

THE Signal

Bimonthly Publication of the Society of Broadcast Engineers



The Association for
Broadcast and
Multimedia Professionals

www.sbe.org

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Massey Named SBE Fellow

The Society of Broadcast Engineers has elevated Jerry Massey, CPBE, 8-VSB, AMD, DRB, CBNT, to the membership rank of Fellow. The SBE Board of Directors elected him at its meeting held April 8 in Las Vegas during the 2018 NAB Show.

Jerry Massey is director of technical operations, Entercom Greenville Spartanburg. His career in broadcasting began as an engineer at WFBC-TV in 1973, but his experience in communications began during his time in the Air Force. His career includes working as a transmitter engineer, director of engineering and chief engineer for stations WFBC-AM/FM, with the additional Greenville stations being added to his responsibilities through acquisitions and mergers.

Massey has served on the SBE Board of Directors and as the society's treasurer, vice president and president. He is currently immediate past president. He is active in Chapter 86 Greenville Area and currently serves as its chair.

In the nomination for Jerry Massey, one person wrote that from a career standpoint, "Jerry is 'top of his class' in his leadership." The nomination goes on to say that, "Jerry's commitment of time and knowledge with the interest in the dissemination of that knowledge to our members as well as serving in [his SBE roles] are indeed conspicuous and valuable contributions to the advancement of broadcast engineering."

Another nomination said, "Jerry is known for...taking care of SBE members. His words of 'member benefit' are often quoted when discussing how the society can do more for members and when the board makes changes to its policies and procedures."

"My friend and colleague, Jerry Massey, demonstrates the outstanding qualifications of broadcast engineers worthy of the Society's highest member grade," said SBE President Jim Leifer, CPBE. "His devotion to excellence in himself, in others and from the SBE is unmatched."

The Fellow honor is the highest membership level in the SBE. Members must have made significant contributions to the broadcast engineering field or the SBE. Candidates are nominated by their peers. Since the Society's founding more than 50 years ago, 78 members have been honored with the Fellow rank.

Massey will be recognized for his election to Fellow during the SBE National Awards Dinner on Oct. 3, 2018, in Boston, during the annual SBE National Meeting, which will be held in conjunction with the Media Resource Expo.



Massey

Boston Suburb of Danvers is Site of the 2018 SBE National Meeting

The Society of Broadcast Engineers will bring the 54th SBE National Meeting to Danvers, MA, just outside of Boston, on October 2-3. The event will be held in conjunction with the Media Resource Expo (MRE), an annual New England regional exposition and educational event. The MRE includes a media equipment

and services tradeshow and multiple technical sessions of interest to all media engineers, technicians, post-production, A/V and media IT professionals.

Serving as event host is SBE Chapter 11 of Boston. The SBE National Meeting begins on Tuesday afternoon, October 2, with the fall meeting of the national SBE Certification Committee from 2:00 to 4:00 p.m. The fall meeting of the SBE Board of Directors will take place from 6:00 to 10:00 p.m. Attendance at the Board meeting is open to any SBE member. On Wednesday, activities begin with the annual SBE Fellows Breakfast, a reunion of SBE Fellow members including this year's inductee, Jerry Massey, CPBE, 8-VSB, AMD, DRB, CBNT. In the afternoon, the one-hour SBE Annual Membership Meeting will be web-

cast live to members around the world.

The SBE Annual Awards Reception and

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



The Doubletree by Hilton Boston North Shore in Danvers, MA

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VICE PRESIDENT

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Technical Broadcast Solutions Inc. | Middletown, DE
rjrussell@sbe.org

SECRETARY

**Wayne M. Pecena, CPBE, 8-VSB,
AMD, DRB, CBNE**
Texas A&M University/KAMU | College Station, TX
wpecena@sbe.org

TREASURER

James Bernier, CPBE, CBNE
Turner | Alpharetta, GA
jim.bernier@sbe.org

DIRECTORS

Andrea Cummis, CBT, CTO
WLVT-TV | Roseland, NJ
acummis@sbe.org

Mark Fehlig, PE, CPBE, 8-VSB
Jampro Antennas/Alan Dick | Walnut Creek, CA
mfehlig@sbe.org

Kirk Harnack, CBRE, CBNE
The Telos Alliance | Nashville, TN
kharnack@sbe.org

Stephen H. Lampen, CBRE
Consultant | San Francisco, CA
slampen@sbe.org

Vinny Lopez, CEV, CBNT
Sinclair Broadcast Group | Syracuse, NY
vlopez@sbe.org

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

Kimberly K. Sacks, CBT
iHeartmedia | Loveland, CO
ksacks@sbe.org

Marcelo Sanchez, CPBE
WBFS-TV/WFOR-TV | Miramar, FL
msanchez@sbe.org

Dave Siegler, CPBE
Cox Media Group | Atlanta, GA
dsiegler@sbe.org

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

Justin "JT" Tucker, CSRE, AMD, CBNE
Cumulus Media | Charleston, SC
jttucker@sbe.org

IMMEDIATE PAST PRESIDENT

Jerry Massey, CPBE, 8-VSB, AMD, DRB, CBNT
Entercom Greenville, LLC | Greenville, SC
jmassey@sbe.org

SBE NATIONAL STAFF

John L. Poray, CAE | Executive Director
jporay@sbe.org

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

Cathy Orosz | Education Director
corosz@sbe.org

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

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

Scott Jones | Database Manager
kjones@sbe.org

Carol S. Waite | Certification Assistant
cwaite@sbe.org

The Signal is published bimonthly by the Society of Broadcast Engineers, Inc., 9102 North Meridian Street, Suite 150, Indianapolis, IN 46260. Questions or comments regarding editorial content or design should be referred to Chriss Scherer at 317-762-9723 or cscherer@sbe.org. For advertising, contact Debbie Hennessey at dhennessey@sbe.org. SBE is a registered trademark of the Society of Broadcast Engineers.

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

Still Time to Renew Your SBE Membership

If you have already renewed your SBE membership, thank you. By doing so, you have retained all your member benefits without interruption. But if you have not yet renewed, you can still do so, and you should renew today. If you don't renew by the June 30 (the end of the grace period), you will be dropped from the active roll.

Member, Senior, Student, Associate and Fellow membership categories can renew online at sbe.org. Click on "Renew Membership" in the upper right-hand corner of the website home page. The online system is available 24/7, is secure and accepts Visa, MasterCard and American Express. The system automatically generates a receipt, sent to your email address. You will need your member number and website password to access the renewal system. If you have forgotten your number or password, there is an automated retrieval system available to you on the renewal page.

When renewing, consider the new SBE MemberPlus option. For \$175, the MemberPlus option provides you with access to all archived SBE webinars and all new SBE webinars produced through March 31, 2019. That's more than 62 webinars covering a broad range of broadcast/media technology, regulatory and safety topics.



It includes the popular eight-part RF101 and five-part Fundamentals of IP Networking series. It also includes the current four-part Broadcast Infrastructure Cybersecurity series.

You may also renew by completing and returning the renewal form with payment that you received in early February by mail to the SBE national office: Society of Broadcast Engineers; 9102 N. Meridian St., Suite 150; Indianapolis, IN 46260; or by fax at 317-846-9120.

Members with questions about their renewal, or those who did not receive a renewal reminder in the mail, can contact Scott Jones at the SBE National Office at 317-846-9000 or kjones@sbe.org.



Certification Question

Answer on page 6

FCC rules require that an operator must hold either a:

- A. General class license or a Broadcast license
- B. Restricted Radiotelephone permit or a Lifetime General Radiotelephone license
- C. Broadcast license or a Restricted Radiotelephone permit
- D. No license or permit is required



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LETTER FROM THE PRESIDENT

By Jim Leifer, CPBE
SBE President
jleifer@sbe.org

Setting the Plan for the Society's Future

We publish *The Signal* every other month, but with all that the SBE is working on, the time since my last article has flown by. Topping our efforts was of course the SBE's NAB Show presence.

The SBE presented our annual Ennes Workshop at the NAB Show on Saturday, and we held the spring membership meeting and member reception on Tuesday. We also had our booth in the north lobby. With all this activity, I was happy to meet many members. I especially enjoyed spending time with you at the reception. I appreciate all the conversations and ideas that you shared with me.

The SBE Board of Directors met on Sunday morning, and among the many projects on our agenda was one of the biggest efforts we have planned for this year: the strategic planning meeting in Indianapolis on June 9. To prepare for this, I have appointed a working group to work with me in leading our efforts for this conference: Board members Jason Ornellas, Kevin Trueblood, and Secretary Wayne Pecena. I am also pleased to report that Rodney Vandever will be with us as our facilitator. You should already know Rodney as the instructor for the SBE's Leadership Development Course.

To make the most of the strategic planning meeting, we encourage every SBE chapter to send a representative to Indianapolis for the meeting. Ideally, that representative is the chapter chair, but if he or she cannot make it, we welcome another chapter representative. The goal of this day-long conference is to identify the efforts, programs and goals for the society to undertake to continue our prosperous path in the years to come. I encourage all chapter chairs to attend.

Our goals will be set shortly, but the theme can be expressed: Where are we going, and how can we reach out to our fellow multimedia professionals and create more opportunities for them to use the society as their resource?

Results of the meeting will be reported in the weeks following the event.

Register Now for the 2018 Leadership Development Course

Atlanta • August 7-9

This course is designed specifically for broadcast engineers who have or aspire to have management responsibilities to acquire and develop skills of sound leadership, supervision and management.



Registration includes course materials, three days of instruction, a certificate of completion, light breakfast items each day and classroom beverages.

The cost to attend is \$670 for SBE members, and \$725 for non-members.

sbe.org/lhc

On June 8, the SBE Executive Committee will also meet in Indianapolis for its summer meeting.

I am also proud to report that SBE MemberPlus continues to exceed our expectations. This program allows members unlimited access to all the Webinars by SBE, both current and future. We have seen an increase in the members who registered for a traditional membership and have now upgraded to SBE MemberPlus. If you haven't done so, I encourage you to upgrade to SBE MemberPlus. I have personally found it to be a big benefit.

SBE Board Update

Last month I accepted the resignation of Barry Thomas as member of the Board of Directors. Barry has served the SBE faithfully for many years, in just about every capacity including president. I thank Barry for all he has done for the Society. I will announce Barry's replacement soon.

Multiple Prizes Awarded at 2018 NAB Show

During the 2018 NAB Show, the SBE held several events. You can see some views of those activities in our NAB Show photo spread on page 8. Some of these events included prize drawings. Here are all the lucky winners from the week in Las Vegas.

Thanks to the event prize sponsors, who are listed on page 8 of this issue.

Daily Booth Drawing

\$200 Fry's gift card
Monday
Anthony Peiffer, CPBE
Center Media Productions
Brooklyn, NY

\$25 Chili's gift cards
Derrick Cullison
AT&T
San Diego, CA

Tuesday
Joe Tymecki, CPBE
Vermont Public Radio
Fairfax, VT

Karen Johnson
Linkup Communications
Panama City Beach, FL

Wednesday
John Huntley, CPBE
Townsquare Media
Rockford, IL

Paul Kaminski, CBT
PK Communications
Johnson City, NY

SBE Membership Meeting

SBE hats
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Cox Media Group
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AC Video Solutions
Gilbertsville, PA

Andrea Cummis, CBT, CTO
AC Video Solutions
Roseland, NJ

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Zipporah Mondy
MBS Broadcasting Network
Helena, AR

SBE Member Reception

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MultiTech Consulting
Swannanoa, NC



EDUCATION UPDATE

By Wayne M. Pecena, CPBE, 8-VSB, AMD, DRB, CBNE
Chairman, SBE Education Committee
wpecena@sbe.org

Cybercrime as a Service

Cybersecurity is an ongoing process for the broadcast engineer who supports an IT infrastructure as new threats are constantly emerging. Use of cloud-based service offerings has become common for content storage, or even used for a complete broadcast facility implementation in the cloud environment. The terms Software as a Service (SaaS), Platform as a Service (PaaS), and Infrastructure as a Service (IaaS) have also become common in the industry. My October 2017 Education Update column focused on the cloud and these implementation layers. No sooner than the ink was dry on that issue of *The Signal*, a new threat emerged: Cybercrime as a Service (CaaS). Variants of CaaS include attacks as a service and malware as a service offering.

Cybercrime has become big business offering a wide range of threat services offering Distributed Denial of Service (DDoS) attacks to ransom attack implementation for hire. These threats are often distributed as email attachments, download links, phishing platforms, or even fake software disguised as security protection tools. What once was an underground activity operated by obscure individuals is now a profitable worldwide business enterprise. As threat mitigation tools and service become more sophisticated and complex, the cybercriminal has more resources available at their disposal. No longer is technical competence an absolute requirement for successful cyber exploits. One must only identify and then contract for services with the right organization offering the services needed.

According to securityintelligence.com, foreign countries are often associated as cybercrime domain registration capitals. Whereas, Portugal, Russia, Netherlands, U.K. and Iceland account for more than half of the known malicious domain registrations (including hijacked legitimate domains), the United States hosts the most (41%). Industry predictions such as "Cyber Security Trends and Threats to Watch for in 2018" emphasize that threats such as DDoS, ransomware, and malware in the cloud will be stronger than ever seen in the past. Thus, it is clear that Cybercrime as a Service is with us to stay and expected to be stronger than ever.

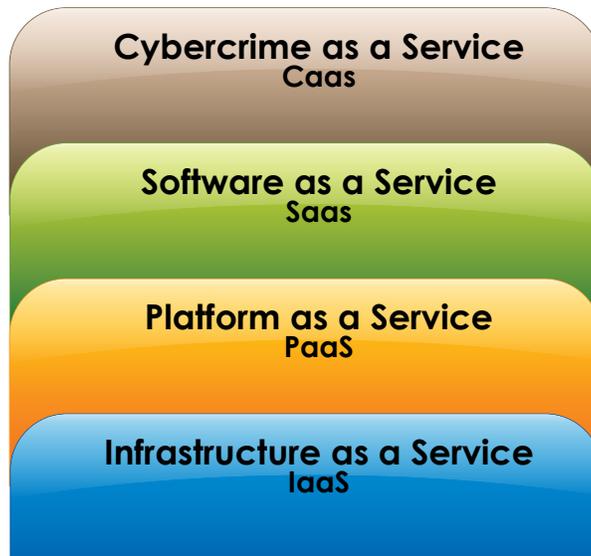
Bankinfosecurity.com estimates that fewer than 200 individuals worldwide are behind the development of CaaS malicious code. However, the cloud environment enables the impact of a relative few to be magnified many times over by the sale of services to launch an attack against organizations. Ransomware has been seen to be particularly lucrative and carries little risk of law-enforcement action. The popularity and value of broadcast media content becomes a target. Ransomware service provid-

ers are known to have established customer call centers to assist victims in the procurement of bitcoins for ransomware payment or to provide technical support for novice cyber criminals.

So what is the broadcast engineer with IT responsibilities to do? Besides praying each night, you should insure that your broadcast technical facility observes best practices in the industry that define and create a secure IT environment. Industry best practices follow a concept of defense in depth that does not rely on any one single security protection method. Defense

in depth relies upon a combination of precautions and practices. These accepted practices include:

- Segmentation of networks to create isolated layers or domains (especially broadcast content & automation)
- Limit and restrict IT resource access to a strict need to access
- Encrypt and authenticate external communications links
- Authenticate not only users, but applications
- Utilize internal and external firewalls or Access Control Lists (ACL) to filter or control network access
- Utilize managed Ethernet switch port security capabilities
- Be proactive in IT resource monitoring; understand system usage; know what is normal
- Maintain and verify regular backup processes that includes off-line and off-site storage



A new layer (CaaS) has been added to the traditional cloud implementation layers.

- Use robust anti-virus detection tools on all hosts; keep signature databases updated
- Keep operating systems updated – especially security patches
- Where possible, actively utilize cyber activity detection tools
- Implement hierarchical Active Domain structure
- Do not overlook social engineering aspects; user actions pose some of the greatest risks

Whereas you still may be a cybercrime victim, these steps can minimize the impact of a cybersecurity event to your broadcast station should one occur. One alarming concern comes from the novice or unscrupulous instigated ransomware attack that successfully implements encryption of a user's data, but even after payment for a de-encryption key, is unable to actually restore the encrypted data. Recovery from such a situation relies totally upon the validity of the affected user's backup content. Be vigilant by following defense in depth techniques and constantly keep social engineering awareness among you users.

Remember your 2018 MemberPlus SBE membership gives you access to all SBE webinars in the on-demand library at no additional cost. Your SBE Education Committee wants to know your professional development needs. Lend your advice and guidance to your SBE Education Committee to help establish the right mix of educational content to meet your professional development needs.

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



CERTIFICATION UPDATE

By Hal Kneller, CPBE, AMD, DRB, CBNE
Member, SBE Certification Committee
hkneller@earthlink.net

A New Certification Specialist Coming: ATSC 3.0

The Certification Committee is always working on new ideas to keep the program relevant. While we review exam questions and the CertPreview questions for sample exams on a regular basis, we also are in a time of rapidly advancing technology. At our recent committee meeting held during the 2018 NAB Show we had two distinguished visitors from the ATSC to discuss the possibility of collaboration on a Specialist Certification. President Mark Richer and Vice-President for Standards Development Jerry Whitaker indicated their interest in helping the committee develop the next specialist certification: ATSC 3.0. They also indicated that the ATSC was developing a best practices book that would help educate those who want to learn more about ATSC 3.0 and also serve as a partial reference for the committee to develop exam and CertPreview questions. The committee vote was unanimous to move forward developing this specialist certification.

To create the exam and the CertPreview questions we will utilize some expertise from our committee along with people from the ATSC, transmitter manufacturers and some engineers at stations who are ahead of the curve by having the technology on-air already. It is our belief that this will truly be a relevant specialist and the further educational tools listed below will do a great job of bringing our members (or non-members) who choose to certify, up to date.

At this point it is too early to say exactly when the official roll-out will occur, but the committee and our guests agree that it is definitely time to start the process, given the FCC has shown

the green light to the new standard. Several stations in the US are already on the air with ATSC 3.0, and more will be coming in the near future, so it is time for television engineers to become more familiar with the inner workings of the new technology and be ready to implement. Our certification process can certainly assist in that.

To complement the new ATSC 3.0 specialist certification, webinars and classes are also planned to commence around the roll-out. These have proven very popular with our members.

With ATSC 3.0 already a reality in the industry, the question may be asked, will we continue with the 8-VSB specialist? The answer is yes, because the current ATSC standard will continue to be relevant for at least the next few years and perhaps longer. The sunset for 8-VSB specialist will be reviewed at some future time. Just as someone who passes the CBNE no longer holds a CBNT, the ATSC 3.0 specialist certification will supersede the 8-VSB.

Meanwhile, if you haven't certified lately, look at the many opportunities to improve yourself and vow to take on one at the next open window! Visit sbe.org for all the information.



Answer from page 3

The answer is D

The FCC eliminated the requirement for individual operator licensing in 1995.

Attend an Ennes Workshop Near You

There are three regional Ennes Workshops on the calendar:

- Lincoln, NE, Aug 15
at the NE Broadcasters Convention
- Kansas City, Aug 21
presented by the broadcaster associations of Kansas and Missouri
- Indianapolis, Nov 1
at the IN Broadcasters Association Conference

ENNES

EDUCATIONAL
FOUNDATION TRUST

Watch for registration details
at sbe.org and in *SBE-news*.

NATIONAL MEETING from p. 1

Dinner also takes place on Wednesday. The dinner will feature a guest speaker and the presentation of the society's major awards, including the Robert L. Flanders SBE Engineer of the Year and James C. Wulliman SBE Educator of the Year awards. The dinner program will conclude with the presentation of the Fellow honor to Massey.

The SBE Chapter and individual awards will be presented during the dinner program. For chapters, they include the Best Chapter or Regional Educational Event, Best Chapter Communications, Most Certified Chapter, Highest Member Attendance and Greatest Growth in New Members.

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

The MRE is a one-day event, held on Wednesday, Oct. 3. MRE session topics and speakers will be announced in the coming weeks.

The SBE National Meeting and the MRE will be held at the Doubletree by Hilton Boston North Shore. The hotel is located 19 miles north, up I-95, from downtown Boston and Logan Airport.

Information about MRE registration and other details will be released later this summer.

Registration for the SBE National Awards Reception and Dinner is made through the SBE website. Reservations are required (\$16) and made on-line at the SBE website, sbe.org or by calling the SBE National Office at 317-846-9000. There is no other registration fee to attend SBE National Meeting events.

Make reservations at the Doubletree by Hilton Boston North Shore by calling 978-777-2500 and ask for the Society of Broadcast Engineers SBE discount. A special rate of \$149 per night plus tax has been arranged for the event.

Save the dates and plan to make your way to Boston for this year's SBE National Meeting and the Media Resource Expo.

SBE Certification Achievements

CONGRATULATIONS

LIFE CERTIFICATION

Certified Professional Broadcast Engineer (CPBE)
 Steve Epstein, Columbia, MO - Chapter 143
 Gordon Larson, Jr., Eugene, OR - Chapter 76
 Timothy Schultz, Moorpark, CA - Chapter 47
 Donald Stewart, Kenmore, NY - Chapter 133

Certified Senior Radio Engineer (CSRE) AM Directional Specialist (AMD)
 Philip Harris, Voorhees, NJ - Chapter 18
Certified Senior Radio Engineer (CSRE)
 Troy Pennington, Hermitage, TN - Chapter 103

Certified Broadcast Television Engineer (CBTE)
 Michael Shovan, Newburgh, NY - Chapter 58
Certified Broadcast Networking Technologist (CBNT)
 Troy Pennington, Hermitage, TN - Chapter 103

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 SBE may be granted Life Certification if so requested. All certified who have retired from regular full-time employment and are at least 59½ years old may be granted Life Certification if they so request. If the request is approved, the person will continue in his/her current level of certification for life.

CERTIFIED PROFESSIONAL BROADCAST ENGINEER (CPBE)

Terry Douds, Lancaster, OH - Chapter 52
 R. Brett Gilbert, Jenks, OK - Chapter 56
 Christopher Johnson, Clanton, AL - Chapter 118

Applicants must have 20 years of professional broadcast engineering or related technologies experience in radio and/or television. The candidate must be currently certified on the Certified Senior Broadcast Engineer level.

FEBRUARY EXAMS

Certified Broadcast Networking Engineer (CBNE)
 Timothy Kelly, Valleyview, OH - Chapter 52
 Eric Papenfuss, West Salem, WI - Chapter 112

NAB SHOW EXAMS

Certified Broadcast Radio Engineer (CBRE)
 Timothy Berry, Knoxville, TN - Chapter 113
 Paul Schminke, Phoenix, AZ - Chapter 9

Certified Broadcast Networking Engineer (CBNE)
 Chuck Primrose, College Station, TX - Chapter 105
 Trevor Schwarze, Saint Paul, MN - Chapter 17
Digital Radio Broadcast Specialist (DRB)
 Jacob Bechtold, Fargo, ND - Chapter 17

Certified Broadcast Networking Technologist (CBNT)
 Nicholas Elliott, Ellensburg, WA - Chapter 21
Certified Television Operator (CTO)
 Yvonne Garcia, Chandler, AZ

SPECIAL PROCTORED EXAMS

Alabama Broadcasters Association Certified Broadcast Technologist (CBT)
 Jeffrey Robinson, Houghton, LA - Chapter 44

SBE CERTIFIED SCHOOL COURSE COMPLETION

DINFOS
 Christopher Ernst, APO, AP - Chapter 131

CERTIFIED BY LICENSE

Certified Broadcast Technologist (CBT)
 John Burke, San Jose, CA - Chapter 40
 Jordan Carter, Muncie, IN - Chapter 25
 David Diaz, Fort Bragg, NC

Elliot Rosen, Erial, NJ - Chapter 18
 Glenn Martin, Biloxi, MS - Chapter 72
 Philip Tori, Rochester, NY - Chapter 57

Sidney Shumate, Harrisonburg, VA - Chapter 36
 Dan Wilson, Paducah, KY

CERTIFIED RADIO OPERATOR (CRO)

Chance Barnett, Batesville, AR
 Jemma Barron, Flaxville, MT

Kayay Truelove, Eastman, GA

Mesquite ISD
 Samantha Sowders, Mesquite, TX

CERTIFIED TELEVISION OPERATOR (CTO)

Kacee Jones, Los Angeles, CA

Stephanie Marek, Goose Creek, SC

Damien Trejo, El Paso, TX

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 Butler, Northport, AL - Chapter 68
Certified Professional Broadcast Engineer (CPBE) AM Directional Specialist (AMD)
 Edward Dulaney, Kamay, TX - Chapter 67

Certified Senior Radio Engineer (CSRE) AM Directional Specialist (AMD) Digital Radio Broadcast Specialist (DRB)

Gary Blau, Plantation, FL - Chapter 53
Certified Senior Television Engineer (CSTE)
 Roger Newton, Tulsa, OK - Chapter 56
 Jonathan Soloman, Columbia, MD - Chapter 46

Certified Senior Television Engineer (CSTE) 8-VSB Specialist

Mark Clem, Jonesboro, AR
Certified Broadcast Networking Engineer (CBNE)
 Wayne Murphy, Winchester, CA - Chapter 131
 Jonathan Soloman, Columbia, MD - Chapter 46
 Andrew Stern, Pleasant Hill, CA - Chapter 40

Certified Broadcast Radio Engineer (CBRE)
 Bret Huggins, San Antonio, TX - Chapter 69
 Ralph Jones, Avondale, AZ - Chapter 9
 Saul Perez, Northridge, CA - Chapter 47
 Joseph Portelli, State College, PA - Chapter 41

Certified Broadcast Television Engineer (CBTE)
 Yezmin Blue, Tacoma, WA - Chapter 16
 Elmir Husetovic, Lombard, IL - Chapter 26
 Michael Nudi, Oakdale, PA - Chapter 20
 Imants Strautin, Saugus, MA - Chapter 11
 John Wenzelberger, Worthington, OH - Chapter 52

Certified Broadcast Television Engineer (CBTE) 8-VSB Specialist (8-VSB)

Douglas Smith, Pleasant View, TN - Chapter 103
 Daniel Zillich, Albuquerque, NM - Chapter 34
Certified Audio Engineer (CEA)
 Gary Faller, Winter Garden, FL - Chapter 42
 Daniel Nevels, Tampa, FL - Chapter 39

Certified Broadcast Networking Technologist (CBNT)

Gary Blau, Plantation, FL - Chapter 53
 Dan Entingh, Denver, CO - Chapter 48
 Elmir Husetovic, Lombard, IL - Chapter 26
 Ralph Jones, Avondale, AZ - Chapter 9
 Andrew Kennedy, Madison, WI - Chapter 24

Certified Broadcast Technologist (CBT)
 Gregory Ardrey, Thornville, OH - Chapter 52
 Timothy Berry, Knoxville, TN - Chapter 113
 Sanford Boyd, Andalusia, AL - Chapter 118
 Marshall Deets, Evansville, WI - Chapter 24
 Maria Dudzak, Ketchikan, AK - Chapter 89
 Nick Grbac, South San Francisco, CA - Chapter 40

Paul Hadley, Tucson, AZ - Chapter 32
 James Hill, Calgary, Alberta Canada
 Andrew Levine, N. Shirley, NY - Chapter 15
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 Ronald Manasco, Robertsedale, AL - Chapter 118
 Frank Peterman, San Antonio, TX - Chapter 105
 Samuel Smith, Trevor, WI - Chapter 28
 Brandon Stadler, Plano, TX - Chapter 67
 Kenneth Tondreau, Calabasas, CA - Chapter 36
Certified Television Operator (CTO)
 Michael McCormick, Ogallala, NE - Chapter 87
 Bradley Meyer, Andover, MN - Chapter 17
 Joseph Orlandi, Corona, CA - Chapter 131
Certified Radio Operator (CRO)
 Joseph Orlandi, Corona, CA - Chapter 131



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A. The SBE booth moved to the North Hall lobby this year. **B.** On Wednesday, representatives from AMITRA stopped at the SBE booth. **C.** The Monday Booth drawing. **D.** Tuesday Booth drawing. **E.** The Wednesday Booth drawing. **F.** The SBE Spring Membership Meeting was held on Tuesday. **G.** The SBE Board of Directors met Sunday. **H.** A member reception was Tuesday after Membership Meeting. **I.** SBE President Jim Leifer (l) presents a plaque to SBE Past President and former Certification Comm Terry Baun for his 42 years of SBE service. **J.** Larry Wilkins (c) received the Radio World Excellence in Engineering Award on Monday. **K.** The crowd gathers on Monday the show floor open (NAB photo) **L.** The show halls were busy with attendee traffic (NAB Photo) **M.** SBE President Jim Leifer presides over the Spring Membership Meeting. **N.** A panoramic view of the Ennes Workshop held on Saturday morning (Vinny Lopez photo)





D. The morning. Committee Chair before meeting. I.N.A





LEGAL PERSPECTIVE

By Chris Imlay, CBT
SBE General Counsel
cimlay@sbe.org

The Battle of the Mid-band Rages; Register Your C-Band Dish Now

Last Fall we wrote in these pages about the FCC’s August 3, 2017, notice of inquiry in General Docket 17-183, asking for public comment on ways to expand opportunities for next-generation wireless broadband services in the “mid-band” spectrum between 3.7 and 24 GHz. The NOI asked for comment on three specific bands: 3.7-4.2 GHz; 5.925-6.425 GHz; and 6.425-7.125 GHz and more generally on all bands from 3700 MHz to 24 GHz. Our initial concern at the time was about the impact on the 6.5 GHz and 7 GHz BAS bands. The threat to those bands still exists and is still a major concern. But a major threat in this docket is to the C-Band receive-only antennas: the principal means by which broadcast quality network programming is received. Simply stated, given the spectrum threat to the C-Band downlinks, you cannot afford to miss the very short-term opportunity to protect your C-band antenna from future interference.

The SBE notified you that on April 19, 2018, the FCC issued a public notice of a temporary freeze on applications for new or modified fixed satellite service earth stations and fixed microwave stations operating in the 3.7-4.2 GHz band: the C-Band Downlink. The notice also established, as a limited exception to the freeze, a 90-day window allowing existing entities that now own Fixed Satellite Service earth stations to register or license them if not currently licensed or registered. During this 90-day window, earth station users of this band can also modify currently licensed or registered earth stations. The freeze is bad news overall, but the 90-day filing window, which closes on July 18, is an opportunity. And the FCC is saving your station a good deal of money in the process to encourage registrations during the window, because they have waived during this window the Frequency Coordination requirement. Per application, that coordination cost is on the order of \$1,000 or more from a commercial frequency coordinator. The FCC doesn’t offer waivers of mandatory coordination very often, so you should take advantage of this chance when you have it.

Normally, a frequency coordination exhibit in an Earth Station registration demonstrates compatibility with terrestrial facilities. The benefit of it is that it entitles the Earth Station to interference

protection against subsequent licensees, normally including fixed service licensees. A registration done during this window, however, does not entitle the C-Band Earth Station to interference protection from fixed service transmissions (because the frequency coordination requirement is waived), but if you have an existing Earth Station you already know whether or not terrestrial fixed service interference to the Earth Station is an issue. It is assumed that C-Band RO antennas will, by registration during this window, be protected against any future interference from mobile facilities. And that is precisely what you need to avoid.

The FCC explains plainly that the purpose of the freeze is to preserve the status quo in the C-Band pending the FCC action in its open inquiry into “the possibility of permitting mobile broadband use and more intensive fixed use of the band” pursuant to Docket 18-122. So there is a direct threat to the C-Band. There are various initiatives, including those of the SBE, to protect the C-Band and the 6.5 GHz and 7 GHz band BAS operations. But you cannot sit idly by. It is critical that you immediately see to the licensing or registration of your C-Band Receive-Only earth station within this window or risk losing the programming feeds. The window opened April 19 and it closes July 18, 2018.

Registering a C-Band Satellite Receive-Only Earth Station for the first time is not difficult. It involves completing and filing a Form 312 and Schedule B on the FCC’s International Bureau filing site. Sign in using the station licensee’s FRN number and complete the Form 312. There are specific requirements including a short exhibit referring to the FCC waiver of the normal requirement for a frequency coordination exhibit, which you are not filing in this instance. But the application, generally speaking, is relatively intuitive, though there is information called for such as the range of easternmost and westernmost satellite orbital locations from which the antenna receives programming. There are somewhat standard responses to this, but don’t guess.

The emission designator has to be accurately specified (often 36M0G7W but not always). You will also have to provide elevation and azimuth angles for given orbital arcs. There are some good “how to” guides circulating around; there are some online tools to use to make the calculations required; and there are also sample registrations that you can use as models. There is an FCC filing fee of \$435 that has to be paid at the time of filing the application. If the process becomes overwhelming, or if you are in doubt about some of the data, which satellites to specify, etc. then by all means contact a consulting engineering firm or your station’s communications lawyer for help.

But do it now. As the TV advertisements say, operators are standing by. But don’t you just stand by. This offer will not be repeated.

LINKS

- The FCC Public Notice**
tinyurl.com/DA18-398notice
- FCC Info on Registering Earth Stations**
tinyurl.com/FCC-form312

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FOCUS ON SBE

By John L. Poray, CAE
SBE Executive Director
jporay@sbe.org

SBE Board Actions Include Creation of SBE ATSC 3.0 Specialist Certification

The SBE Board of Directors conducted its regular spring meeting on April 8, during the 2018 NAB Show in Las Vegas. Perhaps the biggest news from that meeting is that the Board approved a recommendation from the SBE Certification Committee to begin working, in cooperation with the ATSC, on a new SBE ATSC 3.0 Specialist Certification. Work began on the new certification when representatives from the SBE and the ATSC met on May 23 in Washington, DC. More details will be available as work progresses but the initial target is to have it ready to roll out in the spring of 2019.

Also during the meeting there was discussion regarding threats to the C-Band downlink. SBE General Counsel Chris Imlay recommended that the SBE file comments with the FCC regarding this. Eleven days later, on April 19, the FCC issued a public notice of a temporary freeze on applications for new or modified fixed satellite service earth stations and fixed microwave stations operating in the 3.7-4.2 GHz band - the C-Band. The notice also established, as a limited exception to the freeze, a 90-day window allowing existing entities that now own Fixed Satellite Service earth stations to register or license them if not currently licensed or registered. Chris' column in this issue of *The Signal* goes into this in detail.

The Board approved the establishment of a new, annual award, presented to the "SBE Chapter of the Year." The purpose is to recognize an outstanding chapter that produces a program of the highest quality for local members, retains and attracts members, encourages SBE certification and continuing education.

Chapters will not nominate themselves. Instead, as many as a dozen chapters will be selected in a first round, based on a series of statistical measurements accumulated from their monthly meeting reports and attendance, membership and certification numbers and market penetration.

Then the Board will review these finalists, selecting the winner based on the previously mentioned objective criteria, but also using subjective criteria. These will include things like special events, special meetings, community involvement, promotion of technical media careers, chapter communications with members, scholarship programs, etc. Anything that makes the chapter stand out, while in the process of providing an exceptional program for local members.

Judging will be done in January and February each year. The first award will be presented in 2019, at the spring SBE Membership Meeting, held during the annual NAB Show in Las Vegas.

Outstanding Service

The SBE Board of Directors appointed Dale Scherbring, CPBE, to serve as a trustee on the Ennes Educational Foundation Trust. Dale is regional engineering director for Sinclair Broadcast Group and is based in the Baltimore area. He replaces Fred Baumgartner, CPBE, CBNT, who had served as an Ennes Trustee for more than 25 years. We welcome Dale to his new role.

Many know that the Ennes Trust is the charitable arm of the SBE. Its mission is to promote broadcast technical education for both new entrants and those currently engaged in the field. It awards annual scholarships, presents regional workshops around the U.S., and provides financial grants for educational projects related to broadcast engineering.

Three trustees govern the Trust. In addition to Dale, they include Doug Garlinger, CPBE, 8-VSB, CBNT, of Fishers, IN, and Tony Peterle, CPBE, of Miami, FL.

The Board passed a resolution thanking Fred Baumgartner for his 25 years of serve as a trustee. We are thankful that Fred continues to serve as a moderator for regional Ennes Workshops and is a member of the SBE Education Committee.

The Ennes Trust exists through the financial support of SBE members, chapters and Sustaining Member companies. Contributions can be made to the Ennes Educational Foundation Trust and mailed to the Society of Broadcast Engineers; 9102 N. Meridian Street, Suite 150; Indianapolis, IN 46260.

Society of Broadcast Engineers, Inc. 2017 Audited Financial Statements

Combined Statement of Assets, Liabilities* & Net Assets Dec. 31, 2017

ASSETS	
Cash & cash equivalents	\$2,184
Investments	1,094,202
Office Equipment	18,116
Intangible Assets	823
Total Assets:	\$1,115,325
LIABILITIES and NET ASSETS	
Liabilities	\$0
Net Assets:	\$1,115,325
TOTAL LIABILITIES and NET ASSETS	
	\$1,115,325

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

2017 SBE Revenue & Expense Statement

INCOME:	
Membership Fees & Support	\$388,122
National Meeting	45,438
Certification	72,325
Publications/Promotion	51,644
Education Services	97,584
Interest & Dividend Income	42,015
Net Realized/Unrealized Gain (Loss) from Investments	70,462
Miscellaneous Income	4,714
Total Income:	\$787,404
EXPENSES:	
Member Services	\$384,304
Chapter Rebates	38,082
National Meeting	32,377
Publications/Communications	52,049
Certification	94,145
Education	76,880
Administration	75,355
Depreciation/Amortization	5,240
Disposal of Assets	4,273
Total Expenses:	\$762,705
CHANGE IN NET ASSETS:	\$24,699
NET ASSETS 12/31/2016	\$1,090,626
NET ASSETS 12/31/2017	\$1,115,325



freedesignfile



In Memoriam
Barbara Ramaley, CBT
Member #237
1927 - 2018

Charter Member
Senior Member



ENGINEERING PERSPECTIVE

By Jason Ornellas, CBRE, CRO
Sacramento Director of Engineering, KYMX/KNCI/KHTK/KZZO
jornellas@sbe.org

Building a Radio Live Performance Space

Traditional radio continues progressing in its approach to engage an audience. Stations engage listener interaction on multiple platforms, and live performance streaming has become important. This is what drove the CBS Radio Sacramento five-station cluster to build its own space.

The days of a household artist coming to play acoustic in the stations' conference room for listeners and staff are no more in many markets. A performance lounge gives listeners a VIP experience, and allows them access to their favorite artists. Listeners who did not receive tickets can still experience the event live online. For us, each event has grown with streaming interviews live to Facebook and on the station's website. For our stations, it provides a chance to instantly share the experience with the audience.

Performance lounges give broadcasters another opportunity to creatively interact with their listeners and increase revenue. Our lounge is on its second sponsor since it was first built three years ago. Many performance lounges have corporate sponsors, allowing for dynamic signage, product integration and even product sampling. Besides artist performances, these spaces hold Q&As, record release parties, song debuts and other events. Furthering the exposure for record labels and up-and-coming artists, this is a great platform for any client to buy into your brand.

When planning a lounge, include live video streaming and on-air broadcasts. There are several systems that can handle the live streaming and production. In many cases, these systems are config-



The performance space at Jason's Sacramento stations in use.

ured and ready to go once installed, allowing a user to start streaming in minutes. The streaming production opportunities are endless, and the performance space will evolve, as will the overall production values as the staff learns and improves.

From Planning to Implementation

A lot goes into planning a room like this. Performance lounges range in audience capacity from 15 to 500 people. Most companies are building on-site with their current studios or incorporating the space in a new facility. Sacramento was fortunate enough to relocate some walls and remove some unused furniture to build its current 1,000-square-foot performance lounge.

Options abound when building the stage, but a modular design allows for the most flexible configurations. With the stage in place, the attention turns to the structural support of rigging the truss. The truss hardware must be capable of supporting the weight of the equipment on it, which can include lights, haze and fog machines, speakers and more.

Lighting is obviously important for video. Stage, spot and fill lighting are all key factors in streaming quality video. CBS Sacramento partnered with its sister TV stations to help design the lighting. Consider LED lighting because of the reduced heat, wide color range and long life. DMX 512 is a lighting communication standard used by many lighting controllers.

Because this is a live performance space, front-of-house speakers and stage monitors play a key role in the overall experience. Performers will want some form of monitors. While speaker wedges are the classic look, consider an in-ear monitor system. This will reduce the overall volume on stage, eliminate monitor bleed into the mics, and provide a cleaner live mix.

Manufacturers have been on the forefront of designing digital mixing consoles that allow monitor mixes and front-of-house to be created from a single console. Recall of settings (including all-important fader position and preamp gain), convenient recording and playback, tablet control and personal monitoring are nearly standard across many models.

To round out the audio portion of the performance space, a drum mic kit and various dynamic and condenser microphones are found on stage depending on who is performing. But be prepared to use an artist's favorite mic if you don't already have it on hand.

Performance lounges will continue to evolve and grow, as each radio station must. The design and layout will vary based on budget and size of each performance lounge, but these lounges will separate competitors from each other. They will create revenue opportunities with sponsors and experiences for listeners that show the strength of live radio. Over the past three years of having a performance lounge allowed our listeners to privately experience more than 100 artist performances and athlete visits.

Be a Part of the Industry's Future: Join the SBE Mentor Program

Now in its second year, the SBE Mentor Program is engaging even more professionals with beefed-up offerings to engage new professionals.

Kimberly Sacks, chair of the committee, says, "Participation in the SBE Mentor Program is a two-way street. Mentees gain the knowledge of a seasoned pro and Mentors have the opportunity to foster the next generation of broadcast engineers."

New this year, the program offers quarterly, skill-enhancing webinars and participation in a Facebook group. The

closed Facebook group for SBE mentors and mentees offers participants an easy way to get questions answered as well as to network.

The SBE Program is working towards a goal to have mentors and mentees in every state! Do you know someone who would benefit from being mentored or be a great mentor? Contact Education Director Cathy Orosz at 317-846-9000 or corosz@sbe.org.



- 101 Telco Solutions • 2017**
Erik Hoegh-Guldberg 469-732-3589
Dehydrator and Microwave Repair
- 305 Broadcast • 2015**
Alfonso Lopez 305-406-3560
Broadcast Equipment Supplier
- AC Video Solutions • 2014**
Andrea Cummis 201-303-1303
Consulting, Systems Design/Integration
- AEQ Broadcast International • 2015**
Peter Howarth 954-581-7999
Broadcast Audio, Video and Communications
- American Tower Corporation • 2000**
Peter A. Starke 781-926-4772
Development/Construction/Management
- ATV Broadcast, LLC • 2016**
Doug Smith 317-258-6280
Telecommunications Consulting Group
- Audemat-Worldcast Systems Inc. • 2000**
Christophe Poulain 305-249-3110
Control Manufacturer
- AVCOM of Virginia, Inc. • 2010**
Tom Pagonis 804-794-2500
Spectrum Analyzers
- A-Ware Software/MusicMaster • 2014**
Shane Finch 352-351-3625
Advanced Music Scheduling Solutions
- Belden Electronic Division • 1991**
Sales 800-235-3361
Cable and Connectivity
- 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**
Juan Sampedro 305-599-3100
TV, Satellite, Radio, IP
- Broadcast Devices, Inc. • 2015**
Robert Tarsio 914-737-5032
Audio/RF Support Products
- Broadcast Electronics Inc. • 1978**
Tom Beck 217-224-9600
Radio Equipment Manufacturer
- Broadcast Software International • 2016**
Marie Summers 888-274-8721
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
- Calrec Audio • 2016**
Dave Lewty 805-305-5711
Audio Mixing Equipment
- Camplex • 2017**
Daniel Coscarella 800-445-7568 x7409
Fiber Optic Cable Assembler
- Canon USA Inc. • 1985**
Larry Thorpe 201-807-3300,
800-321-4388
Broadcast Lenses & Transmission 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
- CueScript• 2014**
Michael Accardi 203-763-4030
Teleprompting Software & Hardware
- D2D Technologies • 2018**
Jessica Colyer 619-248-0618
PSIP & EAS Insertion, IP Gateways,
Multiplexers, SRT Transmission
- Davicom, Division of Comlab, Inc. • 2014**
Louis-Charles Cuierrier 418-682-3380 x512
Remote Site Monitoring and Control Systems
- DEVA Broadcast • 2015**
Todor Ivanov 305-767-1207
Monitors, IP Audio Codecs, RDS/RBDS
Encoders, Audio Processors, Broadcast Tools
- Dialight Corporation • 2006**
US Headquarters 732-919-3119
FAA Obstruction Lighting, LED Based
- Dielectric • 1995**
Cory Edwards 207-655-8131
TV & FM Transmission & Cellular Products
- 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 Sheppard 270-804-7383
FAA Obstruction Lighting - Medium and High
Intensity
- DTS Inc./HD Radio Technology • 2014**
Rick Greenhut 443-539-4335
HD Radio Technology
- du Treil, Lundin & Rackley, Inc. • 1985**
Jeff Reynolds 941-329-6000
Consulting Engineers
- The Durst Org. - 4 Times Square • 2004**
John M. Lyons, CPBE 212-997-5508
TV/FM/Microwave Tower Site
- DVEO - Division of Computer Modules Inc. • 2011**
Laszlo Zoltan 858-613-1818
Everything About Transport Streams
- Econco • 1980**
Debbie Storz 800-532-6626,
530-662-7553
New & Rebuilt Transmitting Tubes
- ENCO Systems Inc. • 2003**
Ken Frommert 800-362-6797
Playout and Automation Solutions
- ERI - Electronics Research • 1990**
David White 812-925-6000
Broadcast Antennas, Transmission Line,
Filters/Combiners, Towers and Services
- Florical Systems • 2008**
Shawn Maynard 877-774-1058
Television Broadcast Automation
- Frontline Communications • 2015**
Tracy Brink 727-280-8843
Broadcast Vehicle Manufacturer
- Fujifilm/Fujinon • 1986**
Gordon Tubbs 973-686-2769
Broadcast & Cine Lens Products
- GatesAir • 1977**
Dave Hopson (TV) 513-445-5243
Mark Goins (Radio) 513-899-9124
Broadcast Equipment Manufacturer
- Heartland Video Systems, Inc. • 2011**
Dennis Klas 920-893-4204
Systems Integrator
- Hilights, Inc. • 2016**
Rob Sobol 352-564-8830
Obstruction Lighting Maintenance
- Hitachi Kokusai Electric Comark • 2013**
Jack McAnulty 860-763-1100
Manufacturer Broadcasting Transmission
Equipment
- IMT-Vislink • 2009**
John Procacci 908-747-3011
Wireless Video Systems
- 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**
Lon Mass 973-317-5117
Professional Video Products, Camcorders,
Display Monitors, Recording Decks
- Kathrein USA Inc. • 1985**
Les Kutasi 214-238-8835
Antennas for Broadcasting & Communications
- Kintronc Labs, Inc. • 2015**
Joaquin Raventos 423-878-3141
Radio Broadcast Antenna Systems - ISO9001
Registered Company
- L3 Electron Devices • 2017**
Mark Strohecker 570-326-3561
CEAs, IOTs, Thyratrons
- Lawo AG • 2017**
Michael Dosch 888-810-4468
AoIP Consoles & Virtual Radio
- LBA Technology Inc. • 2002**
Javier Castillo 252-757-0279
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
- Markertek • 2002**
Wesley Brewer 800-522-2025
Specialized Broadcast & Pro-Audio Supplier
- Micronet Communications Inc. • 2005**
Jeremy Lewis 972-422-7200
Coordination Services/Frequency Planning
- Microtech Gefell GmbH • 2016**
Udo Wagner +49 36649-82245
Microphones
- Microwave Video Systems • 2011**
Warren J. Parece 781-665-6600
Microwave Equipment Rental, Sales & Service
- Middle Atlantic Products • 2005**
David Amoscato 973-839-1011
Equipment, Mounting, Solutions
- Moseley Associates Inc. • 1977**
Bill Gould 805-968-9621 x785
Digital STLs for Radio and Television
- 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**
Ralph Beaver 813-282-8612
Game Day Coordination Operations
- Nautel Inc. • 2002**
Jeff Welton 877-662-8835
Radio Broadcast Transmitter Manufacturer
- Nemal Electronics Int'l Inc. • 2011**
Benjamin L. Nemser 305-899-0900
Cables, Connectors, Assemblies and Fiber
Optic
- Neutrik USA, Inc. • 2012**
Kathy Hall 704-972-3050
Ruggedized Optical Fiber Systems
- Orban Labs, Inc. • 2011**
David Rusch 480-403-8300
Audio Processing AMFMTV
- Pasternack Enterprises • 2001**
Christine Hammond 949-261-1920
Coax & Fiber Products
- Pebble Broadcast Systems • 2016**
Kurt Schini 612-345-0461
Television Broadcast Playout Automation
- PlayBox Technology • 2017**
Van Duke 561-229-0003
Automation Video Playout Server
- Potomac Instruments • 2012**
Guy Berry 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
- 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
- Radio Frequency Systems • 2015**
Eddy Vanderkerken 214-471-6693
Broadcast Infrastructure Manufacturer
- RF Specialties Group • 2008**
www.rfspecialties.com
Everything from the Microphone to the
Antenna
- 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**
Gerald LeBow 914-872-4069
Emergency Alert Systems Products
- SCMS Inc. • 2000**
Bob Cauthen 800-438-6040
Audio and RF Broadcast Equipment Supplier
- Seacom Erectors, Inc. • 1997**
John Breckenridge 360-793-6564
Tower/Antenna Erections
- SEG • 2014**
Chris Childs 913-324-6004
Supply Chain Products and Services
- 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
- Silvus Technologies • 2015**
Mark Tommey 617-816-6588
Wireless Video Mesh Network
- Smarts Broadcast Systems • 2017**
Dave Potratz 800-213-3356
Radio Digital Audio Systems
- Snell Advanced Media • 1995**
John Shike 650-703-4906
Video Equipment Manufacturer
- Solid State Logic • 2014**
Steve Zaretsky 212-315-1111
Digial Audio Mixing Consoles, Networked
Audio Routing, Embedded Audio Solutions
- Staco Energy Products Co. • 2010**
Paul Heiligenberg 937-253-1191 x128
Manufacturer of Voltage Regulators, UPS
- Sutro Tower Inc. • 1989**
Eric Dausman 415-681-8850
Broadcast Tower Leasing
- Tektronix Inc. • 1977**
Jim Lang 503-627-2980
Video Test & Measurement, Equipment
Manufacturer
- Teledyne e2v US Inc. • 1997**
Dominic Piarulli 914-593-6828
Electronic Components
- Televs USA, LLC • 2018**
Andy Ruffin 937-475-7255
ATSC 3.0 Transmission Solutions, Antennas
- Telos Systems/Omnia/Axia • 2003**
Denny Sanders 216-241-7225
Telos Systems Talk-Show Systems
- Teradek • 2011**
Jon Landman 949-743-5783
Camera-top ENG Solutions
- Terrestrial Inc. • 2003**
Billie Layman 888-373-4832
FCC Broadcast Auxiliary Licensing Services
- Tielne 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
- Verizon Digital Media/Services • 2015**
Gary Learner 781-221-7400
Media Intelligence and Logging Solutions
- Wheatstone • 2010**
Jay Tyler 252-638-7000
IP Consoles, Routers & Processors
- Wireless Infrastructure Services • 2006**
Travis Donahue 951-371-4900
Repacking Services - West Coast Turnkey
Services

**Members With 25 or
More Years of Membership
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Apply online or call 317-846-9000.**

Member Spotlight: Paul Boykin

Member Stats

SBE Member Since: 2009
Certifications: CPBE, CBT, CBNT
Chapter: 42 Central Florida
Employer: Cobalt Consulting LLC
Position: Owner/Operator
Location: Green Cove Springs, FL
I'm Best Known For: Being a great broadcast engineer with a long-term history in the industry.

Q What do you value most about your SBE involvement?

A The SBE is the absolute best organization that supports broadcast engineers. It provides certification proof to employers and to business clients for consulting work. I have a huge amount of people I work with that love the organization and trust its support and certifications.

Q What got you started in broadcast engineering?

A I started as a disc jockey at a radio station when I left high school because I wanted to be in the broadcast industry. Once I looked into television I jumped at the chance to have a great first TV job, and then moved on to years of great opportunities.



Paul has hobbies, but you'll often find him at work.

Q What do you like most about your job?

A The job I have today allows me to work with all the TV networks and large media companies, I can supply many years of experience to clients to help with rebuilds, new installations, transmitter upgrades, live television shows.

Q When I'm not working I...

A ...I actually work a lot. I am a ham radio operator and use it for fun connections with people around the world. I am also a full-time RV'er so I am on the road especially for work at client locations and vacation trips. I also love to play golf.

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

A I have done many live TV shows all around the world from entertainment shows to things like Nascar racing, golf tournaments, football, surfing and many others.

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Did you participate in the SBE Compensation Survey?



If you did, Thank you! The results are being compiled and will be available soon. SBE members can access the report for free as a member benefit.

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

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Candidates Announced for Upcoming 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 members to the national Secretary by July 6 will be added to the ballot. The election will take place July 6 through August 22. Balloting will be via the election website, except for those members who have opt-

ed 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.

For more information about candidacy, contact Secretary Wayne Pecena at wpecena@sbe.org or Executive Director John Poray at jporay@sbe.org or 317-846-9000.



Leifer

Nominations Committee Candidate Slate

Officers:

President: James Leifer, CPBE; Chapter 11 Boston; Andover, MA

Vice President: RJ Russell, CPBE; Chapter 18 Philadelphia; Middletown, DE

Secretary: Wayne Pecena, CPBE, 8-VSB, AMD, DRB, CBNE; Chapter 99 Bryan, TX, College Station, TX

Treasurer: Jim Bernier, CPBE, CBNE; Chapter 5 Atlanta; Alpharetta, GA

Directors (top six vote getters will be elected):

Stephen J. Brown, CPBE, CBNT; Chapter 80 Fox Valley; Appleton, WI
 Roswell Clark, CPBE, CBNT; Chapter 39 Tampa Bay Area; Clearwater, FL
 Ted Hand, CPBE, 8-VSB, AMD, DRB; Chapter 45 Charlotte; Charlotte, NC

Kirk Harnack, CBRE, CBNE; Chapter 103 Nashville; Nashville, TN

Gary Kline; Chapter 5 Atlanta; Atlanta, GA

Vinny Lopez, CEV, CBNT; Chapter 22 Central New York; Syracuse, NY

Thomas R. McGinley, CPBE, AMD, CBNT; Chapter 16 Seattle; Missoula, MT

Jason Ornellas, CBRE, CRO; Chapter 43 Sacramento; Sacramento, CA

Shane Toven, CBRE, CBNT; Chapter 48 Denver; Laramie, WY

Daniel N. Whealy, CBTE; Chapter 96 Rockford; Sumner, IA



Russell



Pecena



Bernier



Brown



Clark



Hand



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Kline



Lopez



McGinley



Ornellas



Toven



Whealy

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MEMBERS ON THE MOVE



▶ **Rick Jesse**, CBRE, is the chief engineer at Cumulus Media in Little Rock, AR.

▶ **Tony Gervasi** is the sales manager for Intraplex products with GatesAir.



▶ **Andrea Cummis**, CBT, CTO, is chief technology officer at WLVT PBS 39 in Bethlehem, PA.

▶ **Josh Hatton**, CBT, is a digital systems engineer at WZ-DX-TV, Huntsville, AL.



▶ **Gary Timm** has been elected to the WBA Foundation Hall of Fame.

▶ **Wayne Pecena**, CPBE, 8-VSB, AMD, DRB, CBNE, will be one of three recipients of the Stephen H Schott Excellence In Texas Engineering award at the 28th Engineer's Dinner at the TAB Convention in August.



Have a new job? Received a promotion? Let your fellow SBE members know. Send your news to Chriss Scherer at cscherer@sbe.org.

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Aug. 3 - 13, 2018 sbe.org/certification
Application deadline June 5

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