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-logoed merchandise from the SBE Store. On Sunday, Monday and Tuesday, the SBE held a daily booth drawing for a $200 Amazon gift card.

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
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

Certification Question

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.
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, 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.

——— sbe.org/lifetime ———

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 ———
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 interleafing 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 regardless 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

Oct. 9: 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 Oroz at the SBE National Office at 317-846-9000 or coroz@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 personal growth, to maintaining a certain proficiency and to expanding a knowledge base and skill set through continuing education. Recertification is not a pro forma 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.

CQ 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.

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.
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, with the main prize being a BlackMagic Design Studio Camera 4K Pro. The first 125 people in the door received an SBE-logoed 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 National 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 jragsdale@sbe.org or 317-846-9000.
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
Report and Order and FNPRM
FCC Rule Section 1.929
tinyurl.com/dwtpw55r
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 broad-casting. 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 working hard to organize local meet-ings, 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 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 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 meet-ings, 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-

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 with 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 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...
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.

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 wanted 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.
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 short-age 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...
A. ...work my hobbies: satcom, ham radio, commercial radio and computers.

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.

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

<table>
<thead>
<tr>
<th>ASSETS:</th>
<th>2021 SBE Revenue &amp; Expense Statement</th>
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<tr>
<td>Cash and cash equivalents  $327,607</td>
<td>INCOME:</td>
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<tr>
<td>Investments 1,361,822</td>
<td>Membership Fees &amp; Support $348,545</td>
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<td>Property &amp; Equipment, Net 40,039</td>
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<td>Intangible Assets, Net 480</td>
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<td><strong>Total Assets</strong> $1,729,948</td>
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<td><strong>LIABILITIES and NET ASSETS:</strong></td>
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<td>Liabilities $18,359</td>
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<td>Net Assets 1,711,590</td>
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<td><strong>Total Liabilities &amp; Net Assets</strong> $1,729,948</td>
<td>Frequency Coordination 628,337</td>
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<td>Contributions 2,439</td>
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<td>Net Investment Return 96,859</td>
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<td><strong>Total Revenue</strong> $1,345,712</td>
<td><strong>Total Expenses</strong> $1,030,886</td>
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**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 Aimerson - Tulsa, OK
Galen W. Azbel - Rhinelander, WI
Michael J. Barber - Tulsa, OK
Sulaiman K. Bastien - Laurel, MD
Jason R. Bender - Rapid City, SD
Michael Cohen - Albany, NY
Marc Benaffi - Rochester, MN
Jacob Bronson - Austin, TX
Bryan A. Carr - Reno, NV
Kristian Cerrone - Tulsa, OK
Peggy Hunt - Chandler, IN
Alyson Cox - Thousand Oaks, CA
William G. Gratsch - Cocoa, FL
Hayden R. Armstrong - Davis, CA
Yvon Dorcinvil - Lauderhill, FL
Nick Divakar - Las Vegas, NV
Michael D. Dela Cruz - Quezon City, Philippines
Katelyn M. Daugherty - Warren, OH
Christopher C. Craig - Montpelier, VT
Kristian Cerrone - Albany, NY
Bryan A. Carr - Reno, NV
Jacob Bronson - Austin, TX
Michael Bohen - Albany, NY
Michael J. Barber - Tulsa, OK
Galen W. Azbel - Rhinelander, WI
[...]

NEW STUDENT MEMBERS

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

NEW ASSOCIATE MEMBERS

Allyson Cox - Thousand Oaks, CA
Peggy Hunt - Chandler, IN
Moriah J. LeFlore - Bonsall, CA
Joseph L. Myers - Lexington, SC

RETURNING SENIOR MEMBERS

Edwin A. Bukont - Gallatin, TN
Paul G. Dugay - Shoreline, WA
Shan Easterling - Tupelo, MS
Donald J. Eastman - Bowling Green, KY
Trevor J. Eisenman - Kearney, NE
Kyle Effer - Talent, OR
John C. Faulkner - White House, TN
Adam Fuller - Elizabethtown, KY
Michael P. Gerring - Lynchburg, VA
Daniel M. Glavins - Mansfield, MA
Chaim J. Goodman - Weston, CT
Michael W. Graebner - Parkville, MD
Robert T. Green - Streetsboro, OH
Ky Gustafson - Berkeley, CA
Donovan R. 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

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.
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.

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

Mark Your Calendar

<table>
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<th>M</th>
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<td>Local Chapters</td>
<td>June 3-13, 2022</td>
<td>sbe.org/certification</td>
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<td>Application deadline June 10, 2022</td>
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<td>Aug. 3-5, 2022</td>
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<td>SBE Election Ends</td>
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<td>sbe.org</td>
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