SBE Re-Elects Andrea Cummis as President

The results of the 2022 SBE election for the national board of directors are in. Andrea Cummis, CBT, CTO, was re-elected as the society's president. Cummis is the chief technical officer of PBS39/WLVT-TV, in Bethlehem, PA, and a member of SBE Chapter 15 in New York City. She is the first woman to be elected to hold the office. Also re-elected was Vice President Ted Hand, CPBE, 8-VSB, AMD, ATSC3, DRB, of Chapter 45 Charlotte; Charlotte, NC. Ted also begins his second term.

SBE Secretary Kevin Trueblood, CBRE, CBNT, (Chapter 90 Southwest FL; Ft. Myers, FL), and SBE Treasurer Jason Ornellas, CBRE (Chapter 43 Sacramento; Sacramento, CA), ran for each other's offices and swapped duties when they were sworn in on Sept. 29 at the SBE National Meeting, Trueblood becoming treasurer and Ornellas becoming secretary.

Board of Directors

Serving two-year terms on the board of directors, which also began Sept. 29 are:
• David Antoine, CBRE, CBNT; Chapter 15 New York; Bronx, NY

• Greg Dahl, CPBE; Chapter 96 Rockford; Rockford, IL
• Mark Heller, CPBE; Chapter 80 Fox Valley; Two Rivers, WI
• Tom McGinley, CPBE, AMD, CBNT; Chapter 16 Seattle; Missoula, MT
• Shane Toven, CPBE, DRB, CBNE; Chapter 43 Sacramento; Antelope, CA
• Fred Willard, CPBE, 8-VSB, CBNT; Chapter 37 District of Columbia; Washington, DC

McGinley, Toven and Willard were incumbents and were re-elected.

Cummis

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 nearly 5,000 members. Those elected began their terms on Sept. 29, 2022, during the SBE Membership Meeting. They join the other six directors who have another year re-

SBE Renews Frequency Coordination Agreement with Department of Defense

The SBE creates working alliances across industries to coordinate RF spectrum. For many years now, the SBE has worked with the U.S. Department of Defense (DoD), which was provided co-primary status with broadcasters in the 2025-2110 MHz Broadcast Auxiliary Spectrum (BAS) band as a result of the Advanced Wireless Services-3 (AWS-3) transition.

The DoD has deployed a number of training systems that use the spectrum shared with broadcasters, which is critical for ENG. The SBE has worked with the DoD on coordination efforts to prevent or at least reduce interference to both groups.

As SBE members know, the SBE has for many years facilitated a network of volunteer frequency coordinators, most through our local chapters, across the United States and its territories. Though the majority of the country is covered by this network of volunteers, there are markets where no coordinator currently exists.

The DoD systems are located at installations of all the military branches, including the National Guard and reserves. These installations are ubiquitous and located in urban and rural areas. The DoD, with the endorsement of the NAB, asked the SBE to employ a national frequency coordinator, paid for with DoD funds, who would work with our established volunteer coordinators and cover the areas that don't have their own local coordinator.

The SBE Board of Directors submitted a proposal to the DoD through a primary contractor to provide national frequency coordination services that will mutually serve the needs of the DoD and broadcasters. That initial proposal was accepted in May 2019, and the program officially began in June 2019. The agreement was recently extended for an additional three years.

In 2019, the SBE hired the broadcast consulting firm of Technical Broadcast Solutions, Inc. (TBSI) of Magnolia, DE. Its prin-

cipal is RJ Russell, CPBE, ATSC3, a senior member of the SBE. TBSI is heavily involved in ATSC 3.0 implementation work for clients and has made the SBE a major client to serve as the national SBE frequency coordination manager (FCM). RJ and others were involved in working with DoD officials and the NAB to develop a workable solution for this shared spectrum.

Upgraded LED Lighting at a Fraction of the Cost

ALL-IN-ONE LED RETROFIT PACKAGE

Brightline is offering a custom, all-in-one LED retrofit package for existing Brightline S1.2 or S1.4 fluorescent light fixtures for a limited time.

SAVE MONEY
Retrofit fixtures at just **25%** of full fixture cost replacement and start saving on energy costs with efficient LED lights

RICHER COLOR
Delivers higher colorization and richer color saturation: **97 CRI** at 5600K

LONGER LIFE
Extend the life of your existing fixture by an additional **50K hours**

EASY DIY KIT
Everything you need, including tools, is included. Complete in just minutes! Short "How To" video makes it easy: **Brightline Fluorescent to LED Retrofit Kit**

DISPOSAL REFUND
Return your old fluorescent lighting back to us with free shipping and receive a **$75 refund** as our thanks

UPGRADE
To brilliant LED lighting with our retrofit package.

AVOID
Lengthy disruptions to your on-air time.

SCHEDULE
Upgrade to LED on your schedule.

Be a Part of the Growth: Participate in the SBE Mentor Program

The SBE Mentor Program is proud to see growth in participation in 2022 year with more than 100 participants. The SBE looks forward to the year ahead, which includes some major enhancements to the program. Even with increased participation, new participants are welcome, both mentors and mentees. Be a part of the growth: Participate in the 2023 Mentor Program.

Do you know someone who would benefit from mentorship? Make a recommendation by contacting Education Director Cathy Orosz at corosz@sbe.org or complete a Mentor Program application.

Do you have an expertise you would like to share? Anyone who meets the qualifications can be an SBE mentor. What does it take to be an SBE Mentor?
• Current SBE member
• Value the organization, its mission and its work.
• Currently in the profession of broadcast engineering.

• Minimum of five years working in the profession.
• Desire to help others grow and excel in their careers.
• Positive attitude toward the profession and learning.

Watch for special announcements in 2023 for new mentor levels.

Want more information? Find it and the program applications at sbe.org/mentor.

CQ   Certification Question

SBE CERTIFIED

The layers Physical, Data-Link, Network, Transport, Session, Presentation, & Application are associated with which networking model?

A. Internet Engineering Task Force (IETF) RFC 1918
B. Open Systems Interconnection (OSI)
C. Institute of Electrical and Electronics Engineers (IEEE) 802.3
D. Department of Defense (DoD) TCP/IP

Another Year, and the Work Continues

Hello SBE members. I hope you had a great summer. Thanks to all of you for re-electing me to be president for another term! It's such an honor to be your president. I feel like I got a late start on things for my first term since we were still meeting virtually last year because of Covid, so I'm happy to have another year to make some exciting things happen.

I'd also like to thank NYC Chapter 15 for naming me the chapter engineer of the year. That was unexpected. I really appreciate the support from my local chapter. And in an even bigger surprise, the National Awards Committee selected me as the 2022 Robert W. Flanders SBE Engineer of the Year! I can't thank you all enough for this award, it's such a great honor to be recognized by your peers. These awards made my summer really special.

On a personal note, thanks to everyone who read my August column, and especially to the people who sent really nice comments afterwards; I really appreciated those notes.

Future Plan

In the past, the SBE has developed its strategic plan by inviting chapters to send representatives to an all-day or weekend meeting. We are trying to involve the whole membership in the first round of planning by inviting everyone to participate in an online survey. Hopefully you have responded to the survey. We want to know how you think we are doing. Is there anything we can do better? Are there other ways we can help our members? Would you be willing to participate in a virtual strategic planning meeting? Please let me know what you think. If you didn't respond to the survey, send an email to me at president@sbe.org with any thoughts or comments.

I'm glad that so many of you were able to join us at the SBE National meeting in Liverpool, NY, in September. This was our first in-person awards reception and dinner in three years. It was great to be together with so many members and supporters of the SBE in person again. Congratulations to all the 2022 award winners!

Speaking of getting back into the swing of things, the Education Committee is in the planning stages of a pre-NAB Show technical program. It is working with potential partners on a venue, schedule and tutorial program. A lot has changed around the spring NAB Show. It's going to take some creativity and effort to put together a quality program we can be proud of.

Preliminary discussions are about two tracks. RF 101, especially for those more IT-oriented, and a NextGen Broadcast/ATSC 3.0 track leading to an SBE ATSC3 Specialist Certification. (SBE Specialist Certifications require holders to first possess an SBE engineering-level certification). The education committee is working with the certification committee to align the tutorials with certification requirements, and to make the learning and testing experience as stress-free and as time and cost efficient as we can.

While this is 200 days away, I'd like to suggest that you budget and plan for an early NAB Show arrival. Right now, the team organizing this is considering planning for a two-day program, starting Friday, April 15, 2023. We expect the 2023 NAB Show exhibits to open on Sunday as they did in 2022.

The SBE has traditionally focused on high-value, in-person, tutorial experiences. In the past, our tutorials adjacent to the NAB Show have proven to be as convenient and economical as in-person learning can be. Hopefully, your management will agree. It's never too early to bring these kinds of training opportunities up with your leadership. The SBE team is already exploring room options and working to secure sponsorships. I hope many of you will be able to join us for this program and our other events in Las Vegas next April at the 2023 NAB Show.

Image: freepik.com

Take the SBE Strategic Planning survey. Scan the QR code or go to surveymonkey.com/r/SBEStrategy
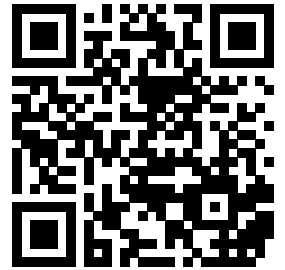
Group Seeks to Form SBE Chapter in Republic of Georgia

Earlier this year, the SBE was contacted by Davit Robakidze, a broadcast engineer in the Republic of Georgia, about working with the SBE to provide SBE member benefits to broadcast engineers in Georgia and surrounding countries. The SBE was able to meet with Robakidze at the 2022 NAB Show to discuss ideas and establish a practical plan.

Discussions continued over the summer, and a course of action has been established. Ten engineers in the Republic of Georgia have become SBE members, and many of them are noted in the new member list on page 15 of this issue. The group has already incorporated in the Republic of Georgia as the Incorporation of Eastern Europe Broadcast Engineers (IEEBE). The intent is to form the first SBE chapter in that country. As per SBE by-laws, the group held organizational meetings on Sept. 15, 16 and 19. Chapter officers were elected at those meetings.

The slate of officers: Chair Davit Robakidze, Vice Chair Zurab Gegenava, Secretary/Treasurer Nino Koberidze. The group is applying

Robakidze   **Gegenava**   **Koberidze**

Assisting the Handicapable Engineer

The Education Committee is undertaking a survey that could have far-reaching benefits for some of our current membership, as well as future membership. Spearheading the initiative is committee member Len Watson, CPBE. Len and I recently chatted about what we're looking to accomplish, and what the longer term implications may be.
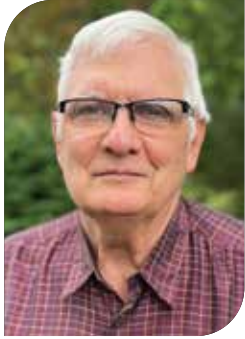
Watson

Geary: Len, if you can think back, what prompted you to bring this to the attention of the SBE Education Committee?

Len: Primarily because I'm a mentor. About three years ago, my mentee had some physical disabilities that limited his availability. We still stay in touch, and he's an SBE member. As we got to talking, I started thinking about my experiences with AoIP infrastructure and I realized there were a lot of things he could be doing from another location (perhaps home), providing a valuable service to stations. He said, "I'd love to do something like that, but here's what you have to look at..." And that's what triggered my reaching out to SBE Education Director Cathy Orosz and the Education Committee to explore what our next steps might be. First, to explore who in our membership may have similar challenges in staying actively employed, and beyond that, what might manufacturers be able to do to enhance their opportunities. That's the back story in a nutshell. It all started with a conversation with a mentee about his challenges and looking to help him get "over the hump" on them.

Geary: So he's actively working in the industry now and obviously looking for more opportunities.

Len: And we know he can't be the only person with that type of situation. That really got my wheels turning. I mean, I'm dealing now with a bit of a messed up knee, which isn't hindering me much, but I personally know three or four guys who are having challenges getting around to one extent or the other, and they would love to be able to either work from home or explore what other opportunities might exist. Then consider what it's like physically going into a small facility that may have never even heard of the Americans with Disabilities Act. You've got to go up several steps to simply get to the studios, and then down an equal number just to get to the transmitter room, and then there's a narrow hallway and all the rest. What might be done to accommodate these technically capable folks?

What is the size of this group? Are there only two or three? By circulating this survey and encouraging participation (both within and outside SBE membership) we'll have a good idea. My guess is we're going to find a lot more than we suspect.

Geary: And as we discussed, much of our technology is heading towards expanded remote access

Len: So much of what we're doing and where we're heading is virtualized and remote accessible. Consider a situation where we're relocating a group of stations that are going to require 100% reconfiguration. You'll want to configure all the AoIP equipment remotely in advance, to make the swap quicker. So, if you have someone you can call on and say "here are all my blades, and make them accessi-ble" - that person can set them up exactly as they're needed.

They can do that from home, and maybe they're doing it from a wheelchair. It really doesn't matter because the job gets done.

Geary: So our first step in the process is rolling out a survey (the link is below) to scope out what our membership may be looking for, and what challenges they may be dealing with, right?

Len: That's the first part. Another part is going to be taking this info to manufacturers for their consideration and input. And there's a third consideration. There are non-SBE members out there who may be positively impacted in our efforts on this, and may want to become involved also.

Geary: I can envision state broadcaster associations and state agencies benefiting.

Len: I know you wouldn't want to release the survey information under HIPPA, but if this results in a disabilities program they can take to their constituents...

Geary: So how will you gauge its success, Len?

Len: I think if we can get responses from folks participating in the survey, and as a result of our outreach be able to help them connect with opportunities so these folks who may not have had a future in our industry now do, or to help those who were forced to leave due to challenges find a path back to productive employment. If those needing technical help can get the job done, I'm confident they'll be agnostic about who is helping make that happen.

So that's the impetus. The survey link is below, or capture the QR code. If you have challenges personally, please participate. No one will have access to personally identifying information. If you know of others (SBE members or not) who may benefit, please share the link with them.

We'll keep you apprised of the project as it proceeds. It has the potential to be a great benefit to both our membership and the industry as a whole. And everyone loves a win-win.

Calendar Update

You'll want to keep April 15, 2023, open for an SBE educational opportunity just ahead of the 2023 NAB Show. More details will be shared as they develop. Watch this space and all the SBE channels.
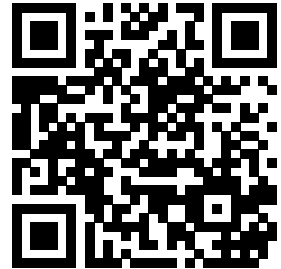
Take the disability survey. Scan the QR code or go to surveymonkey.com/r/SBEDisability

Education Almanac

Webinars by SBE

Oct. 20: Introduction to Successful Troubleshooting Module 2

——— *sbe.org/webinars* ———

SBE Ennes Workshops

Oct.6: Richmond, VA
Oct. 22: GABCON, Atlanta
Dec. 7: Michigan Assoc. of Broadcasters
Contact the SBE to arrange an SBE Ennes Workshop in your area.

——— *sbe.org/ennes_workshop* ———

Webinars by **SBE**

CERTIFICATION UPDATE

By Megan Clappe
SBE Certification Director
mclappe@sbe.org

SBE Certification Begins at the Local Chapters

The SBE Certification program wouldn't work without our local chapters and local Certification Chairs. Many chapters have taken it upon themselves to recognize, encourage and even reimburse their members for obtaining SBE certification. We spoke to some chapters who do that. Perhaps there are steps you can take in your chapter to encourage your members to become SBE certified.

What is your chapter doing to encourage members to become SBE-certified? Let me know.

Britt Lockhart, CPBE
Certification Chair, Chapter 85 Central Western Oklahoma

In honor of the late Chester Grubbs, a founding member and our first Certification Chair, Chapter 85 has a program that reimburses certification applicants for their certification expenses. Alexis Grazdan is the most recent recipient of this chapter benefit. The chapter also presented Alexis with SBE pins for each of her certification levels.

Alexis successfully passed three certifications, CTO, CBT and CBNT, in just two months. Alexis is the evening news engineer at Fox-affiliate KOKH in Oklahoma City. KOKH/KOCB Director of Engineering and Operations Steve Bottkol says of Alexis; "She started at the station as a part-time employee with our lifestyle department, and then moved over to our master control department working full time. She quickly became one of our top MC operators and helped write troubleshooting techniques for our operators. She then inquired about engineering and started to shadow other engineers. When a position opened she was promoted to the engineering department. She is an integral part of the team and we're glad she's with our team."

Photo: Chapter Chair Brian Ryel, CBTE; Alexis Grazdan, CBT, CBNT, CTO; Chapter Certification Chair Britt Lockhart, CPBE. ■

David Halperin, CBRE
Certification Chair,
Chapter 38 El Paso, TX

SBE Chapter 38 voted to reimburse any member for the cost of taking a certification exam to encourage more members to become certified, either in another specialty of media engineering or to earn a higher level of certification. ■

George Marshall, CPBE
Certification Chair,
Chapter 15 New York, NY

New York City Chapter 15 is the largest chapter in the country, but we had an issue. The number of certified members was fewer than we wanted. We are fortunate in that we always seem to run a financial surplus at the end of the year. This is due to some underwriting and advertisements that the chapter has received from broadcast businesses throughout the year, and the way we budget and spend money.

Quite a few years ago, I mentioned the idea of taking some of the leftover money and using it to reimburse members (both old and new) for the cost of certification. The chapter leadership thought it was great idea, and we implemented it, figuring that this might be a good way to encourage more members to become certified, as well as encouraging certified members to get more certifications. The chapter reimburses the member for the cost of the exam as well as the CertPreview (if it was purchased) with one very important caveat: They need to pass the exam. Once they do, and provide us with proof of payment, we issue the reimbursement. This makes for winners all around: More certifications for the chapter and money back in the pocket of those certified. ■

John Collinson, CPBE, 8-VSB, AMD, CBNE
Certification Chair,
Chapter 39 Tampa Bay, Florida

At Chapter 39, we've chosen to purchase and present certification pins for those in our chapter who have achieved a new SBE certification. ■

Geary Morrill, CPBE, AMD, CBNE
Certification Chair,
Chapter 91 Central Michigan

To entice existing members to undertake SBE certification(s), Central Michigan Chapter 91 has a policy of reimbursing any member in good standing for the expense of a successful Certification exam upon that member's request when accompanied by submission of a paid receipt for the corresponding certification application. This reimbursement is available when paid membership exists prior to Certification application. ■

CQ Answer from page 3 — **The answer is B**

The Open Systems Interconnection (OSI) model describes seven layers that computer systems use to communicate over a network. It was the first standard model for network communications, adopted by all major computer and telecommunication companies in the early 1980s.

SBE Certification Achievements
CONGRATULATIONS

LIFE CERTIFICATION	Certified Professional Broadcast Engineer (CPBE) Mark Quella, Watertown, MA - Chapter 11 James Wilson, Sellersburg, IN - Chapter 35 Certified Senior Radio Television Engineer (CSTE) Juan Antonio Gonzalez, Miami, FL - Chapter 53 Certified Senior Radio Television Engineer (CSRTE) Craig Butler, Orange Park, FL - Chapter 7 Certified Senior Radio Engineer (CSRE) Ron Martens, New Market, AL Certified Broadcast Networking Engineer (CBNE) Gerry Field, Ponte Vedra Beach, FL - Chapter 7	Certified Broadcast Television Engineer (CBTE) Renato Calanlang, Orlando, FL - Chapter 42 Gerry Field, Ponte Vedra Beach, FL - Chapter 7 Certified Broadcast Networking Technologist (CBNT) Steven Mainger, Westlake, OH - Chapter 70 Jim Oster, Erie, PA - Chapter 130 Certified Broadcast Technologist (CBT) Robert Farkas, Oakville, ON Gerry Field, Ponte Vedra Beach, FL - Chapter 7 Patrick O'Gara, Las Vegas, NV - Chapter 128 Jim Oster, Erie, PA - Chapter 130	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.
JUNE EXAMS	Certified Senior Television Engineer (CSTE) Kenneth Harl, Columbus, IN - Chapter 25 Robert Owen, Missoula, MT - Chapter 6 Certified Broadcast Radio Engineer (CBRE) Michael Crawford, VA - Chapter 37	Certified Broadcast Television Engineer (CBTE) Kimbal Fatica, Cuyahoga Falls, OH - Chapter 70 Certified Broadcast Networking Engineer (CBNE) Gerard DeSantos, Bloomington, CA - Chapter 131 ATSC 3 Specialist (ATSC3) Michael Norton, Madison, WI - Chapter 24	Certified Broadcast Networking Technologist (CBNT) Michael Crawford, Sterling, VA - Chapter 37 Certified Radio Operator (CRO) Lana Marks, Medford, MA - Chapter 11 Certified Television Operator (CTO) Lana Marks, Medford, MA - Chapter 11
AUGUST EXAMS	Certified Broadcast Radio Engineer (CBRE) Todd Dixon, Jemison, AL - Chapter 68	Certified Broadcast Technologist (CBT) Andrew Gladding, Brooklyn, NY - Chapter 15 Krystal Holland, Hempstead, NY - Chapter 15	Certified Television Operator (CTO) Richard Macris, New York, NY - Chapter 15
SPECIAL PROCTORED EXAMS	Certified Senior Television Engineer (CSTE) Kenny Elcock, Watertown, MA	Certified Broadcast Technologist (CBT) Cody Gee Sheridan Hemlar, Hofstra University	
CERTIFIED BY LICENSE	Certified Broadcast Technologist (CBT) Robert Pantazes, Cape Coral, FL - Chapter 90 Eric Williams, San Antonio, TX - Chapter 69		**Got your SBE Certification pin?** **sbe.org/pins**
CERTIFIED RADIO OPERATOR (CRO)	Mark Johnson, Columbia, MO	Dustin Tatro, Abilene, TX	
CERTIFIED TELEVISION OPERATOR (CTO)	Samuel Angello, Garfield Heights, OH	Luke Crafton, Valrico, FL	Ganesh Iyer, Parker, CO
RECERTIFICATION Applicants completed the recertification process either by re-examination, point verification through the local chapters and national Certification Committee approval and/or met the service requirement.	Certified Professional Broadcast Engineer (CPBE) Robert Nelson, Manhattan, KS - Chapter 3 Certified Professional Broadcast Engineer (CPBE) AM Directional Specialist (AMD) Digital Radio Broadcast Specialist (DRB) Douglas Irwin, Burbank, CA - Chapter 47 Certified Senior Radio Engineer (CSRE) Jimmy Poole, Van Buren, AR - Chapter 56 Joshua Taylor, Tupelo, MS - Chapter 68 Certified Senior Television Engineer (CSTE) ATSC3 Specialist (ATSC3) Michael Norton, Madison, WI - Chapter 24 Certified Broadcast Networking Engineer (CBNE) Jesse Janosky, Glendale, AZ - Chapter 9 Michael Norton, Madison, WI - Chapter 24 Certified Broadcast Radio Engineer (CBRE) AM Directional Specialist (AMD) Steven Callahan, Middleboro, MA - Chapter11	Certified Broadcast Radio Engineer (CBRE) Cristan Caughill, Honolulu, HI - Chapter 50 Christopher King, Knoxville, TN - Chapter 103 Chuck Springer, Garden City, KS - Chapter 3 Kira Parker, South Burlington, VT - Chapter 115 Certified Broadcast Television Engineer (CBTE) Jesse Janosky, Glendale, AZ - Chapter 9 Certified Audio Engineer (CEA) Scott Eugene, Minnetonka, MN - Chapter 17 Certified Video Engineer (CEV) Vincent Lopez, Syracuse, NY - Chapter 22 Certified Broadcast Networking Technologist (CBNT) R. Allen Fowler, Murray, KY - Chapter 103 Victoria Kipp, Oregon, WI - Chapter 24 David Kolesar, College Park, MD - Chapter 37 Robert Nelson, Manhattan, KS - Chapter 3 Vincent Lopez, Syracuse, NY - Chapter 22	Certified Broadcast Technologist (CBT) Christopher Auker, Chula Vista, CA - Chapter 36 Daniel Black, Tuscaloosa, AL - Chapter 68 William Davis, Westerville, OH - Chapter 52 Joshua Ely, Nampa, ID - Chapter 115 Harold Henderson, Jackson, MS - Chapter 125 Eric Miller, Janks, OK - Chapter 56 James Pronath, Springfield, VA - Chapter 37 Craig Wells, Clermont, FL - Chapter 39 Certified Television Operator (CTO) Brandi Bernow, Olmsted Twp., OH Susan John, Virginia Beach, VA Tasia Kinzle, Vermillion, SD Curtis Kirk, Tyler, TX David Medow, Reno, NV Wilson Middleton, Spokane, WA Katie Mulloy, Friendswood, TX Patrick Perez, Mesa, AZ Certified Radio Operator (CRO) Richard Drotleff, Stow, OH Ben Johnson, Cave City, AR

ELECTION, from p. 1

maining in their terms:
• Zhulieta Ibisheva, CBTE, CBT; Chapter 50 Hawaii; Honolulu, HI
• Jeff Juniet, CBTE; Chapter 42 Central Florida; Casselberry, FL
• Charles "Ched" Keiler, CPBE, 8-VSB, CBNE; Chapter 53 South Florida; Ft. Lauderdale, FL
• Geary S. Morrill, CPBE, AMD, CBNE; Chapter 91 Central Michigan; Saginaw, MI
• David Ratener, CPBE, CBNT; Chapter 16 Seattle; Seattle, WA
• Dan Whealy, CBTE; Chapter 96 Rockford; Sumner, IA

Wayne Pecena, CPBE, 8-VSB, AMD, ATSC3, DRB, CBNE, of College Station, TX, continues serving on the board as immediate past president.

The SBE National Meeting and Awards Presentation was held Sept. 29, 2022, during the SBE National Meeting, held in conjunction with the SBE22 Broadcast and Technology Expo in Liverpool, NY, near Syracuse.

GEORGIA, from p. 4

for a grant from the U.S. Agency for International Development for the purpose of establishing a broadcast engineering training program with the Georgian Technical University. Robakidze also attended the SBE National Meeting in Liverpool, NY.

IEEBE
INCORPORATION OF EASTERN EUROPE
BROADCAST ENGINEERS

The group is also soliciting members from Armenia, Azerbaijan and Moldova to join the SBE and become part of the chapter. For more information on the chapter, contact the SBE National Office.

Ennes Educational Foundation Trust Announces Five Scholarship Recipients

The Ennes Educational Foundation Trust has awarded five scholarships for 2022, chosen from applications received by July 1, 2022, from the previous 12 months. The Harold E. Ennes Scholarship, Robert D. Greenberg Scholarship, John H. Battison Founder's Scholarship and 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.

Cassara

This year the Harold E. Ennes Scholarship recipient is Michael Cassara, a junior at the University of Pittsburgh pursuing a degree in computer engineering. He previously led his high school's student-run television station, and serves as a student engineer on Pitt Studios productions for ESPN's ACC Network for the last year. Having become familiar with software and hardware development during his studies for his major, he has gained an interest in developing applications, such as developing a remote-control and automation application for VTRs, and is currently working on a translation server to enable broadcast camera RCPs to control POV and PTZ camera systems from different manufacturers. Michael intends to pursue a career as a television broadcast engineer after graduating.

Receiving the Robert D. Greenberg Scholarship is Meredith Frank, a sophomore TV production & studies major at Hofstra University. In her freshman year, Meredith's love for TV became a passion for all media. After joining the Marconi Award-winning campus radio station WRHU 88.7 FM, Meredith received a Rookie of the Year award, and gained sports media experience producing and engineering the radio broadcasts for New York Islanders hockey. Her work with the Islanders includes engineering broadcasts for ESPN 98.7 FM, voicing packages, and reporting from the press box at UBS Arena. Sports media was a new adventure for Meredith, but she quickly learned that women are still working to earn a place in the industry. She was honored to be the lead producer for WRHU's first all-female studio crew during the International Women's Day Islanders broadcast. Meredith previously earned the SBE Youth Scholarship as a high school senior, and is a member of SBE New York Chapter 15.

Frank

The John H. Battison SBE Founder's Scholarship has been awarded to Jade He, a member of SBE New York Chapter 15. She is a student at Hofstra University where she is a manager for two student-run media organizations, the HEAT (Hofstra Entertainment Access Television) Network and 88.7 FM WRHU. Pursuing a Bachelor of Science in video/television, she hopes to work as a video engineer or in production. She also works as an engineering assistant at Salem Media Group under chief engineer and SBE member Andy Gladding. Furthermore, as an Asian-American woman in media and engineering, she is passionate about uplifting other women and people of color and hopes to one day be a role model and to carve a path for those who will follow her.

He

The Gino Ricciardelli Scholarship has been awarded to Drew Hurst. Drew graduated from Jasper High School in Jasper, IN, in 2021 and is in his second year at Ball State University where he majors in media with a concentration in digital sports production. He has been a member of the Dean's list for the past year and has been an SBE member for two years. In addition to his studies, he has freelanced as a utility and camera operator for Fox, CBS, and ESPN in Cincinnati and Indianapolis with events including Bengals home games, US Men's National Soccer Team games, and the CFB National Championship. He has worked events on ESPN 3 and ESPN Plus at Ball State as well as on MILB.tv with the Louisville Bats.

Hurst

Matthew Kucharczyk received the Youth Scholarship. In high school, Matthew was known for creating high-quality broadcasts (earning him the nickname Stream God), ranging from district basketball, to state-wide swimming competitions, to school events. He formed strong relationships with his peers and district staff to help him create these broadcasts. Alongside working with the school district, he had the role of technical director in the NAIA basketball tournament in Kansas City. He has worked with local companies that help with corporate, entertainment, and live events in the Kansas City metro area. Matthew is currently studying mass media with an emphasis on film and video at Washburn University. He hopes to work in live event video engineering, striving to create an impact on the world around him.

Kucharczyk

Chapter Check

Chapter Engineer of the Year Award Recipients

SBE members who are honored by their chapters as a chapter engineer of the year are automatically entered into consideration for the Robert W. Flanders SBE Engineer of the Year award. Six SBE members were selected by their chapters for the local honor in 2022.
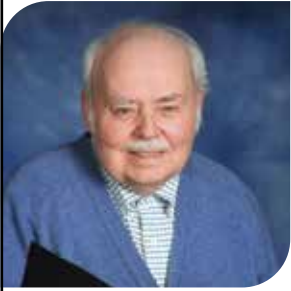
◀ **Chapter 1 • Binghamton**
Bill Sitzman

Chapter 38 • El Paso ▶
Glenn Leffler, CPBE (left), receives his plaque from Chapter Chair Jose Castro.

▼ **Chapter 15 • New York City**
Andrea Cummis, CBT, CTO

◀ **Chapter 70**
Northeast Ohio
Brett Patram

◀ **Chapter 17 • Minneapolis**
Michael Davidson

Chapter 80 • Fox Valley (WI) ▶
Mark Friedman, CBNT, CEV (left), receives his plaque from Chapter Chair Martin Jury.

LEGAL PERSPECTIVE

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

FCC & FEMA: The IEASt You Can Do: plEASe Check Your Equipment

In early August, the FCC's Public Safety and Homeland Security Bureau (PSHSB) issued a Public Notice advising EAS Participants (including but not limited to broadcast radio and TV stations) to take steps to secure their EAS equipment against certain cybersecurity risks. Prior to the FCC's Public notice, FEMA (Federal Emergency Management Agency) had issued an advisory to flag a potential vulnerability in certain EAS encoder/decoder devices that have not been updated to most recent software versions.

FEMA observed that if EAS devices are not up-to-date, an unauthorized actor could hack into devices via the public internet and issue false EAS alerts over—or otherwise compromise—the EAS participant's infrastructure. Although we learned that the risk was most prevalent with Monroe EAS equipment, the suggestions made by FEMA and the FCC are good rules of thumb that station engineers should consider irrespective of their EAS equipment manufacturer.

Of course, EAS participants are expected (and required by FCC rules) to be "responsible for ensuring that EAS Encoders, EAS Decoders, Attention Signal generating and receiving equipment, and Intermediate Devices used as part of the EAS ... are installed so that the monitoring and transmitting functions are available during the times the stations and systems are in operation."

In pursuit of that goal, the FCC requires that stations participate in RWTs and RMTs (and NPTs) and maintain EAS logs. The PSHSB's August Public Notice was not the first time that the FCC has warned EAS participants about security vulnerabilities and encouraged them to secure their EAS equipment by installing current security patches and using firewalls; while we all probably remember the 2013 EAS hack that caused a station in Montana to air a zombie attack EAS alert, we might not all recall the Enforcement Bureau's January 2021 release reminding EAS participants of their compliance obligations. Now, in August 2022, the FCC has again urged EAS participants—regardless of the make and model of their EAS equipment—to upgrade their equipment software and firmware to the most recent versions recommended by the manufacturer and secure their equipment behind a properly configured firewall as soon as possible.

PSHSB has also urged EAS participants to take the following steps to improve their cyber hygiene:
• Install software security patches issued by the manufacturer as soon as they become available.
• Change default passwords.
• Continually monitor EAS equipment and software and review audit logs to detect and report incidents of unauthorized access.
• Contact the EAS equipment manufacturer with any specific questions regarding the security of EAS equipment.
• Review the list of recommended best practices to address potential data security vulnerabilities issued by the Communications Security, Reliability, and Interoperability Council (CSRIC) in 2014.

Before closing this column out, let's pause here to reflect upon the observations astutely made by CSRIC in the 2014 Report of its EAS Security Subcommittee:

"Securing EAS is not a one-time effort, but is a continuous process, which should be applied, assessed, and revised. It is essential for [EAS Participants] to approach EAS as they would any other critical IT system. EAS should be incorporated into the existing business IT security program, or if such a program does not exist, one should be established according to this best practices document and referenced guidance."

A continuous process, indeed—one that requires regular attention and deliberate diligence. Speaking of which, you are almost certainly aware that there will be no nationwide EAS test (NPT) this year. During many of the past several years, FEMA and the FCC have conducted a nationwide EAS test between the months of August and November. Earlier this year, however, FEMA announced that it would not be conducting a nationwide EAS test this year. As a result, this year we will miss the event that often triggers broadcast station engineering teams to (i) turn their attention and conduct diligence relating to their EAS protocols and procedures, (ii) check to ensure their EAS gear has been updated (and is functional), and (iii) re-familiarize themselves with the content and placement (it must be posted at all EAS operator locations) of the FCC's EAS Operating Handbook (the latest version of which was issued in June 2021).

Without a nationwide test—and in light of the EAS security advisories discussed above—now is as good a time as any for all station engineers to conduct the internal EAS due diligence that they would have been prompted to do if we were preparing for a nationwide EAS test. Best wishes to you all for a secure, safe, and successful fourth quarter of 2022!

Chapter Check

Chapter 25 • Indianapolis
Members of Chapter 25 served as the SBE Board of Tellers in the recent SBE election. Left to right: Bill Cherry, Tom Weber, Chuck Kelly, Desy Kelly, and Dale Smiley.

LINKS

Public Notice
docs.fcc.gov/public/attachments/DA-22-828A1.pdf

EAS Advisory
content.govdelivery.com/accounts/USDHSFEMA/bulletins/3263326

EB January 2021 Release
docs.fcc.gov/public/attachments/DA-21-10A1.pdf

CSRIC 2014 Report
transition.fcc.gov/pshs/advisory/csric4/CSRIC_IV_WG3-EAS_SECURITY_INITIAL_REPORT_062014.pdf

EAS Operating Handbook
fcc.gov/file/21268/download

Investing in Interns

In almost every meeting I have attended in my short time with the Society of Broadcast Engineers, the subject of attracting new people to the profession has come up. I thought that this was somewhat unique, but I'm finding out that almost every professional organization is struggling with the same challenge. I recently heard an accountant lamenting this in his profession!

We know that our birth rate has been declining in the US for more than 50 years. Without going too far down the rabbit hole, that means that there are fewer of us in the working years of our life than there used to be. That makes sense.

The impact of that declining birth rate is that there are fewer young people graduating from high school than there used to be. This statistic is often called the "enrollment cliff" in higher education, and it is expected to continue accelerating throughout the rest of this decade. In addition, as a college education has gotten more and more expensive in many areas of the country, fewer students have pursued education after high school. The potential pool of new broadcast engineers is therefore declining, too.

One way to counter this problem is to provide opportunities for students who are still in high school to begin learning a profession. We know that motivated students can learn a lot before they graduate from high school. Making these opportunities available is a way to get ahead of the rest of the technical professions. Many states have active internship funding programs where money to hire the interns is provided by the state, or at least part of the funding is provided. The employer has a responsibility under programs like this to provide meaningful learning opportunities and protect the employee from overwork while they complete their high school education. Many times, the employee can come to the work place during their school day and get credit for their education while learning what they need to work in your office.

Where To Look

Of course, hiring an intern has its own challenges. Finding the best candidate to work in your office isn't going to be easy if you aren't around potential interns. You may have to spend some time around students of the profession to see which seem to have the most promise. Some high schools have broadcasting programs or clubs where you could volunteer your time and have the op-portunity to see them working. Also, you may need to be open to volunteering with programs that tap into STEM (science, technology, engineering, and math) skills, such as a math club, computer club and robotics club, even though they don't link directly to broadcast engineering. Also, you could volunteer through the science department to start a Maker Space or ham radio club.

Hiring an inexperienced person means you have to be willing to accept some mistakes. If they haven't learned all that they need to master a task you give them, you will have to walk alongside them, instructing them as you go. You likely learned that way in your early career. You worked with a more experienced person and he or she taught you what you needed to complete one task at a time, while being given the opportunity to ask questions and be the "extra hand" on manual parts of the task. This obviously has to be done in the right situations. You can't put a mission-critical task into the hands of an inexperienced student. You will have to exercise good judgement in assigning increasingly difficult tasks to an intern, but the long term result will be a responsible person who will be an asset to your office and the broadcast engineering community.

I know I'm not telling you anything new. I hope this serves as a reminder that the broadcast engineering community needs investment in new and less experienced people in order to grow. The broadcasting environment has changed so much and we have to promote ourselves, our work, and the profession as a whole.

I'm thankful for how you in the community have helped each other and want to see that continue with others who are newer. Developing an internship mindset within each of us will strengthen all of us.

ENGINEERING PERSPECTIVE

By Mike Sheffer, CBT
Director of Engineering, Sinclair Broadcast Group Stations, West Palm Beach, FL
msheffer@sbgtv.com

Enhanced Documentation Using Digitally Coded Labels

For decades, documenting individual wires and cables in complex television systems has most often been addressed using simple alpha-numerical label schemes that refer to a database, spreadsheet or physical drawings kept in the engineering shop.

Most everyone has found themselves in a cramped and poorly lit rack enclosure trying to read these wire numbers with a variable amount of success. If the label is readable, the next step is to look up the formal documentation to figure out the characteristics of the cable in question.

After one too many late nights chasing down cable runs, it seemed to me that there had to be a more elegant method that would make the task quicker, logical, and more efficient.

At WPEC, our new systems are installed using an agreed-upon set of conventions that result in an orderly process for systems integration. All cable labels are applied in the same direction of signal flow. This way, it's simple to determine inputs from outputs. Labels are applied 12" or more behind the termination, so they are easy to access and easier to read. Temporary tags are replaced with permanent labels once the system has been commissioned. Finally, the numerical codes always start with an alpha designation and a three-digit rack number, indicating the signal's type and origin. Even with this disciplined method in place, we found that cable identification was still cumbersome.

Fig. 1. The first label attempt with barcode.

With the purchase of a new cable label printer, we began experimenting with a variety of modern coding solutions that we could apply directly while enhancing our systems integration standards and overall documentation. After many weeks experimenting with a variety of coding solutions, it occurred that a simple barcode along with a traditional wire number might be a suitable configuration. Figure 1 shows the result.

We found that barcoded data that could be scanned using a mobile phone's camera linked to any number of available applications for reading digital images. We found one called SCANDIT that works well. The scanned code would instantly provide the user with real time data on the cable's purpose. Scanning the code shown in Figure 1 reveals the information in Figure 2. The information is resident within the code, so there is no database needed as a reference.

Fig. 2. The scanned barcode display using a free iPhone app.

The initial response to the idea was incredibly positive, but we soon discovered that the barcodes exhibited some limitations. For example, the width of the bar expands as more information is entered. This limited our character count to somewhere around 15, including spaces. Anything longer would exceed the capabilities of the printer labels. We also discovered that the lamination wraps tended to obscure the code, making them sometimes difficult for the camera to read. Going back to the printer, we experimented with a variety of possible coding solutions.

We evaluated cables of various sizes and widths so a uniform label could be used on any of the standard cables we use on a day-to-day basis within the facility. We assessed smaller footprint barcodes and mini QR codes. Finally, we settled on a 2D code standard that provides an ample amount of room for detailed descriptions up to 30 characters as shown in Figure 3.

Fig. 3. A test label with 2D code and wire number.

The 2D codes were small enough to allow for the traditional wire numbers to be included below the image and robust enough to be scanned even under two layers of adhesive laminations. Figure 4 shows the scan result.

Taking It One Step Further

Now that we had settled on the format for cable numbering, we turned our attention to in-house documentation and how we could use the same technology to access systems drawings more efficiently.

Our IT manger had already implemented QR codes as an aide to submit trouble tickets or maintenance requests through our in-house ticketing system. Users could simply walk up to a posted display, scan the code, and their phone would call up a form to be completed.
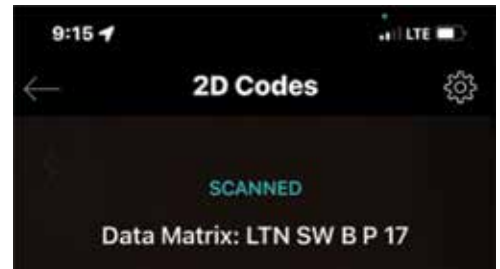

Fig. 4. The 2D code scanned with the iPhone app.

We decided we could use this same method to post QR labels on the rack frames that house specific systems throughout the Tech Core. An example is shown in Figure 5. These codes link to PDF versions of Visio or AutoCAD drawings (Figure 6) that are stored on our corporate SharePoint Site. As a result, drawings can be updated and replaced on the site without having to generate multiple paper copies. Using available IPads or phones in the Tech Core, these codes can be scanned, and the displayed drawings used for reference when troubleshooting. Now our engineers have the information they need at their fingertips rather than having to flip through pages and pages of E-sized drawings or call up a spreadsheets of wire numbers.

Fig. 5. QR codes on the rack frame link to a system diagram.

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

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

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

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

Birns & Sawyer • 2022
Jim Alcantara 323-466-8211
Systems Integration, Sales, Rentals

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

ENCO Systems Inc. • 2003
Samantha Bortz 248-827-4440
Playout and Automation Solutions

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Neutrik USA, Inc. • 2012
Fred Morgenstern 704-916-0368
Ruggedized Optical Fiber Systems

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Vizrt Group • 2022
Anne Hrubala 917-771-8330
More Stories. Better Told.

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

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

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

Member Spotlight: Elvir Hadziselimovic

Member Stats

SBE Member Since: 2006
SBE Certifications: CSTE, 8-VSB
Employer: E.W. Scripps Company
Position: KUPX-TV Station Manager
Location: Salt Lake City
Chapter: 62 Utah

I'm Best Known For: There is no technical problem (in reality, excluded theoretical limitations) that can't be solved: it's just matter of time, effort, and investment.

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

A. I enjoy sharing the road of experience, learning, and advancing to support our communities together with our fellow engineers.

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

A. I spent six months on a national distribution and broadcasting project involvement as a freshman.

Elvir enjoying the great outdoors in the Rocky Mountains.

Q. *Who was your mentor or who in the industry do you admire?*

A. D. Milatovic (RIP). He was one of the very first pioneers and developer of fiber-optic networks worldwide.

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

A. Working on various communications systems and challenges to deliver the highest quality of TV signal across the country.

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

A. ...love outdoor activities: from the sea up to the top of the mountain, and all in between. All with a music background, either listening or singing my faves.

Q. *What's your favorite gadget?*

A. R&S ETL spectrum analyzer

LABELS, from p. 12

Assistant Chief Engineer Joe Ebert prints wire labels.

Future Applications

As the system evolves, we're already looking ahead for ways to expand our capabilities in a variety of applications. One idea is to use system codes to pull up maintenance

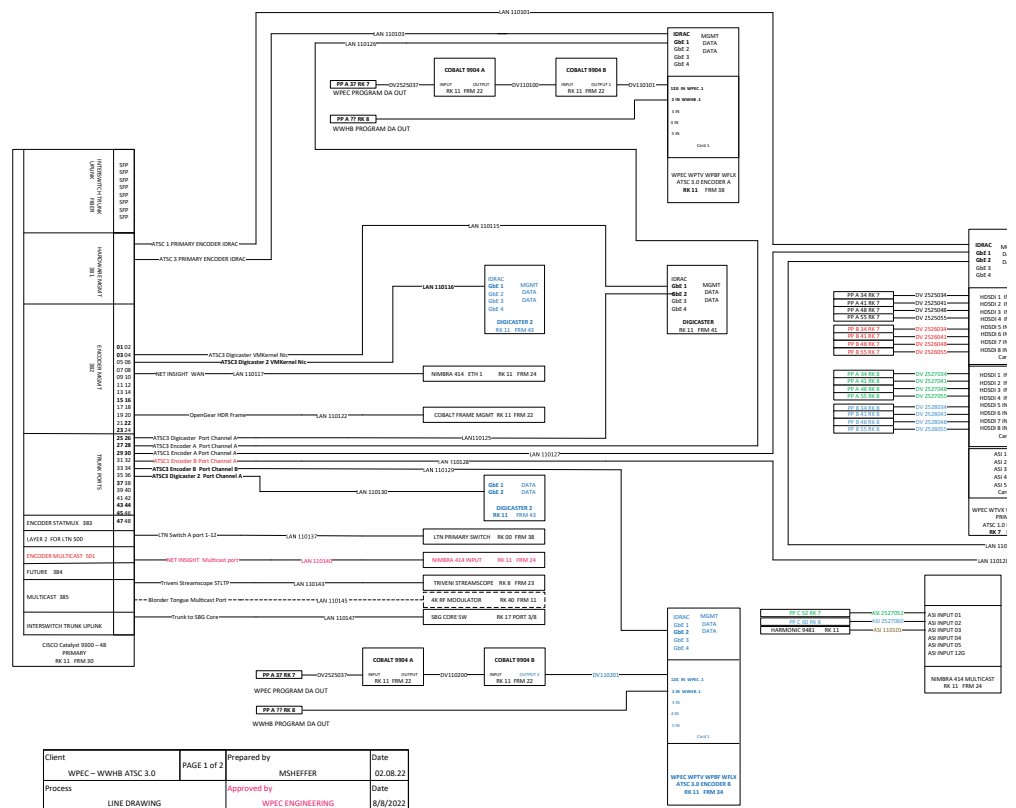**IT Manager Scott Delman designs QR codes.**

Fig. 6. A portion of the system diagram PDF accessed by scanning the QR code.

information from a linked database. Other ideas would provide links to tutorial videos for end user training or troubleshooting.

We feel that we've just scratched the surface and are happy for the opportunity to share this idea with SBE members and others in the industry.

Have an idea or a project for the Engineering Perspective?

Send it to us.

cscherer@sbe.org

WELCOME TO THE SBE

NEW MEMBERS

Justin Beltre - San Francisco, CA
Devin N. Bolen - Omaha, NE
John Bradford - Lewiston, ME
Daniel W. Camp - Pittsburg, KS
Andrew J. Cummings - Topeka, KS
Brian D. Didway - Phoenix, AZ
Ivan A. Feliu - Mayaguez, PR
Tanage Fraser - New Providence, Bahamas
Zurab Gegenava - Tbilisi, Georgia
Luka Jajanidze - Tbilisi, Georgia
Brady T. Johnson - Normal, IL
Levan Katsadze - Tbilisi, Georgia
Giorgi Kharselishvili - Tbilisi, Georgia

William A. Kirkman - Covington, KY
Andrejs M. Kruza - Covington, KY
Michael A. Kurras - Lafayette, CO
Jacob A. MacEntee - Raleigh, NC
David R. MacKinnon - San Diego, CA
Nukri Maisuradze - Tbilisi, Georgia
James W. Martin - Camborne, England
Jim P. McGue - Jacksonville, FL
Paul M. Michaud - Lake Elsinore, CA
Thomas Nickodemus - Durham, NH
Kevin O'Connor - Stamford, CT
Travis B. Owens - Boise, ID
Alexis Patterson - Elk Point, SD

Ian M. Popovich - Monroeville, PA
Revaz Robakidze - Tbilisi, Georgia
Davit Robakidze - Tbilisi, Georgia
Robert E. Robinson - Happy Valley, OR
Keith Rozendal - Santa Barbara, CA
Ramin Sakisyan - Tbilisi, Georgia
Michael W. Scales - Denver, CO
William R. Swanner - Starkville, MS
Timothy Tam - Brisbane, CA
Dustin Tatro - Abilene, TX
David Tucker - Autaugaville, AL
Justin Williamson - Lawton, OK
Dan Works - Lewiston, ME

RETURNING MEMBERS

Robert M. Amoroso - Petaluma, CA
Ryan D. Baker - Durango, CO
Larry J. Brown - Waco, TX
Ted Chavez - Antioch, IL
William J. Dean - Cincinnati, OH
David H. DeGraffenreid - Orlando, FL
Timothy L. Deterding - Herrin, IL
Brian E. Dugger - McDonough, GA
Rick Durham - Brentwood, TN
Michael P. Fitzpatrick - Taunton, MA
Brian D. Flynn - Parker, CO
Chon C. Gammill - Bedford, TX
Peter Glass - Waterford, MI
Samuel S. Grizzle - Antioch, CA

Guy R. Hadland - Millbrae, CA
Blake G. Haynes - Ridgeland, MS
Jason Liao - San Leandro, CA
John J. Mehrtens - Auburn, MA
Dominic G. Mitchum - Slidell, LA
David Nicosia - Albany, NY
Brett Patram - Cincinnati, OH
Joseph P. Portelli - West Pittston, PA
James R. Pronath - Springfield, VA
Ben Slagle - North Lima, OH
Drake Smith - New Smyrna Beach, FL
Michael E. Todd - Lake Jackson, TX
Cyrus Uible - Miami, FL

NEW STUDENT MEMBERS

William Bacaj - Goleta, CA
Michael J. Cassara - Wilton, CT

NEW ASSOCIATE MEMBERS

Nicolette L. Boissonneau - Dawsonville, GA
Mackenzie M. Jacobson - Quincy, IL
Pam M. Leffler - Quincy, IL
Jack Vines - St. Louis, MO

MEMBERS ON THE MOVE

➤ **Lucretia Lee-Arceneaux**, CBNT, is a system engineer at Infosys, Phoenix.

◄ **Dennis Sloatman** is interim market director of engineering at MaxMedia in Virginia while the company seeks to hire a new DOE.

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. 17, 2022		sbe.org/webxtra
SBE Certification Exams		*Local Chapters*
Nov. 4-14, 2022		sbe.org/certification
Application deadline closed		
SBE WEBxtra		*online*
Nov. 21, 2022		sbe.org/webxtra
SBE WEBxtra		*online*
Dec. 19, 2022		sbe.org/webxtra
Chapter Meeting Reports Due		
Jan. 15, 2023		sbe.org/rebate
Meeting reports determine a chapter's rebate		
SBE WEBxtra		*online*
Jan. 16, 2023		sbe.org/webxtra
SBE Certification Exams		*Local Chapters*
Feb. 3-13, 2023		sbe.org/certification
Application Jan. 2, 2023		

SBE WEBxtra		*online*
Feb. 20, 2023		sbe.org/webxtra
SBE Membership Drive Begins		
March 1, 2023		sbe.org
SBE Compensation Survey Opens		
April 1, 2023		sbe.org/survey
SBE Dues Renewal Deadline		
April 1, 2023		sbe.org/renew
2023 NAB Show		*Las Vegas*
April 15-19, 2023		nabshow.com
SBE Membership Meeting		*NAB Show*
April 17, 2023		
SBE WEBxtra		*online*
April 17, 2023		sbe.org/webxtra
SBE WEBxtra		*online*
May 15, 2023		sbe.org/webxtra