 GHz link facilities to expeditiously review the accuracy of the ULS data for those paths. Importantly, if ULS does not contain accurate, up-to-date information for your licenses, your station's fixed 6 GHz links run the risk of being unprotected from harmful interference from unlicensed devices operating in the band.

Brief Background

Back in 2020, the FCC adopted a Report and Order and Further Notice of Proposed Rulemaking that expanded unlicensed broadband operations in the 6 GHz spectrum band (i.e., 5.925 GHz–7.125 GHz). The order was a setback for broadcasters, who already have deployed – and rely on – significant electronic newsgathering operations in the 6 GHz band and who had warned the Commission that permitting expanded unlicensed broadband operations in the band could cause harmful interference to those electronic newsgathering operations. For years, broadcasters have used the 6 GHz band for essential broadcast auxiliary services, including video relays and the operation of certain wireless microphones.

The rules adopted in the 2020 order provide limited protections to broadcasters by requiring many new, unlicensed devices used in the 6 GHz band to consult an automated frequency coordination (AFC) system prior to deploying operations. The AFC system uses broadcasters' existing operations – as memorialized in FCC databases – to establish "exclusion zones" where unlicensed devices cannot operate.

Pursuant to the well-known law of garbage-in, garbage-out (which cannot be found in the FCC rulebooks) the AFC system is only as effective as the license data with which it is populated. That data comes directly from the ULS and includes transmitter and receiver locations, frequencies, bandwidths, antenna polarization, transmitter effective isotropic radiated power (EIRP), antenna height, and the make and model of the antenna and equipment used.

Consequently, it is critical for broadcasters to review their 6 GHz fixed link licenses as soon as possible to ensure that all information is accurate and complete. Such a prompt review is especially critical given that, as noted above, a third party recently reviewed the ULS and reportedly discovered a number of license records with missing, clearly erroneous, or conflicting information. To the extent a station discovers that its real-world fixed link operating parameters differ from the data in the FCC's ULS records, the notice requests – and we strongly encourage – that you seek to modify those records as soon as practicable. Updating your 6 GHz licenses will maximize the likelihood that your operations will be protected from harmful interference from any other spectrum users, and it will also help you to abide by your responsibility as a licensee to "maintain the continued accuracy of the data in the ULS."

Non-6 GHz ULS Licenses

In the spirit of spring/summer cleaning, we also encourage you to review your other BAS, ENG, microwave (Part 74 and Part 101), and Part 90 (two-way radios and weather radars) licenses in an effort to identify any missing data and/or changes that have occurred since the last applicable application was granted. After all, licensees always have a general obligation to keep their licenses current and accurate and to not engage in unauthorized operations such as transmitting from an unauthorized location or antenna height, using unauthorized power, or operating with an unauthorized emission type. If you and your team are going to review your 6 GHz fixed licenses, you might as well review your others as well!

FCC Rule Section 1.929 establishes that some types of license modifications for BAS (and other wireless licenses used by broadcasters) are major and some are minor. Keep in mind that major modifications will require stations to go through the regular PCN frequency coordination process, which means that if you need to file for a major modification to remedy incorrect ULS information it will likely take at least two weeks (and probably more like a month) to get through the necessary process before you are even able to file your application(s). While it may be obvious that certain types of modifications (such as a change in the transmit location) might be major, some station engineers seem surprised to learn that some other modifications – such as from an outdated analog-only or analog-digital composite emission designator to a digital-only emission designator – are considered major under the rule.

We wish you all the best as spring becomes summer!

Thanks for participating in the SBE Compensation Survey

The most useful data in the annual SBE Compensation Survey comes from wide participation. If you took a few minutes to respond, thank you. If you didn't participate, we hope you will next year.

The results will be compiled and made available soon. Watch the website, SBE-news and our social media sites for the announcement. SBE members will again be able to access the report for free as a member benefit.



LINKS

Public Notice

docs.fcc.gov/public/attachments/DA-22-236A1.pdf

Report and Order and FNPRM

docs.fcc.gov/public/attachments/FCC-20-51A1.pdf

FCC Rule Section 1.929

tinyurl.com/dwtpw55r



FOCUS ON THE SBE

By James Ragsdale
SBE Executive Director
jragsdale@sbe.org

My First Membership Meeting

As I write this, I am reflecting on the experience of attending my first SBE Membership Meeting at the NAB Show. We in the National Office have been planning this in-person meeting of our members for months, so I have personally been anticipating this meeting for a long time. I was very excited to finally get to attend. Since this Membership Meeting took place at the NAB Show, our presence there also gave us the opportunity to meet many folks working in the broadcast industry and help them understand the role the Society of Broadcast Engineers plays. We were able to tell them about our members and how we were working to strengthen the technical aspects of broadcasting. Our SBE booth was strategically located, being at the crossroads of the exhibit halls (as well as next to the Starbucks). It was really exciting to see passersby notice our sign/logo and stop at our booth to find out more about us.

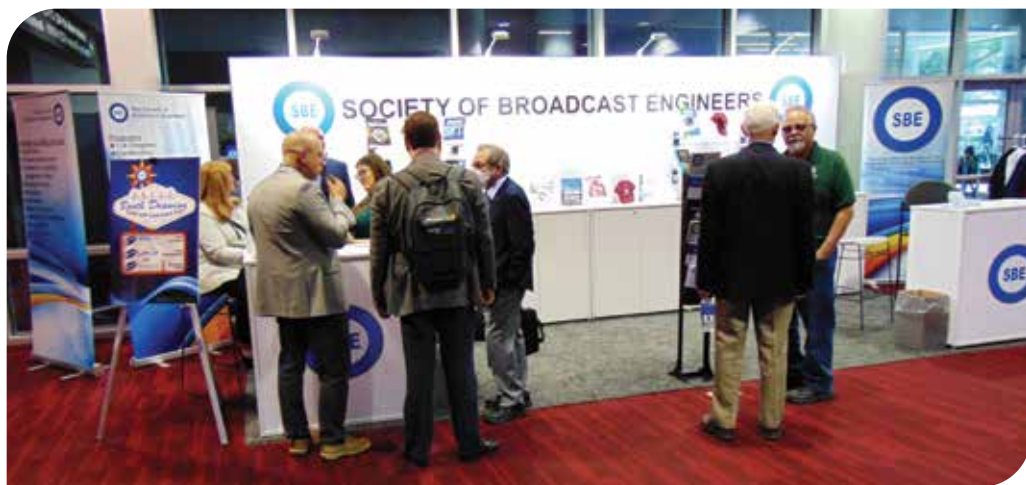
The board members and national staff who were present did a great job of connecting with these visitors, answering their questions, and helping them with whatever they needed. We had members who wanted to renew their membership, those who wanted to join the SBE for the first time, members who were looking for printed references to strengthen their personal or station library, and folks who just wanted to get a logoed hat, shirt, or lapel pin to display their membership. New members who joined at the booth also received \$25 SBE StoreBucks to spend in the booth on the resources that we brought with us. We had many board members who volunteered in the booth, spending hours on their feet answering questions and supporting our national staff.

As I met with members, prospective members, and representatives with organizations at the NAB Show, there was a consistent question from almost everyone present. The question was, "How are we working to attract people to become broadcast engineers?" We shared with them information about our certification, education, and mentoring programs, as well as our social media presence on popular platforms.

At the NAB Show, I was also able to hear from many local SBE chapter leaders who were working hard to organize local meetings, either virtual, in-person, or hybrid. You know how hard that has been over the last two years. Some have been able to leverage the need to switch to virtual meetings, involving members who were too distant geo-

graphically but able to join a virtual meeting during a lunch break or after work. Some chapters were also able to invite educational presenters who couldn't travel to their chapter meeting but were happy to join them virtually to teach about a new technology. Some chapters who were in adjoining cities or states were able to schedule a combined

same kind of support we received. The SBE will continue to tell that story as we interact with our peer organizations in the broadcast industry. Educating, certifying, mentoring, and resourcing our members will continue to be the focus of the organization. However, encouraging our members and chapters to tell the story of their experience will also be



The SBE booth at the NAB Show was a central meeting location.

meeting with other chapters. In some parts of the country, as local conditions improved, chapters were able to schedule an in-person monthly meeting at a restaurant. Others, as the weather warmed this spring, were able to schedule outdoor meetings.

As I met our members at the convention, I asked them how they first became involved in broadcast engineering. Almost everyone first became involved because of the encouragement of a working broadcast engineer who they worked for or with. Sometimes the technology attracted them, but the influence of a broadcast engineer was what helped them grow in their profession. That influencer answered questions, gave them increasing responsibility, gave them advice with a career opportunity, and answered the phone when they called in the middle of the night with a crisis at their station.

Returning to the question of how we are working to attract people to become broadcast engineers, I think this experience helps answer it. Broadcast engineering is one of those professions where success often means that everything "just works." Success is easy to overlook because it prevents crises instead of creating crises. If folks our members come in contact with are going to join the profession, we have to tell them about the success stories and offer up the

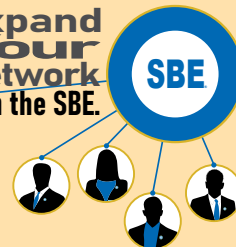
an essential part of what we do. We will be looking for ways to effectively tell the story to anyone who will listen.

Perhaps some of you who are geographically distant from Las Vegas can attend the SBE National Meeting at the SBE22 Broadcast & Technology Expo in Syracuse, NY, on Sept. 28-29, 2022. I look forward to seeing you at the National Meeting.

Thank You to all the Membership Drive Recruiters

The annual SBE Membership Drive concluded at the end of May. If you recruited a new member during the Drive, **thank you!**

Expand Your Network. Join the SBE.



The prize drawing for recruiters will be held this month. All the recruiters also earned a discount on their 2023 SBE dues. At the same time, they helped grow the society and helped someone further his or her career.



ENGINEERING PERSPECTIVE

By Shane Toven, CPBE, DRB, CBNE
Senior Broadcast Engineer, Educational Media Foundation
stoven@sbe.org

PREC 2022 Goes Hybrid

Since its official formation as an organization in 2008, the Association of Public Radio Engineers (APRE) has held the Public Radio Engineering Conference (PREC) in Las Vegas every year without fail just prior to the annual NAB Show. The PREC is the only conference dedicated exclusively to educating engineers in the Public Radio community about technical developments and issues not only relevant in the industry as a whole, but specific to Public Radio.

As with the NAB Show and many other conferences, the PREC was forced to take a two-year hiatus in 2020 due to constraints imposed by the COVID pandemic. 2022 saw its very successful in-person return to Las Vegas. Since there were still some concerns around who might be able to attend the live conference, the APRE board decided to host a hybrid event that would include fully interactive participation of both remote presenters and attendees.

Webinars and conferences on various platforms had become commonplace over the last two years, but this was completely new territory for the APRE. "We weren't sure whether there were going to be six people or sixty coming to the conference in person," said APRE President Victoria St. John. "All we knew was that we would be there as a board and we would absolutely hold a conference before the NAB Show in 2022, one way or another."

Doing an in-person conference was relatively straightforward since the organization had done so many times before. Everyone remembered what needed to be done, and made it happen. The hybrid component, however, was something completely new. Nobody was quite sure how to pull that off. The pieces of the puzzle were all there, but they needed to be put together.

During the previous few years of PREC, the conference was streamed and captured on video, but primarily as a value-added component for APRE members and PREC attendees. Audio and presentation content had been captured and made available for many years prior to that.

This year the board decided to reduce the price of the conference and charge the

same whether the registrant attended in person or virtually. This seemed to be the most logical method for handling things, but it was a departure from the previous approach. Because this was going to be a paid event for virtual attendees, the APRE want-



Audio at PREC 2022 was handled by a Behringer X32 rack. A glass cockpit allows management of audio, network infrastructure, and presentation systems simultaneously.

ed to ensure it was of the highest quality for attendees both in-person, and virtual. The intention was to give virtual attendees the same experience as in-person attendees as much as possible, except for the face-to-face interaction, food, and swag.

The Technical Setup

Jim Gray, APRE board member and advisor to 88.1 KVSC at St. Cloud State University worked with SCSU's television department to provide both technology and talent for producing the virtual portion of the conference. SCSU graciously allowed APRE to utilize its Zoom Webinars platform, which allowed considerable flexibility in registering attendees, and bringing in remote presenters.

The technology setup was probably one of the most elaborate that had ever been deployed for the PREC. On the audio side, a Behringer X32 rack mixer served as the core. This provided the primary room PA in addition to mix-minus feeds to remote attendees and presenters on Zoom. The hotel provided all microphones, speakers, display technology, and a dedicated 100-megabit

Ethernet connection to the outside world. A complete Ubiquiti UniFi network was deployed to provide reliable interconnection for the technology components, and fast WiFi to attendees. To control this half of the system, I, the resident APRE A/V wrangler, used dual 27" monitors, forming a glass cockpit with plenty of screen real estate to manage audio, networking, and presentation content.

For video, Gray's team used two AViPAS PTZ cameras, a third Marshall camera fixed on the presenter, a Black Magic ATEM Television Studio Pro 4K for switching, a laptop running OBS to provide graphics and encoding, and a second laptop to manage the Zoom session, with an SCSU staff member monitoring the conference remotely as a backstop in case of issues. The hotel provided numerous Decimator MD-HX HDMI/SDI cross-converters for interconnecting equipment.

Remote presenters were brought in seamlessly by promoting them to a presenter in Zoom, and then switching them to the room's A/V system. This approach allowed both remote and in-room attendees to see them without any issues. The mix-minus feed allowed bi-directional interaction and ensured that the remote presenter's audio would not loop-back through the Zoom session. Q&A in the Zoom session was moderated, and questions from attendees were read live in the room at the appropriate time. In-room attendees had the ability to submit their questions as well by scanning a QR code and entering them into a form for the conference emcee to read.

Altogether, the technology worked flawlessly, and the conference was a great success. 116 people registered in total, with about 25 of them attending remotely. Both in-person and remote attendees commented that it was one of the best PRECs they had ever attended. This new hybrid approach may very well become a part of future conferences to allow attendance by those who are otherwise unable to make the trip to Vegas.

NEW SUSTAINING MEMBER



AC Video Solutions • 2014 Andrea Cummis 201-303-1303 Consulting, Systems Design/Integration	Digital Alert Systems, LLC • 2005 Bill Robertson 585-765-1155 Emergency Alert Systems	LYNX Technik • 2007 Steve Russell 661-251-8600 Broadcast Terminal Equipment Manufacturer	NEW SUSTAINING MEMBER Sage Alerting Systems Inc. • 2010 Harold Price 914-872-4069 x113 Emergency Alert Systems Products
American Tower Corporation • 2000 Tiffany Yu 603-930-9091 Development/Construction/Management	DoubleRadius, Inc. • 2012 Jeffrey Holdenrid 704-927-6085 IP Microwave STL	MaestroVision • 2021 Claude Turcotte 888-424-5505 Broadcast Automation Software	SCMS Inc. • 2000 Bob Cauthen 800-438-6040 Audio and RF Broadcast Equipment Supplier
Audemat-Worldcast Systems Inc. • 2000 Christophe Poulain 305-249-3110 Control Manufacturer	Drake Lighting • 2015 Dave Sheppard 270-804-7383 FAA Obstruction Lighting - Medium and High Intensity	Markertek • 2002 Adam June 845-246-2357 Specialized Broadcast & Pro-Audio Supplier	Shively Labs • 1996 Dale Ladner 888-SHIVELY FM Antennas & Combiners
Barnfind-USA, Inc. • 2021 George Gónos 919-748-7373 Fiber Transport Solutions	DTS Inc./HD Radio Technology • 2014 George Cernat 443-539-4334 HD Radio Technology	Micronet Communications Inc. • 2005 Jeremy Vize 972-422-7200 Coordination Services/Frequency Planning	Sierra Automated Systems and Eng. Inc. • 2011 Al Salci 818-840-6749 Routers, Mixers, Consoles, Intercoms
Belden Electronic Division • 1991 Rose Lockwood 203-500-4743 Fiber and Copper Cabling Infrastructure	du Treil, Lundin & Rackley, Inc. • 1985 Jeff Reynolds 941-329-6000 Consulting Engineers	Microwave Video Systems • 2011 Warren J. Parece 781-665-6600 Microwave Equipment Rental, Sales & Service	Staco Energy Products Co. • 2010 Paul Heiligenberg 937-253-1191 x128 Manufacturer of Voltage Regulators, UPS
Birns & Sawyer • 2022 Jim Alcantara 323-466-8211 Systems Integration, Sales, Rentals	The Durst Org. - 4 Times Square • 2004 Tom Bow 212-997-5508 TV/FM/Microwave Tower Site	Moseley Associates Inc. • 1977 Bill Gould 805-968-9621 x785 Digital STLs for Radio and Television	SuitLife Systems • 2019 Nigel Brownnett 310-405-0839 Manage. Monitor. Control
Blackmagic Design • 2012 Terry Frechette 408-954-0500 Production Switchers, Digital Cameras, Routers, Video Editing and Monitoring, Color Correction, Video Converters	Econco • 1980 Debbie Storz 800-532-6626, 530-662-7553 New & Rebuilt Transmitting Tubes	MulticAM Systems • 2020 Mary Ann Seidler 207-776-5338 Fully automated live video production	Sutro Tower Inc. • 1989 Raul Velez 415-681-8850 Broadcast Tower Leasing
Bracke Manufacturing LLC • 2012 Patra Largent 949-756-1600 RF & Microwave Components	ENCO Systems Inc. • 2003 Samantha Bortz 248-827-4440 Playout and Automation Solutions	MusicMaster • 2014 Jerry Butler 352-231-8922 Advanced Music Scheduling Solutions	Synthax Inc. • 2020 Brittany Hilton 754-206-4220 Audio Codecs and Converter Solutions
Broadcast Depot • 2018 Tim Jobe 305-281-7540 TV, Satellite, Radio, IP	ERI - Electronics Research • 1990 Zachary Bailey 812-925-6000 Broadcast Antennas, Transmission Line, Filters/Combiners, Towers and Services	Nascar Productions • 2014 Abbey Kielcheski 704-348-7131 Live/Post Production Services	Technical Broadcast Solutions, Inc. • 2018 Robert Russell 302-414-0055 Engineering and Consulting Services
Broadcast Devices, Inc. • 2015 Robert Tarsio 914-737-5032 Audio/RF Support Products	Floral Systems • 2008 Shawn Maynard 877-774-1058 Television Broadcast Automation	National Association of Broadcasters • 1981 Industry Trade Association 202-429-5340	Teles USA, LLC • 2021 John Bisset 937-475-7255 Antennas Transmitters Measurement Distribution
Broadcast Electronics Inc. • 1978 Perry Priestley 217-224-9600 Radio Equipment Manufacturer	Heartland Video Systems, Inc. • 2011 Dennis Klas 920-893-4204 Systems Integrator	National Football League • 1999 Michael Katzenhoff 212-450-2368 Game Day Coordination Operations	Telos Systems/Omnia/Axia • 2003 Talk-Show Systems 216-241-7225
Broadcast Supply Worldwide • 1986 Shannon Nichols 800-426-8434 Audio Broadcast Equipment Supplier	Hilights, Inc. • 2016 Timothy Nash 352-564-8830 Obstruction Lighting Maintenance	Nautel Inc. • 2002 Jeff Welton 877-662-8835 Radio Broadcast Transmitter Manufacturer	Teradek • 2011 Jon Landman 949-743-5783 Camera-top ENG Solutions
Broadcasters General Store • 2004 Buck Waters 352-622-7700 Broadcast Audio Video Distributor	Hitachi Kokusai Electric Comark • 2013 Jack McAnulty 413-998-1523 Manufacturer Broadcasting Transmission Equipment	Nemal Electronics Int'l Inc. • 2011 Benjamin L. Nemser 305-899-0900 Cables, Connectors, Assemblies and Fiber Optic	Tieline The Codec Company • 2003 Dawn Shewmaker or Jacob Daniluck 317-845-8000 Audio Codec Manufacturer
Burk Technology • 2019 Matt Leland 978-486-0086 x703 Transmitter Facility Control Systems	iHeartMedia, Inc. • 2019 Troy Langham 918-664-4581 Radio Group Owner	Neutrik USA, Inc. • 2012 Fred Morgenstern 704-916-0368 Ruggedized Optical Fiber Systems	Unimar Inc. • 2001 Thad Fink 315-699-4400, 813-943-4322 Tower Obstruction Lighting Designer, Manufacturer, Distributor
Calrec Audio • 2016 Helen Carr 703-307-1654 Audio Mixing Equipment	Indiana Broadcasters Association • 2019 Dave Arland 317-701-0084 Indiana Association for Radio & TV Broadcasters	NPR Distribution Services • 2019 Joe Schifano 202-513-2624 Your Content Delivery Partners	Wheatstone • 2010 Jay Tyler 252-638-7000 IP Consoles, Routers & Processors
Cavell, Mertz & Associates Inc. • 2011 Gary Cavell 703-392-9090 Consulting Services	Inovonics Inc. • 2012 Gary Luhrman 831-458-0552 Radio Broadcast Equipment	Orban Labs, Inc. • 2011 Mike Pappas 480-403-8300 Audio Processing AMFMTV	WideOrbit • 2012 Brad Young 415-675-6700 Radio Automation and Playout
Comrex Corporation • 1997 Chris Crump 978-784-1776 Audio & Video Codecs & Telephone Interfaces	Jampro Antennas Inc. • 2011 Alex Perchevitch 916-383-1177 DTV, FM-HD Radio, DVB-T/TT2, ISDB-T, DAB	Potomac Instruments • 1978 Zachary Babendreier 301-696-5550 RF Measurement Equipment Manufacturer	Wireless Infrastructure Services • 2006 Travis Donahue 951-371-4900 Repacking Services - West Coast Turnkey Services
Continental Electronics • 1976 Dale Dalesio 412-979-3253 TV and Radio Transmitters	JVC Professional Video • 2014 Edgar Shane 973-317-5000 Professional Video Products, Camcorders, Display Monitors, Recording Decks	ProAudio.com - A Crouse-Kimzey Co. • 2008 Mark Bradford 800-433-2105 x560 Proaudio Broadcast Equipment Distributor	
Crawford Broadcasting Company • 2021 Cris Alexander 303-481-1800 Media Company	Kathrein USA Inc. • 1985 Les Kutasi 541-879-2312 Antennas for Broadcasting & Communications	Propagation Systems Inc. - PSI • 2010 Doug Ross 814-472-5540 Quality Broadcast Antenna Systems	
CueScript • 2014 Michael Accardi 203-763-4030 Teleprompting Software & Hardware	Kintronc Labs, Inc. • 2015 Brad Holly 423-878-3141 Radio Broadcast Antenna Systems - ISO9001 Registered Company	QCommunications • 2019 Tony zumMallen 816-729-1177 Services Behind the Scenes	
Cumulus Media, Inc. • 2021 Conrad Traumann 212-419-2940 Audio Media Company	latakoo • 2021 Paul Adrian 214-683-0791 Media Workflow Automation	Quintech Electronics and Communications Inc. • 2002 James Herbstritt 724-349-1412 State-of-the-art RF Hardware Solutions	
Davicom, Division of Comlab, Inc. • 2014 Louis-Charles Cuierrier 418-682-3380 x512 Remote Site Monitoring and Control Systems	LBA Technology Inc. • 2002 Jerry Brown 252-757-0279 x228 AM/MW Antenna Equipment & Systems	QVC • 2011 Kevin Wainwright 484-701-3431 Multimedia Retailer	
Dialight Corporation • 2006 David Jennings 732-919-3119 FAA Certified Obstruction Lights	Linkup Communications Corporation • 2017 Mark Johnson 703-217-8290 Satellite Technology Solutions	Rohde & Schwarz • 2003 Walt Gumbert 724-693-8171 Transmitters, Test & Measurement, Video	
Dielectric • 1995 Cory Edwards 207-655-8131 Radio & TV Antenna Systems and Monitoring		Ross Video Ltd. • 2000 Jared Schatz 613-228-0688 Manufacturer, Television Broadcast Equipment	

Members With 25 or More Years of Membership
New Sustaining Members
Become a sustaining member.
Apply online or call 317-846-9000.

Member Spotlight: Tony Abfalter

Member Stats

SBE Member Since: 2005
Employer: Leighton Broadcasting
Position: Director of Engineering/IT
Location: St. Cloud, MN
Chapter: 17 Minneapolis
I'm Best Known For: Fixings things with the resources at hand, and talking to everyone.

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

A. Getting the word out about a career in broadcast engineering and addressing the shortage of technical talent. At some point I want to retire.

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

A. Playing with electronics at a young age. I got a 60-in-one Electronic Project Lab kit from Radio Shack when I was about four years old. From that point on I started taking things apart (and sometime fixing things) to learn more. From that point on projects got bigger and more complex.

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

A. ...work my hobbies: satcom, ham radio, commercial radio and computers.



Tony standing in front of the McMurdo Station sign. The ice pier is behind where the ship unloads cargo once a year.

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

A. Jim Offerdahl with his years of experience has been a great resource for radio engineering, but also a big push in me learning more about satellite communication as a hobby.

Rich Wood should be called Mr. AM. His knowledge of AM as a whole is incredible. This really drove my passion with AM radio and allowed me to become much better with troubleshooting.

Stephen Schuh is always calm under pressure, and is always working to learn new technology. Steve has inspired me to always keep learning.

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

A. Getting paid to do a hobby. I don't go to work, I go to my hobby every day.

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

A. I am currently in Antarctica supporting radio communication at McMurdo Station. I repair equipment needed for next summer when all the people arrive. During the winter, there are 131 people, but during the summer that number jumps to around 1,258.

Q. *What's your favorite Gadget?*

A. Right now, Garmin GPS Map 66i.

Renew Membership by June 30

When you renew your SBE membership on time, you retain all your member benefits without interruption. But if you have not yet renewed, you need to do so today. While renewals were due April 1, you are now in the grace period. If you don't renew by June 30 (the end of the grace period), you will be dropped from the active roll.

Renew online at sbe.org. Click on "Renew Membership" at the top of the website home page. Mobile users can find it in the hamburger drop-down menu. The online system is available 24/7, is secure and accepts Visa, MasterCard and American Express.

When renewing, consider upgrading to SBE MemberPlus. SBE MemberPlus provides you with access to all archived and all new Webinars by SBE. And if you are a Student or Life Member, you can take advantage of SBE MemberPlus, too. Adding MemberPlus gives you full access to all the Webinars by SBE.

Questions about renewal? Contact Scott Jones at the SBE National Office at 317-846-9000 or kjones@sbe.org.

Society of Broadcast Engineers, Inc. 2021 Audited Financial Statements Combined Statement of Assets, Liabilities and Net Assets* December 31, 2021

ASSETS:

Cash and cash equivalents	\$327,607
Investments	1,361,822
Property & Equipment, Net	40,039
Intangible Assets, Net	480
Total Assets	\$1,729,948

LIABILITIES and NET ASSETS:

Liabilities	\$18,359
Net Assets	1,711,590
Total Liabilities & Net Assets	\$1,729,949

2021 SBE Revenue & Expense Statement

INCOME:

Membership Fees & Support	\$348,545
Membership Services	46,147
National Meeting	10,285
Certification	51,649
Education Services	137,033
SBE Store/Book Store	16,317
Website	8,090
Frequency Coordination	628,337
Contributions	2,439
Net Investment Return	96,859
Interest	11
Total Revenue	\$1,345,712

EXPENSES:

Program Services	\$751,455
Management & General	279,431
Total Expenses	\$1,030,886

NET ASSETS 12/31/2020	\$1,396,764
NET ASSETS 12/31/2021	\$1,711,590
CHANGE IN NET ASSETS	\$314,826

* CPA-conducted financial audit. SBE uses modified cash accounting method. Investments are listed at market value.



WELCOME TO THE SBE

NEW MEMBERS

Sheyenne Aimeron - Tulsa, OK
Galen W. Azbell - Rhinelander, WI
Michael J. Barber - Tulsa, OK
Sulaiman K. Bastien - Laurel, MD
Jason R. Bender - Rapid City, SD
Michael Bohen - Albany, NY
Marc Braniff - Rochester, MN
Jacob Bronson - Austin, TX
Bryan A. Carr - Reno, NV
Kristian Cerrone - Albany, NY
Nicholas Clardy - Carencro, LA
Christopher C. Craig - Montpelier, VT
Katelyn M. Daugherty - Warren, OH
Maurice D. De Fraga - Bonsall, CA
Michael D. Dela Cruz - Quezon City, Philippines
Porfirio Delgado - Portales, NM
Nick Divakar - Las Vegas, NV
Yvon Dorcinvil - Lauderhill, FL

Paul G. Duguay - Shoreline, WA
Shan Easterling - Tupelo, MS
Donald J. Eastman - Bowling Green, KY
Trevor J. Eiseman - Kearney, NE
Kyle Eller - Talent, OR
John C. Faulkner - White House, TN
Adam Fuller - Elizabethtown, KY
Michael P. Geringer - Lynchburg, VA
Daniel M. Glavin - Mansfield, MA
Chaim J. Goodman - Weston, CT
Michael W. Graebner - Parkville, MO
Robert T. Green - Streetsboro, OH
Ky Gustafson - Berkeley, CA
Donovan P. Hart - Guyton, GA
Michael J. Healey - Tampa, FL
Kevin L. Helton - Bolivia, NC
James R. Hendershot - Grants Pass, OR
Brian A. Hensley - Huntington, WV
Hector Hernandez - Little Elm, TX
Christopher A. Hickman - Lynchburg, VA
Jacob T. Hodkinson - Hansen, ID
John K. Hogg - Jersey Shore, PA
Jose Y. Holguin - Lutz, FL

Eric J. Hopes - Orlando, FL
Brent Ikei - Honolulu, HI
Jacob W. Isham - Hayward, WI
William C. Jones - Richmond, VA
Kyler D. Klingelhofer - Odessa, NE
Paul M. Krabath - Cornelius, NC
Benjiah Loftin - Fort Worth, TX
Daniel P. Luke - Stanfield, NC
Nicole Lun Lopez - Brooklyn, NY
Ryan C. McCarthy - Farmington, MN
Ranye L. McLendon - Baltimore, MD
Edward Mitchell - Tampa, FL
Frederick Moore - Macomb, MI
Richard W. Moore - Woodbridge, VA
Daryoush Mortazavi - Vaughan, ON
Chris Murrell - Boalsburg, PA
Roberto Nerey - Reno, NV
Stephane B. Nguemengne Sipa - Washington, DC
Constantine Papageorgiou - Yulee, FL
Donald P. Parker - Traverse City, MI
Monica Pena - Houston, TX

Eli S. Pena Lacruz - Kissimmee, FL
Michael J. Pender - Rochester, NY
Keith W. Peterson - Longmont, CO
Daniel Quesnel - Arlington, TX
Jude Richard - Bryan, TX
Wilmer Robles - Pembroke Pines, FL
Michael Rosenow - Bloomingdale, GA
Beau D. Rudd - Roanoke, VA
Mike Scharf - Roanoke, VA
Himanshu Sharma - Etobicoke, ON
Dale E. Shera - Fort Worth, TX
Levi W. Sirmans - Lynchburg, VA
Jonathan Smith - Myrtle Beach, SC
Anthony W. Solano - Brighton, CO
Andrew J. Stewart - Flower Mound, TX
John A. Strand - Orlando, FL
Phillip A. Tracy - Buchanan, GA
Kyle Verrell - New Albany, MS
Gregory B. Watterworth - Cookeville, TN
Jamie Wenz - Lincoln, NE
Joseph M. Williams, Jr. - Philadelphia, PA
Glenn Yuill - Las Vegas, NV

NEW STUDENT MEMBERS

Hayden R. Armstrong - Davis, CA
William G. Gratsch - Cocoa, FL
Matthew W. Sidar - Portland, ME

NEW ASSOCIATE MEMBERS

Alyson Cox - Thousand Oaks, CA
Peggy Hunt - Chandler, IN
Moriah J. LeFlore - Colby, KS
Joseph L. Myers - Lexington, SC

RETURNING SENIOR MEMBERS

Edwin A. Bukont - Gallatin, TN

Sean R. Anker - Dedham, MA
Crystal A. Bell - Orlando, FL
Robert L. Berger - Milan, IL
Brent R. Bolinger - Olathe, KS
Scott W. Briggs - Butler, PA
Mark T. Cantrell - New Albany, MS
Ernie Ensign - Arlington, VA
Tony W. Fernandez - Tampa, FL
Daniel C. Harrell - Norfolk, VA
Chad L. Hayes - Calgary, AB

RETURNING MEMBERS

Raymond D. Hepner - Baltimore, MD
Steven M. Jaquin - Canastota, NY
Michael J. Kobylka - Erie, PA
Andrew J. Koziol - Greer, SC
Adam J. Lancaster - Cape Coral, FL
Jeremy L. Langley - Talladega, AL
Pierre A. Lonewolf - Kotzebue, AK
Sean Mattingly - Muncie, IN
Kenneth G. McCrimmon - Bentonville, AR
Dean W. Middleton - Eugene, OR
Daryl K. Mukai - Honolulu, HI

Robert Owen - Missoula, MT
Dale A. Pendleton - Raleigh, NC
Sonny Reschka - Amelia, OH
Rodney L. Rhodes - Grand Prairie, TX
Cliff Rogers - Atlanta, GA
Dennis L. Sloatman - Midlothian, VA
Drew A. Smith - Baraboo, WI
Calvin L. Smith - Winchester, CA
Adam P. Tarnowski - Hardin, KY
Robert D. Williams - Powhatan, VA

NATIONAL MEETING, from p. 3

Individual (or company) awards include: Technology Award, Facility Innovation of the Year, Best Technical Paper, Article, Book or Program by an SBE Member; Best Article, Paper or Program by a Student Member and the SBE Freedom Award.

Tickets (\$16) for the SBE Awards Reception and Dinner went on sale at the SBE website on June 1. The other SBE National Meeting events are free with your Chapter 22 Broadcast and Technology Expo registration.

The Expo features exhibitors, both regional and national, showing radio/audio technology, television/video technology and broadcast IT. Expo hours are 8:30 a.m. to 4:30 p.m. Anyone working in the broadcast/media field, including those who work in non-technical positions in broadcast and media are invited to attend. You do not need to be an SBE member to attend. Admission to the Expo and sessions is free. Register at sbe22.org. Lunch will be available for a nominal charge.

The SBE National Meeting and Chapter 22 Broadcast and Technology Expo will be held at the Ramada by Wyndham, Liverpool.

Individual attendees may make hotel reservations directly through Ramada reservations at 315-457-1122. Ask for the Society of Broadcast Engineers special rate of \$111 plus tax per night. A limited room block has been set aside for our guests.

Companies wishing to exhibit may register at the SBE Chapter 22 website, sbe22.org. Go to the 2022 Expo page/Exhibitors. Booths are assigned on a first-come, first-served basis.

Save the dates and plan to make your way to Syracuse for the Chapter 22 Broadcast and Technology Expo and SBE National Meeting!

Register for the SBE National Awards Dinner

bit.ly/2022SBE Dinner

Register for the SBE22 Broadcast & Technology Expo

sbe22.org/2022-expo

Potential 2GHz Interference from Dish Network

The SBE has learned that many stations have received PCN notifications regarding Dish Network and its deployment of AWS-4 at 2000-2020 MHz (downlink) and 2180-2200 MHz (uplink). Those stations have been seeking guidance on a uniform response. In reviewing these notifications, the SBE believes the potential for interference to ENG is high as the downlink is 5MHz away from the lower DRL (2025-2025.5 MHz) and channel A1 (2025.5-2037.5 MHz).

The SBE recommends that all licensees generate a paper trail (emails) in case potential interference arises, and they should notify Comsearch/Dish Network in writing immediately noting that any harmful interference would not be tolerated, and any interference mitigation would be at their costs per §27.1133. The SBE is distributing a sample letter that members are welcome to use and/or adapt. Contact SBE Frequency Coordination Manager RJ Russell (rjrussell@sbe.org) for a copy.

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MEMBERS ON THE MOVE



◀ **Nicholas Thweatt** is assistant chief engineer at Nebraska Public Media, Lincoln, NE.

Keith Pelletier has been promoted to president of Dielectric.

▶ **Carl Cutforth** is executive vice president of technology at SportsGrid, New York.



◀ **David Shantz** is director of engineering at Family Stations, Alameda, CA.



▲ **Warren Reeves** (center) and **Glenn Leffler**, CPBE (right), both of El Paso, TX, were recognized by the U.S. Army 1st Armored Division in Ft. Bliss for building an LPFM station in 72 hours to broadcast Pashtu and Dari language information and news. Lt. Colonel Figueora presented them plaques.



MARK YOUR CALENDAR

S	M	T	W	T	F	S
SBE Certification Exams <i>Local Chapters</i>						
June 3-13, 2022 sbe.org/certification						
<i>Application deadline closed</i>						
SBE Awards Nominations Deadline						
June 15, 2022 sbe.org/awards						
SBE WEBxtra <i>online</i>						
June 20, 2022 sbe.org/webxtra						
SBE WEBxtra <i>online</i>						
July 18, 2022 sbe.org/webxtra						
SBE Certification Exams <i>Local Chapters</i>						
Aug. 5-15, 2022 sbe.org/certification						
<i>Application deadline June 10, 2022</i>						
SBE Leadership Development Course <i>Atlanta</i>						
Aug. 3-5, 2022 sbe.org/lcd						
SBE WEBxtra <i>online</i>						
Aug. 15, 2022 sbe.org/webxtra						
SBE Election Ends						
Aug. 17, 2022 sbe.org						

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



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