

THE Signal

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The Association for Broadcast and Multimedia Professionals

www.sbe.org

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SBE Re-Elects Wayne Pecena as President

The results of the 2020 SBE election for the national board of directors are in. Wayne Pecena, CPBE, 8-VSB, AMD, DRB, CBNE, was reelected as the society's president. Pecena is the associate director of educational broadcast services at Texas A&M University, which operates public broadcast stations KAMU FM & TV. He is a member of SBE Chapter 99 in College Station, TX.

Regarding the election, President Pecena said, "I look to my second term as our industry and our personal lives have experienced change and challenge like never before. I want to ensure the Society brings a sense of normalcy to our members. This uniformity is accomplished through our professional development, continuing education, certification and frequency coordination programs, while

making the right decisions for change in the future to insure continued value to our members."

Others serving one-year terms as officers, which began on Sept. 23, are:

- Vice President: Andrea Cummis, CBT, CTO; Chapter 15 New York; W. Orange, NJ
- Secretary: Kevin Trueblood, CBRE, CBNT; Chapter 90 SW Fla.; Ft. Myers, FL
- Treasurer: Ted Hand, CPBE, 8-VSB, AMD, DRB; Chapter 45 Charlotte; Charlotte, NC

Serving two-year terms on the board of directors, which also began Sept. 23 are:

- Stephen Brown, CPBE, CBNT; Chapter 80 Fox Valley; Appleton, WI
- Roswell Clark, CPBE, CBNT; Chapter 39 Tampa Bay Area; Clearwater, FL
- Kirk Harnack, CBRE, CBNE; Chapter 103 Nashville; Nashville, TN

- Thomas McGinley, CPBE, AMD, CBNT; Chapter 16 Seattle; Missoula, MT
- Shane Toven, CSRE, CBNT; Chapter 43 Sacramento; Antelope, CA
- Fred Willard, CPBE, 8-VSB, CBNT; Chapter 37 District of Columbia; Washington, DC



Pecena

The national board of directors of the SBE is responsible for the development of policy and determines the programs and services the society provides to its approximately 5,000 members.

see [ELECTION](#), p. 14

Recap of the Virtual SBE Annual Meeting and Awards Program

The Society of Broadcast Engineers 56th SBE National Meeting was originally to be held in Syracuse, NY, on Sept. 22 and

23, but like most other events this year, was moved to a virtual event because of the COVID-19 pandemic. Emanating from the broadcast studios of Texas A&M University's KAMU-TV, and hosted by SBE President Wayne Pecena, CPBE, 8-VSB, AMD, DRB, CBNE, the SBE combined and condensed the annual SBE Membership Meeting and National Awards Dinner into a fast-moving, 90-minute program. It was broadcast on the SBE YouTube channel.

The SBE National Meeting was to be held in conjunction with the SBE Chapter 22 Broadcast & Technology Expo, a regional exposition and educational event held

in Syracuse. Chapter 22 announced in August that it was cancelling the event due to restrictions imposed by the state of New York as a health precaution.

The YouTube broadcast began with the

see [NATIONAL MEETING](#), p. 6



SBE President Wayne Pecena led the SBE National Membership Meeting & Awards Presentation.

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Update from the SBE Executive Director Search Committee

By Joe Snelson, CPBE, 8-VSB
Chair, SBE Executive Director Search Committee



Snelson

In the last edition of The Signal, I presented an outline of the process that the SBE Executive Director Search Committee would take in finding our next executive director. I will present in this edition where we are in that process.

Of course, by the time you read this we will be even further down the road and possibly have already made an announcement of who the replacement for current Executive Director John Poray might be.

The Committee received around 30 applications for the position by the end of June. This large number was culled down to six by the process of each committee member submitting his or her ranking for each applicant. Those six individuals went through an initial interview with the Committee using video conferencing to narrow it down from six to four. Those four applicants participated in another, lengthier interview to narrow it down further to the top three. The next step after that was to schedule face-to-face interviews with the top three finalists. At the time of this writing, it is unknown what we might face in conducting those interviews due to possible governmental restrictions that could

be in place due to the COVID-19 virus pandemic. The purpose of the face-to-face interviews is to narrow the top three down to one finalist and an alternate. The name of the finalist will be presented to the SBE Board for approval. If approved, an announcement of the new executive director will be made public soon after that Board meeting in late September.

As I said at the beginning, it's possible that by the time you read this an announcement of the new executive director may have been made. Nevertheless, I thought it important to give you some details on how the search for a new executive director was conducted.



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Certification Question

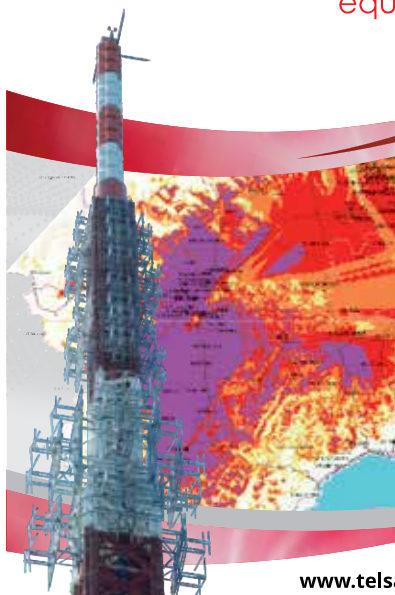
Answer on page 6

An FCC inspector needs to make an appointment with a station to conduct an inspection of the station.

A. True
B. False



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LETTER FROM THE PRESIDENT

By Wayne Pecena, CPBE, 8-VSB, AMD, DRB, CBNE
SBE President
wpecena@sbe.org

Looking Ahead to 2021

It may be too soon to look to 2021, but I expect many of you are like me and ready for 2020 to come to a conclusion. A year ago, I became your Society president and wrote in my first president's column of a productive year ahead for the industry and your society. I am once again honored and humbled to have been reelected for my second term. It was a quick 12 months, and again it's time to look ahead. The pandemic brought change at a pace that never could be envisioned as well as uncertain times ahead.

Zoom (or your favorite media conferencing platform) has become a routine part of our daily schedule, whether conducting our day jobs or keeping in touch with our industry. With all industry gatherings canceled or postponed, your society has conducted an Executive Committee meeting, two Board of Directors meetings and just wrapped up the annual membership meeting virtually. I have a love-hate relationship with the media conferencing technology. I have enjoyed the numerous online events that I have been involved in as a presenter and far more as a participant. I look forward to when we can again gather face-to-face for a chapter meeting, a regional conference or a national event. For now, the technology at hand serves as the best option available, but maybe not as the long-term substitute. This is an aspect where the future might not look like the past we have known. I suggest the future might include a balance between traditional in-person conferences and ongoing in-depth online technology presentations throughout the year.

Regardless of the challenges and obstacles presented this year, your society has been busy and maintaining a sense of normal. I look to the continuing education, certification and frequency coordination programs as cornerstones of the SBE. These programs continue as always. Many organizations scrambled to develop online events as in-person events were canceled, while it was business as usual at the SBE where online events have been a normal offering for some time. The webinars and monthly WEBxtra Chapter of the web meetings headline the offerings. Webinar participation has seen record enrollment with the first six months of this year surpassing all of 2019. New webinars have been added monthly to the library of now more than 90 topics. Remember, all Webinars by SBE are free with your MemberPlus membership option. Certification exams continue to be conducted, although maybe in a little different setting to comply with local social distancing requirements.

Continuing education, certification and frequency coordina-

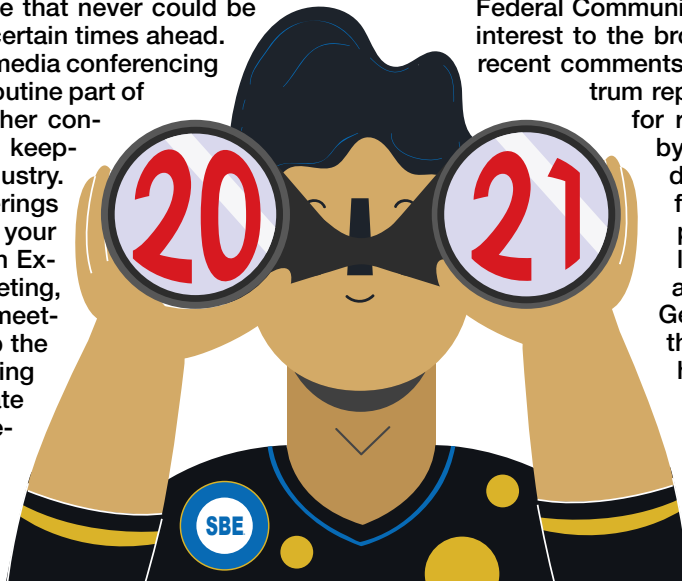
tion programs often receive the majority of the society limelight. These are important for sure, but many other programs are alive and well. The SBE Mentor Program continues and the Ennes Foundation Trust continues to fund scholarships with record financial support this year. Scholarships were awarded this year to five budding engineers.

The SBE has continued to provide comments and input to the Federal Communications Commission on a variety of issues of interest to the broadcast engineer and the industry. The most recent comments were focused on the C-Band satellite spectrum repack. The SBE suggested a 30-day extension for reimbursement requests by stations affected by the C-Band repack. The FCC granted a 14-day extension. While our efforts don't always fully achieve what the society sought, an impact was achieved. The additional time allowed broadcast station engineers and management to make an informed decision. SBE General Counsel Chris Imlay best summarized the motion outcome; "It seems clear the FCC has come to respect comments from the SBE based upon practical experience and engineering expertise" as the SBE motion was the catalyst for the FCC extension granted.

Due to the production lead times associated with a print publication such as The Signal, the new executive director of the SBE may have been announced before you read this column. Joe Snelson, who chaired the Executive Director Search Committee, outlines the search process in this issue of The Signal. A special thanks to Joe for his leadership of the committee and to your fellow SBE members who served on the committee. Work of this committee resulted in one of the most important actions of the society as we look to the future and prepare to congratulate John Poray upon his retirement in December recognizing his 28 years of service to the SBE.

A sincere thank you goes to the dedicated SBE staff members as the national office continues to keep the business side of your association moving right along while observing the Indiana and Indianapolis guidelines. The phone continues to be answered, the mail opened, certification exams distributed and inquiries responded to while taking the necessary precautions for the staff to stay safe and remain healthy.

As we look to 2021 and seek to get back to normal, the new normal is yet to be defined and is likely a work in progress for some time to come. I personally want to know your suggestions, comments and concerns. Your feedback is essential to our collaborative effort as we all seek the "new normal" ahead. Please reach out to me at wpecena@sbe.org or by phone at 979-845-5662 for a more personal exchange. Always, a sincere thank you to those I have heard from. In the meantime, stay safe and stay healthy!



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"Trying to predict the future is like trying to drive down a country road at night with no lights while looking out the back window."

~ Peter Drucker



EDUCATION UPDATE

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

The March to ATSC 3.0 Continues - Ready or Not

For the past several years, nothing has captivated the thoughts of television broadcasters like what they'll soon be allowed to unleash on the viewing public as we approach the cusp of widespread deployment of ATSC 3.0. The additional opportunities to distribute data at a fraction of the cost of competing technologies promises to provide new revenue streams and opportunities never imagined before.

At the same time, broadcast technical staff have never been presented with more complex architecture to plan, configure and execute. The decisions to be made over the next few months will determine whether facilities maximize their potential or just "mark time" while competition reaps the benefits.

Speaking of competition, that term takes on a different perspective given benefits of creating market partnerships to efficiently use market spectrum to deploy ATSC 3.0 in parallel with legacy digital services.

The folks at Pearl TV have demonstrated workable solutions in their Phoenix Model Market initiative, and thanks to 2020 James C. Wulliman SBE Educator of the Year corecipient Fred Baumgartner, we recently received a copy of the Host Station Manual to peruse.

I mentioned to Dave Folsom of Pearl how well thought out the manual was, and I felt the frequently asked questions would prove an excellent resource to help focus non-technical folks to technical decisions that need to occur for successful implementation. He graciously approved sharing a sampling of those here:

Will a new transmitter be required if I am operating a NextGen TV Host station?

It will depend on several factors. Many current transmitters in use with ATSC-1 are completely capable of transmitting the NextGen TV signal. However, NextGen TV's COFDM transmission system can provide transient power demands beyond what is required by equivalent legacy ATSC-1 average transmission power. This is referred to as a high peak to average power ratio.

It is a characteristic of COFDM trans-

mission. Also, the broadcaster may choose to add additional power to provide for a vertical polarized transmission component that will become important in reaching a mobile audience. Many legacy transmitters already have enough power overhead to handle these peaks and additional power requirements. However, each circumstance is different so these factors must be considered when designing your system.

Does a broadcaster need a new exciter (modulator) if hosting a NextGen TV Host station?

Legacy ATSC-1 exciters/modulators generally are not compatible with current NextGen TV transmission unless they have been purchased in the last year or two. More recent exciters are software-based and can run software to create a legacy ATSC-1 or alternatively a NextGen TV transmission often with the addition of a license key.

Why are there so many transmission parameter selections available in NextGen TV?

In designing the ATSC-3 NextGen TV system, the designers were aware of the wide range of transmission characteristics that need to be provided by a modern television transmission system. This variety of possible parameters allow flexible use of the service from in-home, portable, mobile, in-vehicle and inside large building requirements. All the different transmission parameters provide capabilities from more robust mobile or inside building transmission to less robust, with wider bandwidth capabilities. NextGen TV also allows for transmission of multiple modulation and coding parameters at the same time which provides the flexibility to transmit to multiple levels of service bandwidth or signal robustness within a single transmission.

Should you consider the use of a Broadcaster Application and what is the Application Framework?

NextGen TV has the capability of automatically downloading and running a broadcaster-provided application on the viewer's receiver. This application can be simple and just provide a familiar receiver control interface to the viewer or it can

provide a wide range of enhanced contents such as a sophisticated guide with deep links to enhance the viewer experience. A (common) Application Framework is a means by which much of the underlying software code that makes this experience possible is shared between broadcasters to provide faster app loading between a service change. It also provides a common and familiar look and feel to viewer-facing broadcaster apps.

What is Dialogue Enhancement in NextGen TV?

The Dolby AC-4 audio system used in NextGen TV in North America can create and provide an audio dialogue enhancement feature. This feature allows viewers that have receivers with this selection capability to improve the ability of the listener to understand the dialogue within a program source. It does not just increase the dialogue level; it also changes the characteristics of the dialogue within the program to make it easier to discern by the viewer. This feature was not added just for the hearing-impaired community. It was added to enhance the viewer experience in a wide range of viewing/listening circumstances where background noise in the program (as in a sporting event) or at the viewer's location can mask the dialogue intelligibility. This feature has proven to be very popular in early tests by a wide range of test audience members.

If you're going to be involved with implementation of ATSC 3.0 in your market, or just want to get a better grasp of the process, I encourage you to download a copy of the Host Station Manual.

LINK
Host Station Manual
pearlrv.com/station-resources/

Education Almanac

Upcoming Webinars

October 15: AoIP Module 8: Troubleshooting IP Systems

sbe.org/webinars



Have an idea for a webinar?
Contact Education Director Cathy Orosz at 317-846-9000 or corosz@sbe.org.

For more information on any SBE education program, contact Education Director Cathy Orosz: corosz@sbe.org or 317-846-9000.



CERTIFICATION UPDATE

By Ralph Hogan, CPBE, DRB, CBNE
Chair, SBE Certification Committee
rhogan@sbe.org

Certification Testing During a Pandemic

When safe practices dictate you maintain distance and avoid indoor public gatherings, how do you conduct an in-person meeting to administer an SBE certification exam? The SBE continues to offer SBE certification exams, but they are being held with some modifications, as you can imagine. When the World Health Organization declared COVID-19 a pandemic in March, we all wondered what it would mean for us individually and for our regular day-to-day procedures. In this vein, the SBE National Certification Committee had to consider what that meant for our certification exams.

As you likely know, SBE certification exams are held in-person with local certification chairs or designated special proctors. Our first exam session after the pandemic declaration was in June. At that time, some states had begun to lift some of their rules on social distancing and open some places of business. We made it clear to each examinee and proctor that first and foremost they needed to be comfortable and safe in the exam process. This took different forms at various locations. With most chapters administering an exam to one or two people, each situation was different.

A few chapters still had stringent regulations and they opted to reschedule their exam. In these cases, the retake fee was waived. One chapter had a proctor who was at high-risk of infection. The SBE found an alternate proctor for that exam. Another chapter had its examinee take the exam outside. In one case, an examinee had the entire building to himself, so social distancing wasn't a problem.

During all this, some have asked why SBE exams are not administered online. That sounds like a quick and easy concept,

but in reality, there are many factors to consider. These include effective proctoring, maintaining the integrity of the questions and question pool, and the cost of the method itself. We also value the time and work our volunteers give to the SBE and the certification program. That is a foundation of our organization. We don't want to eliminate them from our process.

All this said, the Certification Committee continues to evaluate new methods and more flexible exam options. If you want to take an SBE certification exam, but have concerns about the process, we're willing to work with you on a mutually agreeable solution. As always, let us know if you have questions or concerns. SBE Certification Director Megan Clappe is available to help.



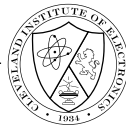
EQ Answer from page 3

The answer is B (False)

The Commission has no means of determining whether a station is being operated as licensed except through immediate on-the-spot inspection. To establish the amount of operating power of a station, the input power of the last radio stage of the transmitter must be actually measured with test equipment. To delay an inspection for the convenience of a licensee would allow the licensee time in which to modify or restore the transmitter to its licensed condition, thus permitting the licensee to avoid detection. This same theory also applies in the case of whether a station is operating with an unapproved type of transmitter.

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THANKS TO THE FOLLOWING SUPPORTERS FOR THEIR CONTRIBUTIONS

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John H. Battison Founder's Scholarship
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Youth Scholarship
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Robert D. Greenberg Memorial Scholarship
James Feld, Culver City, CA

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SBE Certification Achievements

CONGRATULATIONS

LIFE CERTIFICATION	<p>Certified Professional Broadcast Engineer (CPBE) Patrick Caffrey, Cheyenne, WY - Chapter 129 Samuel Cox, Escondido, CA - Chapter 36 Andres Diaz, Guaynabo, PR - Chapter 142</p> <p>Certified Professional Broadcast Engineer (CPBE) 8-VSB Specialist (8-VSB) Kenneth Drewes, Des Moines, IA - Chapter 109</p>	<p>Certified Broadcast Radio Engineer (CBRE) Nestor Criscio, Montevideo, Uruguay</p> <p>Certified Broadcast Networking Technologist (CBNT) Paul Orth, Menomonie, WI - Chapter 112</p> <p>Certified Radio Operator (CRO) David Magness, Washington, DC</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>
JUNE EXAMS	<p>Certified Senior Radio Engineer (CSRE) Shane Toven, Antelope, CA - Chapter 43</p>	<p>Certified Broadcast Networking Engineer (CBNE) Jonathan Hollon, North Richland Hills, TX - Chapter 67</p>	
AUGUST EXAMS	<p>Certified Broadcast Radio Engineer (CBRE) Mike Felt, Glendale, AZ - Chapter 9 Rick Ruhl, Rialto, CA - Chapter 131</p> <p>Certified Broadcast Television Engineer (CBTE) Andrew Kennedy, Fitchburg, WI - Chapter 24 Joshua Lynch, Millsboro, DE - Chapter 46</p>	<p>Certified Broadcast Networking Engineer (CBNE) Bryan Anderson, Wentzville, MO - Chapter 55</p>	<p>Certified Radio Operator (CRO) Thomas Stephan, Denver, CO - Chapter 48</p> <p>Certified Television Operator (CTO) Parker Johnson, Norman, OK - Chapter 85</p>
SBE CERTIFIED SCHOOL COURSE COMPLETION	<p>Certified Broadcast Technologist (CBT) DINFOS Andrew Christian, FPO, AE</p>	 <p>Got your SBE Certification pin? sbe.org/pins</p>	
CERTIFIED BY LICENSE	<p>Certified Broadcast Technologist (CBT) Cleve Massey, Weatherford, TX - Chapter 67</p>		
CERTIFIED RADIO OPERATOR (CRO)	<p>Sylvester Carino, Antelope, CA Ryan Glazar, Flagstaff, AZ - Chapter 9 Alex MacKensen, Hurricane, WV</p>	<p>Daniel Masinter, Roseville, CA Devon Rudd, Lincoln, CA</p>	<p>Randy Bohn, Suring, WI Pasadena City College Danielle Beard, Los Angeles, CA</p>
CERTIFIED TELEVISION OPERATOR (CTO)	<p>Brian Conley, Glenshaw, PA Fernando Silva, Clifton, NJ - Chapter 15</p>	<p>Bates Technical College Eric Ellsworth, Gig Harbor, WA Muaj Xiong, Lakewood, WA</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 Professional Broadcast Engineer (CPBE) Jon Hardee, Pittsboro, NC - Chapter 93</p> <p>Certified Professional Broadcast Engineer (CPBE) AM Directional Specialist (AMD) Robert Bowe, Phoenix, AZ - Chapter 9</p> <p>Certified Professional Broadcast Engineer (CPBE) AM Directional Specialist (AMD) Digital Radio Broadcast Specialist (DRB) Alan Jurison, Syracuse, NY - Chapter 22</p> <p>Certified Senior Television Engineer (CSTE) Daniel Paixao, Meridian, ID - Chapter 115 Kevin Tubbs, Kirkville, NY - Chapter 22</p> <p>Certified Broadcast Networking Engineer (CBNE) Alan Jurison, Syracuse, NY - Chapter 22</p>	<p>Certified Broadcast Radio Engineer (CBRE) AM Directional Specialist (AMD) Stephen Poole, Warrior, AL - Chapter 68</p> <p>Certified Broadcast Radio Engineer (CBRE) AM Directional Specialist (AMD) Digital Radio Broadcast Specialist (DRB) John Mulhern, Liberal, KS</p> <p>Certified Broadcast Television Engineer (CBTE) Lawrence Enroth, Joshua Tree, CA - Chapter 131</p> <p>Certified Broadcast Networking Technologist (CBNT) Don Bohrer, Helotes, TX - Chapter 69 Arthur Mistretta, Murrieta, CA - Chapter 131 John Mulhern, Liberal, KS</p>	<p>Certified Broadcast Technologist (CBT) Joshua Bohn, Chelsea, AL - Chapter 68 Sajjad Hussain, Regina, SK, Canada Michael Ridley, Welland, Ontario, Canada Rufus Smith, Nolensville, TN - Chapter 103 Jeremy Wilkinson, Bowling Green, KY - Chapter 103 Shannon Wilson, Mount Pleasant, SC - Chapter 107</p> <p>Certified Television Operator (CTO) Jamil Barrett, Los Angeles, CA Sandra Carter, Chadburn, NC Terrell Freeman, Dallas, GA Eva Hern, Kemah, TX - Chapter 105 Certified Radio Operator (CRO) Friend Weller, Logan, UT - Chapter 62</p>



Want to be a mentor or a mentee?

Mentor Program

The SBE Mentor Program pairs an experienced broadcast engineer with someone who is a newer broadcast or multimedia technology professional. The SBE Mentor Program provides a means for SBE members to share knowledge and experience.

Want to know more or participate?

sbe.org/mentor

Tune in to the Chapter of the Web
The SBE WEBxtra is usually streamed live on the third Monday of the month. Also watch the replay on our YouTube Channel.



sbe.org/webxtra

NATIONAL MEETING from p. 1

Annual Meeting portion of the program. Opening remarks were delivered from President Pecena, who reviewed the accomplishments of the SBE during the past very challenging year, and provided a look ahead to what the SBE plans to accomplish in 2021. The first half hour of the program was highlighted by the induction of the SBE national officers and six of the 12 national directors (see SBE election results on page 1).

Recognized in that portion of the program was the winner of this year's SBE Membership Drive, Paul Easter, CPBE, CBNT, of Rosenberg, TX, Chapter 105, Houston. Dielectric was recognized for 25 years of support of the SBE through its Sustaining Membership. This year's five Ennes Scholarship winners, and winners of Chapter Engineer of the Year awards by seven SBE chapters were also recognized. Official reports from SBE Secretary Kevin Trueblood, CBRE, CBNT, and Treasurer Ted Hand, CPBE, 8-VSB, AMD, DRB, were delivered, and program updates were made by Steve Brown, CPBE, CBNT, Membership; Ralph Hogan, CPBE, DRB, CBNE, Certification; and Geary Morrill, CPBE, CBNE, Education; who chair those committees.

SBE National Awards

The program then shifted to the presentation of the annual SBE National Awards. These included awards to chapters, individual members and one Sustaining Member company. Chapter 115, Southern Idaho, and Chapter 131, Inland Empire, CA, were recognized for having the greatest percentage of SBE certified members. Chapter 106, Florida Panhandle, and Chapter 103, Nashville, were recognized for having the greatest percentage of membership growth. Awards for the highest percentage of member attendance at chapter meetings went to Chapter 112, Western Wisconsin, and Chapter 69, Alamo Area, TX. Chapter 37 of Washington, DC, was recognized with the award for Best Regional Educational Event for its NextGen TV Summit. SBE Sustaining Member company MultiCAM Systems received the SBE Technology Award for its AirBridge product.

A special surprise presentation of the John H. Battison Award for Lifetime Achievement was made to Mark Persons, CPBE, AMD, CBNT, of Brainerd, MN, Chapter 17, Twin Cities. Persons is retired from a long broadcasting career, most of it spent op-



Persons

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erating his own contract engineering firm.

There were two winners this year of the James C. Wulliman SBE Educator of the Year Award. Fred C. Baumgartner, CPBE, CBNT, of Elizabeth, CO, Chapter 48, Denver, was recognized for his work organizing and presenting the SBE NextGen TV tutorial that took place as part of the PBS TechCon program in 2019. Roland Robinson, CBTE, CTO, CBNT, of Tacoma, WA, Chapter 16, Seattle, was recognized for his work as an instructor at Bates Technical College, an SBE Certified School.

The Robert L. Flanders SBE Engineer of the Year Award was presented to Robert J. (RJ) Russell, CPBE. Russell operates Technical Broadcast Solutions, Inc., a

broadcast technology consulting firm, and also serves as the SBE Frequency Coordination Manager. He has been instrumental in the SBE work to coordinate use of broadcast auxiliary spectrum with co-user, the U.S. Department of Defense.

The final awards of the evening were to the two members elevated to the SBE Fellow rank of membership in 2020. Ralph Beaver, CBT, of Tampa, FL, Chapter 39, Tampa Bay, was the first recipient. Beaver operates Media Alert and has served for the past ten years as the manager of the event frequency coordination program of the National Football League. James Leifer, CPBE, of Tewksbury, MA, Chapter 11, Boston, is senior manager of broadcast operations for American Tower Corporation. He is immediate past president of the SBE, a member of the SBE Executive Committee, and served this past year as chair of the SBE Nominations Committee.

Our thanks to the SBE Sustaining Members that sponsored the SBE Annual Membership Meeting and National Awards Presentation webcast. Please consider them when making your broadcast equipment and services purchase decisions.



Baumgartner



Robinson



Russell

sbe.org/youtube



Ennes Educational Foundation Trust Awards Five Scholarships

The Ennes Educational Foundation Trust has awarded five scholarships for 2020. The recipients were chosen from applications received by July 1, 2020, from the previous 12 months.

The Harold E. Ennes Scholarship, Robert D. Greenberg Scholarship, John H. Battison Founder's Scholarship and newly created Gino Ricciardelli Scholarship are awarded to individuals interested in continuing or beginning their education in broadcast engineering and technology. The Youth Scholarship is specifically for a graduating high school senior interested in broadcast engineering as a career. Each scholarship awarded this year is for \$2,500.

This year the Harold E. Ennes Scholarship recipient is Chris Gamelin of Middletown, CT. His goals in broadcasting continue to evolve as he feeds his hunger to learn. His professional work began with an internship at WQUN-AM. Since then, he has worked for iHeartRadio and Entercom Communications, and is now a maintenance technician for WFSB-TV.



Gamelin



Sanelli

Receiving the Robert D. Greenberg Scholarship is Jon Sanelli of Albertson, NY. He has worked on the engineering and production side in the New York City market at WRHU Radio Hofstra University, in addition to broadcast facilities in the five boroughs and the Tri-state. Jon knows that broadcasting needs technology, but more importantly, it is people that make the industry shine.

The John H. Battison SBE Founder's Scholarship has been awarded to Ismail Otu, CRO, CTO, originally from the Bronx, but now living in Charlotte, NC. He graduated from The Broadcasting Production Technology



Otu

Program at Central Piedmont Community College (CPCC) in Charlotte. Ismail plays several critical roles during live events and concerts for CPCC's performing arts and events facilities. He plans to attend The Cleveland Institute of Electronics and major in Broadcast Engineering/Wireless Communication Electronics to pursue a career in broadcast operations.

The Gino Ricciardelli Scholarship, created earlier this year in recognition of Gino Ricciardelli, an SBE Charter, Life and Fellow member who died in 2018, has been awarded to Sadie Levy of New York, NY. She currently attends Northeastern University in Boston, where she is majoring in electrical and computer engineering, with a focus on media production. Sadie graduated from Fiorello H. LaGuardia High School of Music & Art and Performing Arts. While in high school, Sadie was awarded scholarships to study digital electronics in pre-college programs at both The Cooper Union and New York University. Last summer, Sadie completed a media internship in a New York City government office, and this summer she completed a media/design internship at ATEM NYC.



Levy

ENNES EDUCATIONAL FOUNDATION TRUST™

Isaiah Dickson of Brookhaven, PA, received the Youth Scholarship. Isaiah is entering his freshman year at Cabrini University. He will major in digital communication and social media. His work has been recognized by the Population Media Center and the Scholastic Art and Writing Awards. In his spare time he enjoys filming and editing his own videos, writing poetry, writing music, and live streaming.



Dickson

SBE President Wayne Pecena, CPBE, 8-VSB, AMD, DRB, CBNE, said, "The SBE has an ongoing focus on education, and the Ennes Scholarships are yet another piece of the overall education effort. We look forward to seeing the great progress of these five budding engineers as they further their education goals with the assistance of the Ennes Educational Foundation Trust."



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LEGAL PERSPECTIVE

By Chris Imlay, CBT
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6.5 and 7 GHz: Let's Let the Courts Decide

When we last visited this subject, the FCC had released its Report and Order and Further Notice of Proposed Rulemaking in Docket 18-295, deciding to permit unlicensed 5G Wi-Fi devices and other unlicensed broadband devices in the 1200 megahertz of spectrum in the 5.925-7.125 GHz (6 GHz) band. In the BAS 6425-6525 MHz and 6875-7125 MHz bands, lower powered, indoor-only unlicensed operation would be permitted without any automatic frequency control circuitry required. The combination of lower power (30 dBi EIRP as opposed to 36 dBi for outdoor devices) and indoor operations would, the FCC said, protect licensed services operating on these frequencies from harmful interference.

Not so fast, FCC. A series of requests to stay the effective date of the new rules adopted in this proceeding were filed and promptly denied by the FCC, triggering a series of appeals to the United States Court of Appeals for the District of Columbia Circuit, challenging the fundamental elements of the FCC's decision and arguing errors in the process. Let's take a look at a few of these. The Court of Appeals has consolidated these cases, and they are being briefed now.

The first to appeal to the Federal appellate court was APCO, on behalf of the public safety and government licensees in this band. APCO claims that the FCC failed to address the potential impact on public safety communications, as required by the Communications Act of 1934. APCO notes (as did the SBE in its comments in this proceeding) that there is no effective way to prevent consumers from using low-power indoor Wi-Fi devices on balconies, rooftops, in moving vehicles, or anywhere else, and there is no means for licensees suffering interference to quickly require the Wi-Fi devices (assuming they can even be identified) to be shut down. APCO's stay request during the reconsideration period was based on the likelihood for harm if uncontrolled numbers of these RF devices (estimated to be in the billions) are allowed to flood the market before interference controls can be put in place. Of course, the tech companies oppose APCO's petition, arguing that there is great consumer demand for additional WiFi capacity, and in any event, interference is unlikely until consumers have purchased a large number of devices.

AT&T and the Edison Electric Institute (EEI) have also appealed the FCC's decision to the Court of Appeals. EEI's argument is similar to that of APCO, but it also claims that the FCC relied on computer simulations to support its view that interference is unlikely, without any real-world testing to validate the assumptions underlying the theoretical analyses. AT&T said that while it supports the use of the band for Wi-Fi expansion, any new use must protect incumbent services, which in AT&T's case includes tens of thousands of microwave links critical to maintaining network infrastructure. An AT&T statement said that the FCC order does not do that. AT&T said that by failing to require that new Wi-Fi devices using this band include smart technology that avoids interference, the FCC order will allow the introduction of devices that can impair, or even knock out, links in the networks that monitor the electric grid, enable first responders to communicate and provide mobile broadband services to millions of Americans, particularly in rural areas. AT&T also made a point that the SBE has made for years: that the FCC has no plan

to mitigate the interference when it inevitably occurs. Once millions of these new unlicensed devices are released and in use, it will be impracticable, if not impossible, for the FCC to identify and remove specific devices causing interference.

Continuing the Argument

The Utilities Technology Council (UTC), together with the American Public Power Association and the National Rural Electric Cooperative Association also asked the Court of Appeals to overturn the FCC's April 2020 decision. The UTC claimed that utilities and public safety entities use the band for mission-critical communications, and that interference from new unlicensed users will likely degrade and diminish these critical communications, potentially threatening life and safety. The UTC said that though the FCC was obligated to act deliberately and carefully, the decision was approved without any proof or evidence that existing critical-infrastructure and public-safety communications will not be disrupted. The UTC claims that existing users of the 6 GHz band offered "study after study demonstrating that the FCC's plan was flawed and needed to be revised" to determine interference potential.

Perhaps of most direct interest to broadcasters, the NAB filed its own Petition for Review with the D.C. Circuit U.S. Court of Appeals. In it, the NAB notes that the 6 GHz band is currently allocated for licensed use by broadcasters, public safety entities, wireless communications providers and utilities, all of whom use this spectrum to provide important services to the public. It claims that in the Order, the FCC adopted new rules permitting uncoordinated, unlicensed operations across the entire 6 GHz band. The Order, it says, unlawfully fails to protect the large variety of existing licensed users in the band from potential interference arising from this unlicensed use. Television broadcasters in particular have both fixed and mobile operations in the 6 GHz band, which require different protective measures to be adequately insulated from harmful interference. The Order neglects to include proper safeguards for either type of broadcast operation.

The NAB says that the Order is a final agency action that has significant and immediate adverse consequences for the NAB and its members because broadcasters rely on interference-free spectrum in the 6 GHz band for important operations, including those needed for the production of highly-valued news and sports programming. The NAB seeks relief from the Order on the grounds that it: (1) is arbitrary, capricious, and an abuse of discretion; (2) it violates federal law, including, but not limited to, the Constitution, the Administrative Procedure Act, the Communications Act of 1934, as amended, and Commission regulations; and (3) it is otherwise contrary to law.

The FCC is showing no remorse for its decision, and has actively pushed back on these arguments, and it will continue to do so in the Court of Appeals. The FCC's track record is very good in appellate cases in the Court, and those who appeal an FCC decision are seldom rewarded for their efforts. But in this case, the argument that the FCC's policy got ahead of the evidence is potentially a compelling argument. The FCC has a bad habit of making policy determinations first and then finding technical justifications for them. We will see how this ends before too long.



FOCUS ON SBE

By John L. Poray, CAE
SBE Executive Director
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SBE Chapters Adjust During These Restrictive Times

Since mid-March of this year, just about the entire world has been enduring – some areas better than others – a pandemic that just wants to linger on. Most health experts point to a time when a vaccine is readily available before our communities will approach getting back to normal. The pandemic has impacted everyday life in ways that everyone recognizes. Social distancing – including separation from loved ones – wearing masks, working from home in many cases, a shortage of cleaning supplies and some food commodities. Some people have been furloughed from their jobs or lost them all together. By late spring, unemployment in the U.S. had reached levels not seen since the Great Depression.

The pandemic has also had its effect in ways that were less predictable. In the first couple of months when lockdowns were widely in place, we saw a reduction in air pollution in major cities as cars sat idle. Family pets received more attention, many people who hadn't done so previously on a regular basis took walks or rode a bicycle. Many people became much more familiar with their computers, the internet, and Zoom became a household word.

Broadcasters, as they always do in times of disaster, adapted to ensure that news, information and entertainment continued to be provided to the public. Station newsrooms operated with skeleton staffs while on-air talent largely did their shows from their homes. Many still are. Broadcast engineers spent countless hours preparing systems at those homes and adjusted in-studio technology to accommodate the increased remote activity.

For the SBE, many chapters have continued to meet, but have shifted to virtual meetings and some of them have experienced an increase in attendance. That may be due to people having more time to take part, or not having to take the time to travel to the meeting and back, or just a longing to meet with their friends and peers. By my estimate, more than 100 virtual meetings have been conducted by SBE chapters, most using Zoom, over the past six months, bringing hundreds of SBE members together to listen to presentations, share ideas and solve a few problems. Perhaps most importantly, to just spend some time visiting and connecting with friends in the industry.

Be sure to thank your chapter leaders who have taken the time and made the effort to keep your chapter meeting going through these virtual means. Though nothing can take the place of in-person experiences, these virtual meetings have kept us together and provided an avenue to continue to gain knowledge about the technology of the broadcast and media industry. It's likely that when things do get back to normal – or the new normal – that virtual SBE chapter meetings may continue in tandem

with in-person meetings.

Something that has been effected by the reduction of personal contact is the number of new members that have been joining the SBE this year. The number that have joined this year is down about 25 percent over the same period in 2019. We know that the best recruiters of new members are current members. With-

out a monthly opportunity for an in-person invitation during a chapter meeting to join, fewer membership invitations are being extended. If you have visitors attending your virtual chapter meeting, be sure to extend an invitation to join the SBE. It's part of being "all-in" when it comes to one's professional career. They can tap into the many educational resources the SBE provides, the certification program and industry information that helps to keep them up on the latest industry news, trends and developments. They can also share their knowledge, and do

their part to contribute to the betterment of the field of broadcast engineering. Borrowing a popular slogan, whether virtual or in-person, we are all better, together.



What's in a name?

You may have noticed something unusual on the mailing label of your August issue of *The Signal*. Your first name, address and member number were all correct, but you had been given a different last name. Be assured, all is well with your member information at the SBE.

What happened?

Once printed, the SBE mails *The Signal* through the mailing services of a mailing house. The SBE provides a member mailing list, and the mailing house then sorts that list before printing the address on each issue. The data sorting is to make the mailing process more efficient. It seems that in the sorting process, the last name field was not kept in place with the other individual data, resulting in the last-name variation.

The issue has been addressed, and extra steps are being taken to assure it doesn't happen again.

Your member information is fine. There's no need to contact the SBE office to make a correction. The mix-up occurred outside the SBE records, and only affected the one mailing.





ENGINEERING PERSPECTIVE

Intro by Chriss Scherer, CPBE, CBNT
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Adapting Plans for a Pandemic

The world continues to deal with the COVID-19 pandemic in various ways, and broadcast facilities are no exception. In the June issue of *The Signal*, two broadcast engineers shared their individual experiences and business plans to deal with the situation, including the stay-at-home orders issued at that time. While we continue to address the ongoing situation, stations and facilities have implemented and likely updated their plans to ensure ongoing operations and the safety of all employees.

In the 2020 SBE Compensation Survey, conducted during April and May, we asked respondents to indicate if their facilities had any kind of plan in place that was put into use. If a plan existed, we asked what was included in that plan. Specifically, we asked: "Did your station(s) or facility(ies) have an operation plan in place before the COVID-19 pandemic was declared? What did the plan include?"

Figure 1 shows the results of that question. Multiple responses were allowed, and 211 respondents provided a reply.

Likely, it's not surprising that the two highest responses were providing the ability to work from home (for those who can) and using remote login. That has become commonplace for many businesses. While many other businesses had to quickly learn about web conferencing and remote audio/video connections, broadcasting had the advantage that most already used remote contribution to create the on-air product.

About half the respondents noted that they had an alternate facility for on-air operations and an off-site backup of data and media assets. A complete alternate facility is something of a luxury for some operations. For stations that are part of a larger group, an alternate facility might be easier to provide.

Off-site data backup is a step that every operation should implement. It doesn't need to be cloud-based or even connected for automatic archiving. A nightly update to physical media with that media being held off-site is better than nothing. In a real crisis, having some data and assets is certainly better than not having any.

The lowest response from the drop-down options was for stations with an alternate location for business operations. As many businesses have likely seen, this probably is not as critical for continuing operations. Creating the on-air product requires more than the simple basics, but remote access can, in many cases, continue the business operation.

Other Options Explained

In addition to the drop-down replies, we also asked for written answers for other preparations. While 10 percent of the respondents provided a reply, there was some interesting insight to the answers.

One of the more detailed replies covered a lot of ground. It also noted some forethought in planning, albeit not likely for a pandemic.

All shows were brought offsite through the use of codecs and teamware. All business operations, traffic and production were already cloud-based and able to remain online as usual. The facility is fully AOiP so all audio routing, etc. can be handled from offsite. Over and above the normal soap/water and sanitizer we already had, sanitization and cleaning procedures for facilities were put in place immediately to support essential staff that had to remain. Installation of HVAC system air filtration/UVC sterilization equipment had been done first of the year as a measure to prevent the general spread of disease and has been another layer of protection during this situation.

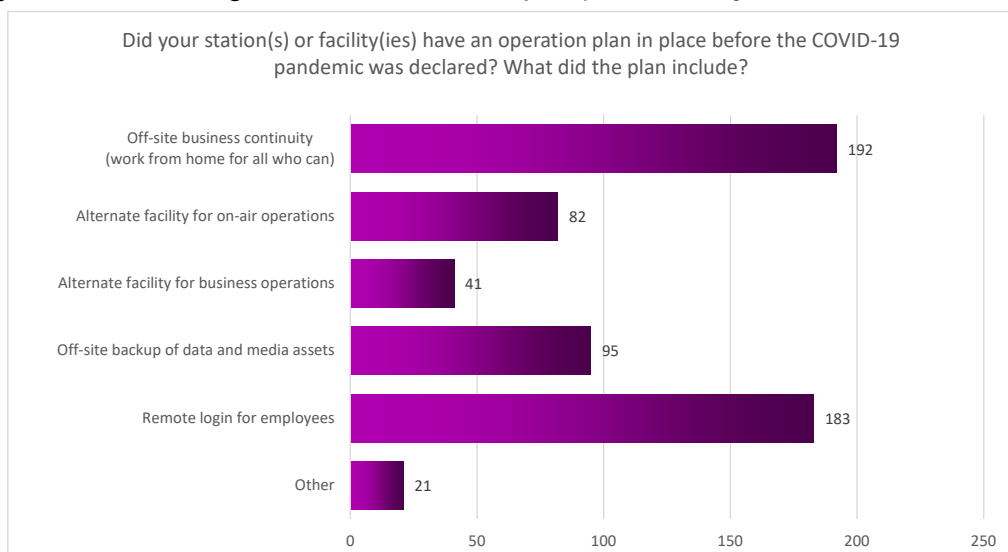


Figure 1. The results of one question from the 2020 SBE Compensation Survey.

Additional replies noted that the IP connectivity already in place for the on-air operation was extended for those who needed it or could work from home. Others already had remote login and off-site data backup in place.

Some replies noted that existing backup plans had been created for other uses, such as a hurricane or other natural disaster. For some, these plans were adjusted for the pandemic response. Some noted that the updates will be added to their master plans going forward. One reply noted that supplies are always in place for any disaster that would keep employees sheltered in place or quarantined for at least a month, including some medical supplies. That respondent added that his facility is equipped for cooking and personal care needs.

It seems the scale of accommodating the entire staff to operate remotely for distancing was not part of many plans. Several noted that additional equipment had to be acquired (bought or borrowed). It also took some time to put all the pieces in place.

One response included a sentiment that I think we can all appreciate: "It's been one helluva year."



Additional highlights from the 2020 SBE Compensation Survey are included in this issue. SBE members can download the report from the SBE Bookstore at no charge as a member benefit.

sbe.org/bookstore

<p>AC Video Solutions • 2014 Andrea Cummis 201-303-1303 Consulting, Systems Design/Integration</p>	<p>DoubleRadius, Inc. • 2012 Jeffrey Holdenrid 704-927-6085 IP Microwave STL</p>	<p>Linkup Communications Corporation • 2017 Mark Johnson 703-217-8290 Satellite Technology Solutions</p>	<p>Ross Video Ltd. • 2000 Jared Schatz 613-228-0688 Manufacturer, Television Broadcast Equipment</p>
<p>AEQ Broadcast International • 2015 Peter Howarth 954-581-7999 Broadcast Audio, Video and Communications</p>	<p>Drake Lighting • 2015 Dave Sheppard 270-804-7383 FAA Obstruction Lighting - Medium and High Intensity</p>	<p>LYNX Technik • 2007 Steve Russell 661-251-8600 Broadcast Terminal Equipment Manufacturer</p>	<p>Sage Alerting Systems Inc. • 2010 Harold Price 914-872-4069 x113 Emergency Alert Systems Products</p>
<p>American Tower Corporation • 2000 Peter A. Starke 781-926-4772 Development/Construction/Management</p>	<p>DTS Inc./HD Radio Technology • 2014 Rick Greenhut 443-539-4335 HD Radio Technology</p>	<p>Markertek • 2002 Adam June 845-246-2357 Specialized Broadcast & Pro-Audio Supplier</p>	<p>SCMS Inc. • 2000 Bob Cauthen 800-438-6040 Audio and RF Broadcast Equipment Supplier</p>
<p>Audemat-Worldcast Systems Inc. • 2000 Christophe Poulain 305-249-3110 Control Manufacturer</p>	<p>du Treil, Lundin & Rackley, Inc. • 1985 Jeff Reynolds 941-329-6000 Consulting Engineers</p>	<p>Micronet Communications Inc. • 2005 Jeremy Vize 972-422-7200 Coordination Services/Frequency Planning</p>	<p>Seacomm Erectors, Inc. • 1997 John Breckenridge 360-793-6564 Tower/Antenna Erections</p>
<p>Belden Electronic Division • 1991 Rose Lockwood 203-500-4743 Fiber and Copper Cabling Infrastructure</p>	<p>The Durst Org. - 4 Times Square • 2004 212-997-5508 TV/FM/Microwave Tower Site</p>	<p>Microwave Video Systems • 2011 Warren J. Parece 781-665-6600 Microwave Equipment Rental, Sales & Service</p>	<p>SEG • 2014 Chris Childs 913-324-6004 Supply Chain Products and Services</p>
<p>Blackmagic Design • 2012 Terry Frechette 408-954-0500 Production Switchers, Digital Cameras, Routers, Video Editing and Monitoring, Color Correction, Video Converters</p>	<p>DVE0 - Division of Computer Modules Inc. • 2011 Laszlo Zoltan 858-613-1818 Everything About Transport Streams</p>	<p>Moseley Associates Inc. • 1977 Bill Goulet 805-968-9621 x785 Digital STLs for Radio and Television</p>	<p>Shively Labs • 1996 Dale Ladner 888-SHIVELY FM Antennas & Combiners</p>
<p>Bracke Manufacturing LLC • 2012 Patra Largent 949-756-1600 RF & Microwave Components</p>	<p>Econco • 1980 Debbie Storz 800-532-6626, 530-662-7553 New & Rebuilt Transmitting Tubes</p>	<p>MulticAM Systems • 2020 Mary Ann Seidler 207-776-5338 Fully automated live video production</p>	<p>Shure Incorporated • 2012 Bill Ostry 847-600-6282 Microphones, Wireless Systems, Headsets</p>
<p>Broadcast Depot • 2018 John Lackness 305-599-3100 TV, Satellite, Radio, IP</p>	<p>ENCO Systems Inc. • 2003 Samantha Bortz 248-827-4440 Layout and Automation Solutions</p>	<p>MusicMaster • 2014 Jerry Butler 352-231-8922 Advanced Music Scheduling Solutions</p>	<p>Sierra Automated Systems and Eng. Inc. • 2011 Al Salci 818-840-6749 Routers, Mixers, Consoles, Intercoms</p>
<p>Broadcast Devices, Inc. • 2015 Robert Tarsio 914-737-5032 Audio/RF Support Products</p>	<p>ERI - Electronics Research • 1990 Zachary Bailey 812-925-6000 Broadcast Antennas, Transmission Line, Filters/Combiners, Towers and Services</p>	<p>Nascar Productions • 2014 Abbey Kielcheski 704-348-7131 Live/Post Production Services</p>	<p>Solid State Logic • 2014 Steve Zaretsky 212-315-1111 Digital Audio Mixing Consoles, Networked Audio Routing, Embedded Audio Solutions</p>
<p>Broadcast Electronics Inc. • 1978 Perry Priestly 217-224-9600 Radio Equipment Manufacturer</p>	<p>Floral Systems • 2008 Shawn Maynard 877-774-1058 Television Broadcast Automation</p>	<p>National Association of Broadcasters • 1981 Industry Trade Association 202-429-5340</p>	<p>Staco Energy Products Co. • 2010 Paul Heiligenberg 937-253-1191 x128 Manufacturer of Voltage Regulators, UPS</p>
<p>Broadcast Software International • 2016 Marie Summers 888-274-8721 Radio Automation, Audio Logging</p>	<p>Fujifilm/Fujinon • 1986 Gordon Tubbs 973-686-2769 Broadcast & Cine Lens Products</p>	<p>National Football League • 1999 Michael Katzenoff 212-450-2368 Game Day Coordination Operations</p>	<p>SuitLife Systems • 2019 Nigel Brownnett 310-405-0839 Manage. Monitor. Control</p>
<p>Broadcast Supply Worldwide • 1986 Shannon Nichols 800-426-8434 Audio Broadcast Equipment Supplier</p>	<p>GatesAir • 1977 Dave Hopson (TV) 513-445-5243 Mark Goins (Radio) 513-899-9124 Broadcast Equipment Manufacturer</p>	<p>Nautel Inc. • 2002 Jeff Welton 877-662-8835 Radio Broadcast Transmitter Manufacturer</p>	<p>Sutro Tower Inc. • 1989 Eric Dausman 415-681-8850 Broadcast Tower Leasing</p>
<p>Broadcasters General Store • 2004 Buck Waters 352-622-7700 Broadcast Audio Video Distributor</p>	<p>Heartland Video Systems, Inc. • 2011 Dennis Klas 920-893-4204 Systems Integrator</p>	<p>Nemal Electronics Int'l Inc. • 2011 Benjamin L. Nemser 305-899-0900 Cables, Connectors, Assemblies and Fiber Optic</p>	<p>Synthax Inc. • 2020 Derek Badala 603-591-6735 Audio Codescs and Converter Solutions</p>
<p>Burk Technology • 2019 Jim Alinwick 978-486-0086 x7404 Transmitter Facility Control Systems</p>	<p>Hilights, Inc. • 2016 Timothy Nash 352-564-8830 Obstruction Lighting Maintenance</p>	<p>Neutrik USA, Inc. • 2012 Kathy Hall 704-972-3050 Ruggedized Optical Fiber Systems</p>	<p>Technical Broadcast Solutions, Inc. • 2018 Robert Russell 215-983-0855 Engineering and Consulting Services</p>
<p>Calrec Audio • 2016 Helen Carr 703-307-1654 Audio Mixing Equipment</p>	<p>Hitachi Kokusai Electric Comark • 2013 Jack McAnulty 413-998-1523 Manufacturer Broadcasting Transmission Equipment</p>	<p>NPR Distribution Services • 2019 Dan Riley 202-513-2624 Your Content Delivery Partners</p>	<p>Televue USA, LLC • 2018 Andy Ruffin 937-475-7255 ATSC 3.0 Transmission Solutions, Antennas</p>
<p>Camplex • 2017 Daniel Coscarella 800-445-7568 x7409 Fiber Optic Cable Assembler</p>	<p>iHeartMedia, Inc. • 2019 Troy Langham 918-664-4581 Radio Group Owner</p>	<p>Orban Labs, Inc. • 2011 Mike Pappas 480-403-8300 Audio Processing AMFMTV</p>	<p>Telos Systems/Omnia/Axia • 2003 John Bisset 216-241-7225 Tels Systems Talk-Show Systems</p>
<p>Canon USA Inc. • 1985 Larry Thorpe 201-807-3300, 800-321-4388 Broadcast Lenses & Transmission Equipment</p>	<p>Indiana Broadcasters Association • 2019 Dave Arland 317-701-0084 Indiana Association for Radio & TV Broadcasters</p>	<p>Pasternack Enterprises • 2001 Christine Hammond 949-261-1920 Coax & Fiber Products</p>	<p>Teradek • 2011 Jon Landman 949-743-5783 Camera-top ENG Solutions</p>
<p>Cavell, Mertz & Associates Inc. • 2011 Gary Cavell 703-392-9090 Consulting Services</p>	<p>Inovonics Inc. • 2012 Gary Lührman 831-458-0552 Radio Broadcast Equipment</p>	<p>Potomac Instruments • 1978 Zachary Babendreier 301-696-5550 RF Measurement Equipment Manufacturer</p>	<p>Tieline The Codec Company • 2003 Dawn Shewmaker or Jacob Daniluck 317-845-8000 Audio Codec Manufacturer</p>
<p>Comrex Corporation • 1997 Chris Crump 978-784-1776 Audio & Video Codescs & Telephone Interfaces</p>	<p>JAMPRO Antennas Inc. • 2011 Alex Perchevitch 916-383-1177 DTV, FM-HD Radio, DVB-T/T2, ISDB-T, DAB</p>	<p>ProAudio.com- A Crouse-Kimzey Co. • 2008 Mark Bradford 800-433-2105 x560 Proaudio Broadcast Equipment Distributor</p>	<p>Unimar Inc. • 2001 Thad Fink 315-699-4400, 813-943-4322 Tower Obstruction Lighting Designer, Manufacturer, Distributor</p>
<p>Continental Electronics • 1976 Dale Dalesio 412-979-3253 TV and Radio Transmitters</p>	<p>JVC Professional Video • 2014 Edgar Shane 973-317-5000 Professional Video Products, Camcorders, Display Monitors, Recording Decks</p>	<p>Propagation Systems Inc. - PSI • 2010 Doug Ross 814-472-5540 Quality Broadcast Antenna Systems</p>	<p>Wheatstone • 2010 Jay Tyler 252-638-7000 IP Consoles, Routers & Processors</p>
<p>CueScript • 2014 Michael Accardi 203-763-4030 Teleprompting Software & Hardware</p>	<p>Kathrein USA Inc. • 1985 Les Kutasi 541-879-2312 Antennas for Broadcasting & Communications</p>	<p>QCommunications • 2019 Tony zumMallen 816-729-1177 Services Behind the Scenes</p>	<p>WideOrbit • 2012 Jim Hammond 415-675-6700 Radio Automation and Playlist</p>
<p>Davicom, Division of Comlab, Inc. • 2014 Louis-Charles Cuierrier 418-682-3380 x512 Remote Site Monitoring and Control Systems</p>	<p>Kintronc Labs, Inc. • 2015 Joaquin Raventos 423-878-3141 Radio Broadcast Antenna Systems - ISO9001 Registered Company</p>	<p>QVC • 2011 Kevin Wainwright 484-701-3431 Multimedia Retailer</p>	<p>Wireless Infrastructure Services • 2006 Travis Donahue 951-371-4900 Repacking Services - West Coast Turnkey Services</p>
<p>Dielectric • 1995 Cory Edwards 207-655-8131 TV & FM Transmission & Cellular Products</p>	<p>LBA Technology Inc. • 2002 Javier Castillo 252-757-0279 AM/MW Antenna Equipment & Systems</p>	<p>Radio Frequency Systems • 2015 Eddy Vanderkerken 214-471-6693 Broadcast Infrastructure Manufacturer</p>	<p>Rohde & Schwarz • 2003 Walt Gumbert 724-693-8171 Transmitters, Test & Measurement, Video</p>
<p>Digital Alert Systems, LLC • 2005 Bill Robertson 585-765-1155 Emergency Alert Systems</p>			<p>Members With 25 or More Years of Membership New Sustaining Members Become a sustaining member. Apply online or call 317-846-9000.</p>

Member Spotlight: Russ Awe

Member Stats

SBE Member Since: 2019
Chapter: 24 Madison
Employer: PBS Wisconsin/
 WHA-TV
Position: Engineering Supervisor/Remote Truck Engineer in Charge
Location: Madison, WI
I'm Best Known For: Meeting everyone with a big smile.

Q What do you value most about your SBE involvement?

A The comradery. Ask a question at an SBE meeting and someone will probably have an answer or a direction in which to go. The friendships with other engineers is very valuable to me.

Q What got you started in broadcast engineering?

A It started in middle school when I was asked to record basketball games for the coaches to review. Add to that, I've always had a curious mind. From there I received an associate degree from Chippewa Valley Technical College and started working at the local cable access channel, where I had to



Russ and his "baby": The PBS Wisconsin remote truck.

know how to do everything. I also started at WEAU-TV in Eau Claire as a part-time camera operator, then was hired-full time as a master control operator.

Q Who do you consider to be a mentor?

A It would have to be Ron Viste and Ron Wiedemeier at WEAU-TV. Also Paul Stoffel, retired SBE 24 member

and co-worker, for always looking for a better way and better quality product for the viewer/listener. They were always ready to help and explain things that I didn't and still don't understand.

Q What do you like most about your job?

A I love working on live TV! Getting all the details figured out beforehand so when that curve ball comes, and they do come, you and your team can handle the challenge and change. Live TV is the best. There is no going back, no editing. I have worked on many football, basketball

and hockey remotes. Living on the live edge and serving the public and viewers.

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

A ...am camping or working on the yard/garden would just take care of itself. One of my goals is to camp at every State Park in Wisconsin. Another goal is to visit every World's Fair city.

ELECTION from p. 1



Cumis



Trueblood



Hand



2020 SBE election Board of Tellers: Chapter 25 members Chuck Kelly, Desi Kelly and Dale Smiley.

The newly elected join the other six directors who have one year remaining in their terms:

- Mark Fehlig, PE, CPBE, 8-VSB; Chapter 40 San Francisco; Walnut Creek, CA
 - Charles "Ched" Keiler, CPBE, 8-VSB, CBNE; Chapter 53 South Florida; Ft. Lauderdale, FL
 - Geary Morrill, CPBE, CBNE; Chapter 91 Central Michigan; Saginaw, MI
 - Jason Ornellas, CBRE, CRO; Chapter 43 Sacramento; Sacramento, CA
 - Chris Tarr, CSRE, AMD, DRB, CBNE; Chapter 28 Milwaukee; Milwaukee, WI
 - Dan Whealy, CBTE; Chapter 96 Rockford; Waterloo, IA
- Jim Leifer, CPBE, of Tewksbury, MA, continues as immediate past president.



Brown



Clark



Fehlig



Harnack



Keiler



McGinley



Ornellas



Morrill



Tarr



Toven



Whealy



Willard

WELCOME TO THE SBE

NEW MEMBERS

Stewart J. Adams - Pierre, SD
 Phillip Bernal - Brick, NJ
 Justin G. Bowker - Saginaw, MI
 Dianne Carter - Beverly Hills, CA
 Andrew J. Christian - FPO, AE

Garrett W. Coons - Lyons, NY
 Dave Doherty - Portland, OR
 Pamela J. Dourm - Cuyahoga Falls, OH
 Timothy A. Dourm - Cuyahoga Falls, OH
 Patrick Downey - Brookfield, CT
 Brian DuBose - Chandler, AZ

Kevin M. Gary - Methuen, MA
 Warren L. Holybee - Portsmouth, VA
 Jose D. Jimenez - Odessa, TX
 Constance T. Kell - Portland, OR
 John F. Leenerts - Louisville, KY
 David G. Lopez - Rosharon, TX

Cleve E. Massey - Weatherford, TX
 Francis C. McGuire - Gaithersburg, MD
 Jeffrey K. Oestreich - Harrisburg, IL
 Jessica D. Shute - Ocala, FL
 Reiss L. Wilson - Missoula, MT

NEW ASSOCIATE MEMBERS

Frank J. Pekoc - Cleveland, OH

Aaron Andrus - Athens, PA
 SeVern L. Ashes, Sr. - Vermillion, SD
 John R. Barnett - Spokane Valley, WA
 Charles Contreras - Culver City, CA
 Josh A. Crawford - Midway, FL

RETURNING MEMBERS

Mohanad A. Faisal - Syracuse, NY
 Lance B. Feder - Loveland, OH
 James N. Feld - Culver City, CA
 Greg W. Gutierrez - Tucson, AZ

Kelvin Howard - Midway, FL
 Sajjad Hussain - Regina, SK Canada
 Paul Lawicki - Holland, OH
 Frank G. Long - Tallahassee, FL
 Devin T. Smith - Odenville, AL

Chapter Check

Chapters Present Their Chapter Engineer of the Year Awards

Chapter 15 New York City ▶
 Louis Libin



Chapter 17 Minneapolis ▼
 Harold Schardin, CPBE, CBNT, posthumously. Award accepted by Patty Schardin and their sons Tim and David

Chapter 37 District of Columbia ▼
 Dave Kolesar, CBT



Chapter 16 Seattle ▼
 Michael Brooks, CBRE (right), with Chapter Chair Dave Ratener, CPBE, CBNT



Chapter 70 Northeast Ohio ▼
 James Georgiades



Chapter 38 El Paso ▼
 Noe Rodriguez-Jimenez (right) with Chapter Chair Jose Castro



Chapter 80 Fox Valley ▼
 Martin Jury (left) with Chapter Chair William Hubbard, CPBE



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MEMBERS ON THE MOVE



◀ **Linda Baun**, an SBE Fellow, has retired from her position with the Wisconsin Broadcasters Association.

▶ **Mark Simpson**, CPBE, DRB, AMD, CBNE, is chief engineer at Cumulus Media, Tucson, AZ.



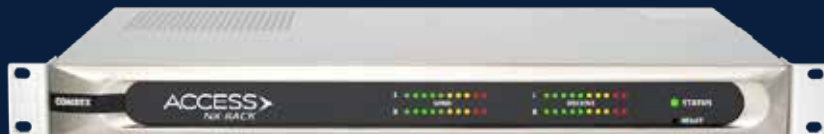
◀ **George White**, CBNE, is a broadcast engineer with Science Applications International Corp., which works for the EPA, Washington, DC.

Ray Fodge is a field engineer II with EMF Broadcasting, Mesa, AZ.

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 WEBxtra online						
Oct. 19, 2020 sbe.org/webxtra						
SBE Certification Exams Local Chapters						
Nov. 6-16, 2020 sbe.org/certification						
Application deadline closed						
SBE WEBxtra online						
Nov. 16, 2020 sbe.org/webxtra						
SBE WEBxtra online						
Dec. 21, 2020 sbe.org/webxtra						
SBE Certification Exams Local Chapters						
Feb. 5-15, 2021 sbe.org/certification						
Application deadline Dec. 31, 2020						
SBE Certification Exams Local Chapters						
June 4-14, 2021 sbe.org/certification						
Application deadline April 16, 2021						
SBE Leadership Development Course Atlanta						
Jun 8-10, 2021 sbe.org/lcd						



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